Network Management Station Installation Guide

(For Solaris 2.6, Sybase 11.0.3.3, and HP OpenView 5.01)

Ascend Communications, Inc.

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Chapter 2 Installing Solaris 2.6

Chapter 3 Preparing for a Sybase 11.0.3.3 Installation

Chapter 4 Installing Sybase 11.0.3.3

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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 required software for configuring Ascend switches.

Intended Audience

The *Network Management Station Upgrade Guide* is intended for system administrators responsible for the installation and setup of the NMS.

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 Ascend switch hardware (STDX 6000 ™, B-STDX 8000/9000 ™, CBX 500 ™, and GX 550 ™). See 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*
- *GX 550 Hardware Installation Guide*

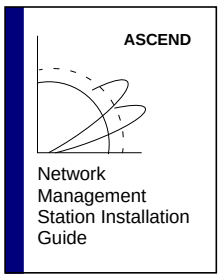
Reading Path

This section describes all of the documents that support the NavisCore™ NMS and Ascend switch software. The documents are grouped as follows:

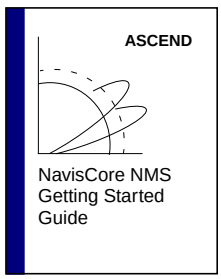
- NMS Documentation
- Switch Software Documentation

NMS Documentation

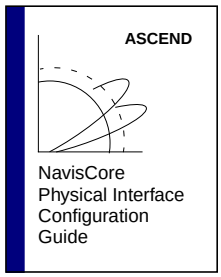
Read the following documents to install and operate NavisCore Release 4.0.



This guide describes prerequisite tasks, hardware and software requirements, and instructions for installing Solaris, HP OpenView, and NavisCore on the NMS.



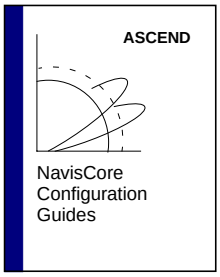
This guide describes how to configure and manage NavisCore, network maps, and Ascend switches.



This guide describes how to configure processor and I/O modules on Ascend switches.

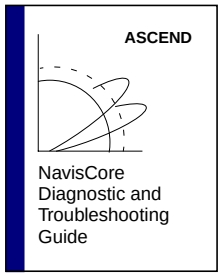
Switch Software Documentation

Read the following documents to configure switch software for B-STDX Release 6.0, CBX Release 3.0, and GX Release 1.0.

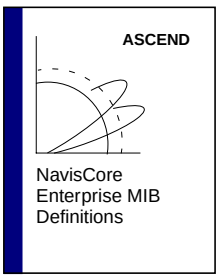


These guides describe how to configure WAN services on the STDX, B-STDX, CBX, and GX switch platforms:

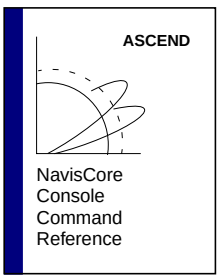
- *NavisCore Frame Relay Configuration Guide*
- *NavisCore ATM Configuration Guide*
- *NavisCore IP Navigator Configuration Guide*
- *NavisCore ISDN Configuration Guide*
- *NavisCore SMDS Configuration Guide*



This guide describes how to diagnose and troubleshoot your NavisCore switch network.



This document gives a brief overview of SNMP and describes the NavisCore Enterprise MIB definitions.



This reference lists and describes the NavisCore switch console commands.

How to Use This Guide

Before you read this guide, read the *Software Release Notice for Network Management Station Installation and Upgrade Sybase Script: 02.00.00.00* and the *Software Release Notice for Network Management Station Installation and Upgrade HP OpenView Script: 02.00.00.00*.

The following table highlights the chapters and contents of this guide.

Read	To Learn About
Chapter 1	Installation prerequisites, and system, hardware, and software requirements.
Chapter 2	The *Ascend-recommended* instructions for installing Solaris 2.6 and Common Desktop Environment (CDE) on your UNIX NMS platform.
Chapter 3	Preparing for a Sybase 11.0.3.3 installation.
Chapter 4	Installing Sybase 11.0.3.3.
Chapter 5	• Preparing for an HP OpenView 5.01 installation. • Installing HP OpenView 5.01. • Installing HP OpenView patches.
Chapter 6	Installing NavisCore.
Chapter 7	Backup procedures.
Chapter 8	Installing a two-system configuration.
Appendix A	Installing a remote backup server.
Appendix B	Sybase 11.0.3.3 backups to the remote backup server.
Appendix C	Enabling/Disabling IP Discovery.
Appendix D	Re-integrating NavisCore with HP OpenView.
Appendix E	NMS startup/shutdown procedures.
Appendix F	Sybase 11.0.3.3 worksheet.

What's New In This Guide

The following table lists the new enhancements made to this guide.

Changes/Enhancements to this Guide	Described in
Installing Solaris 2.6	Chapter 2
Sybase 11.0.3.3 preparation tasks	Chapter 3
Installing Sybase 11.0.3.3	Chapter 4
• Preparing for the HP OpenView 5.01 installation • Installing HP OpenView 5.01 • Installing HP OpenView patches	Chapter 5
Sybase 11.0.3.3 backup procedures	Chapter 7

Related Documents

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

Ascend

- *Network Management Station Upgrade Guide* (Part Number:104-00201-00)
- *NavisCore Getting Started Guide* (80070)
- *NavisCore Physical Interface Configuration Guide* (80080)
- *NavisCore Frame Relay Configuration Guide* (80071)
- *NavisCore IP Navigator Configuration Guide* (80056)
- *NavisCore ATM Configuration Guide* (80072)
- *NavisCore Diagnostics and Troubleshooting Guide* (80074)
- *Network Management Station Installation Guide* (80014)
- *NavisCore Console Command User's Guide* (80075)

Third Party

- *Solaris 2.6 System Configuration and Installation Guide*
- *HP OpenView 5.01 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.	NavisCore ⟹ Logon
Black border surrounding text	Notes and warnings.	See examples below.
Italics	Book titles, new terms, and emphasized text.	*Network Management Station Guide*

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

Cautions notify the reader to proceed carefully to avoid possible equipment damage or data loss.

Warns the reader to proceed carefully in order to avoid 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.

Customer Support

To obtain release notes, technical tips, or support, access the Ascend FTP Server or contact the Technical Assistance Center at:

- 1-800-DIAL-WAN (U.S. and Canada)
- 0-800-96-2229 (U.K.)
- 1-978-952-7299 (all other areas)

1

Overview

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

General Requirements

Ascend requires you use a dedicated SunSPARC station for the purpose of network management. Ascend does not support any other UNIX operating system.

NMS Hardware Requirements

You can configure your Network Management Station in a variety of ways. See 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:

- The number of switches in your network
- The 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 (see 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. Table 1-1 lists each workstation in order of performance (low to high).

The sections that list the workstation(s) for your NMS configuration do not contain the latest SunSPARC workstations. For more information on the latest workstations, see your Sun representative.

In addition, the sections that follow list the minimum SunSPARC workstations for your NMS configuration.

Single-system Configuration

In a single-system configuration, Sybase is used with one Ascend product (NavisCore, Statistics Server, 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. If your Sybase installation supports multiple Sybase databases, install a two-system configuration (page 1-4) or a large system configuration (page 1-6).

Table 1-1 lists the hardware needed to run Sybase 11.0.3.3, HP OpenView 5.01, and NavisCore. Your workstation must be equipped with the following:

- CD-ROM drive
- Tape drive

The tape drive does not need to be directly connected to the NMS. However, you need connectivity between the workstation (with the tape drive) and the NMS.

- 3 1/2-inch floppy drive

Table 1-1. Single-System Configuration

# of Switches	# of Users	Workstation	# of CPUs	Hard Drive (all workstations)	RAM
10-15	<10	Ultra 1 Model 140	1	2 disks, minimum 4 GB total, (1) 2 GB and (1) 2 GB	96 MB
15-50	10-20	SunSPARC20 Model 712 Ultra 1 Model 170 or 170E	2		128 MB
		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 that HP OpenView and NavisCore reside on one workstation and Sybase on another workstation. This type of configuration enables your Sybase Server to support multiple Sybase databases (NavisCore, Statistics Server, CNM Proxy Agent).

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.

Either the Sybase or HP server must be equipped with the following:

- Tape drive

The tape drive does not need to be directly connected to the NMS. However, you need connectivity between the workstation (with the tape drive) and the NMS.

- 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
10-15	<10	Ultra 1 Model 140	1	2 disks, minimum 4 GB total, (1) 2 GB and (1) 2 GB	96 MB
15-50	10 to 20	SunSPARC20 Model 712 Ultra 1 Model 170 or 170E	2		128 MB
		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
Ultra 1 Model 140	1	2 disks, minimum 4 GB total, (1) 2 GB and (1) 2 GB	128 MB
SunSPARC20 Model 712	2		
Ultra 1 Model 170E	1		
Ultra 1 Model 200E			
Ultra 2 Model 2170	2		256 MB
Ultra 2 Model 2200			

Ascend recommends a Sybase Server workstation with multiple CPUs. Additional CPUs increase performance to support multiple Sybase databases (CNM, Statistics Server). 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

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

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

- Tape drive

The tape drive does not need to be directly connected to the NMS. However, you need connectivity between the workstation (with the tape drive) and the NMS.

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

Table 1-4. Large-System Configuration

# of Switches	# of Users	Workstation	# of CPUs	Hard Drive (all workstations)	RAM
50+	<50	SPARC 1000E	2 to 8	2 disks, minimum 4 GB total, (1) 2 GB and (1) 2 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

Ultra 4000/5000s and 6000s have two more CPUs than shown in Table 1-4. You can increase redundancy by adding a second I/O card and using 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 two additional 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. Ascend 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

Item	Qty.	Supplier Part Number	Description
1	1	E5000	Enterprise 5000 Server Base Package
2	4	SUNX2600A	CPU/Memory Board
3	8	SUNX2510A UltraSPARC module	336/330 MHz 1MB Cache per processor
4	4	SUNX7022A	256 MB Memory upgrade
5	2	SUNX2610A	SBUS I/O Board
6	2	SUN954A	Power/Cooling Module
7	1	SUNSOLS	2.6 Solaris Server Media
8	2	SUN6504AR4	7x4.2 GB 5400 RPM SPARCstorage RSM Disk Tray 56 GB total (24 GB Mirrored with 2 hot spares)
9	2	SUN1062A	SBUS Differential F/W SCSI-2 Host Adapter
10	1	SUNX1026A (optional)	SUN FDDI Dual Attach SBUS Adapter 5.0
11	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 that you install the following software:

- Solaris 2.6 and Common Desktop Environment
- Solaris 2.6 Cluster Patch
- Sybase 11.0.3.3 SQL Server
- HP OpenView 5.01
- HP OpenView patch PSOV_01984
- NavisCore

Solaris Operating System

Sun Microsystems SunSoft™ Solaris®2.6 operating environment — Includes the following software: SunOS™ 5.5 operating system, ONC+™/NFS® networking software, OpenWindows™ Version 3.4 windows environment

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.

Solaris 2.6 Cluster Patch

Before you install the NMS software programs, you must obtain the file *2.6_Recommended.tar.Z*. There are several versions of this file (*Patch.0*, *Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version.

To get the patch, do one of the following:

- Contact Sun at 1-800-USA-4SUN
- Obtain these files from SunSolve's website at *http://sunsolve.sun.com:80/pub-cgi/patchclusters.pl*

During the installation procedure, you will be prompted to install the cluster patch file (after you install the Solaris operating system).

Sybase 11.0.3.3 SQL Server

Sybase 11.0.3.3 SQL Server is a relational database software program used to store database information and provide backup and recovery of database files.

HP OpenView, Version 5.01

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 5.01:

- 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 5.01, which permits extensive customization. This includes the definition of icons, maps, background graphics, symbols, and application representations.

HP OpenView Patches PSOV_2091 and PSOV_02161

The PSOV_02091 patch and the PSOV_02161 patch resolve an anomaly that occurs when you run HP OpenView 5.01 on a Solaris 2.6 operating system. If you run HP OpenView 5.01 on Solaris 2.6 without installing these patches and the HP OpenView database is empty, you receive the error message `unable to connect to HP OpenView object databases`. The patches resolve this problem.

NavisCore

NavisCore provides the Ascend-specific configuration and monitoring tools needed to configure, monitor, and control an Ascend network. NavisCore 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 an Ascend network. NavisCore 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

Ascend 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 11.0.3.3 installation
- Install Sybase 11.0.3.3 software on the system
- Install local Backup Server

HP OpenView/NavisCore Installation Script (install_cvux)

Run this script to:

- Install HP OpenView 5.01
- Install NavisCore

Installation Sequence

The NMS installation sequence varies according to NMS configurations setups. See one of the following tables for your NMS configuration type:

- Table 1-7, “Installing a Single-System NMS”
- Table 1-8, “Installing a Two-System NMS”
- Table 1-9, “Installing a Three-System NMS”

Table 1-7. Installing a Single-System NMS

Installation Sequence
Chapter 2, “Installing Solaris 2.6”
Chapter 3, “Preparing for a Sybase 11.0.3.3 Installation”
Chapter 4, “Installing Sybase 11.0.3.3”
Chapter 5, “Installing HP OpenView 5.01”

Table 1-8. Installing a Two-System NMS

Installation Sequence on System 1	Installation Sequence on System 2
Chapter 2, “Installing Solaris 2.6”	Chapter 2, “Installing Solaris 2.6”
Chapter 3, “Preparing for a Sybase 11.0.3.3 Installation”	Chapter 5, “Installing HP OpenView 5.01”
Chapter 4, “Installing Sybase 11.0.3.3”	Chapter 6, “Installing NavisCore”
Chapter 8, “Installing a Two-System Configuration”	Chapter 8, “Installing a Two-System Configuration”

Table 1-9. Installing a Three-System NMS

Installation Sequence on System 1	Installation Sequence on System 2	Installation Sequence on System 3
Chapter 2, “Installing Solaris 2.6”	Chapter 2, “Installing Solaris 2.6”	Appendix A, “Installing a New Remote Backup Server.”
Chapter 3, “Preparing for a Sybase 11.0.3.3 Installation”	Chapter 5, “Installing HP OpenView 5.01”	
Chapter 4, “Installing Sybase 11.0.3.3”	Chapter 6, “Installing NavisCore”	
Chapter 8, “Installing a Two-System Configuration”	Chapter 8, “Installing a Two-System Configuration”	

Before You Begin the NMS Installation

Before you install the NMS software, fill out the installation worksheet (Appendix F). It provides parameter information you will need for the NMS installation.

2

Installing Solaris 2.6

This chapter describes installation instructions for the following software:

- Solaris 2.6
- Solaris 2.6 cluster patch file

Common Desktop Environment is automatically installed during the Solaris 2.6 installation.

Before You Begin

Before you install Solaris 2.6, verify you:

- ☑ Read the general requirements for network management.
- ☑ Obtained the Solaris 2.6 cluster patch.
- ☑ Read the NMS hardware and software requirements.

Installing Solaris 2.6

Sun Microsystems, Inc. SunSoft Solaris, Version 2.6 (Solaris 2.6) 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 *Ascend-recommended settings* for installing and running NavisCore.

To install Solaris 2.6:

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 2.6 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:

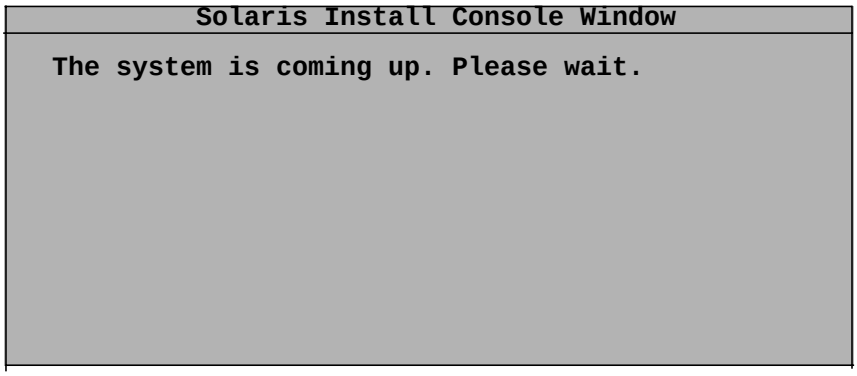


Figure 2-1. Solaris Install Console Window

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

   (For example, **nms01**)
9. At the Network Connectivity dialog box, select **Yes** and choose Continue.
10. At the IP Address dialog box, enter **[*your IP address*]** and choose Continue.
11. 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
    ```

12. 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.

13. 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.
    ```

14. At the Subnets dialog box, select **Yes** to make this system part of a subnet. Choose Continue.
15. At the Netmask dialog box, enter **[*your subnet mask*]** and choose Continue.
16. At the Time Zone dialog box, select **Geographic region** and choose Set.
17. 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.
18. At the Date and Time dialog box, accept the default date and time or enter new values. Choose Continue.
19. 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...
    ```

20. At the Solaris Interactive Installation dialog box, choose Initial.

Do not choose Upgrade in the Solaris Interactive Installation dialog box.

21. At the subsequent Solaris Interactive Installation dialog box, choose Continue.
22. At the Allocate Client Services dialog box, choose Continue.
23. At the Select Languages dialog box, choose Continue
24. At the Software dialog box, select **Developer System Support** and choose Customize.

25. At the Customize Software dialog box (under the Software Clusters and Packages section), do the following:

a. Select the following (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.

b. Unselect the following (a blank gray box indicates the feature is unselected):

– Java VM

26. Choose OK.

27. At the Select Software dialog box, choose Continue

28. At the Select Disks dialog box, highlight the line that has “bootdisk” on it. Choose the > button and make sure the line is in the “In Selected Disks column.” Choose Continue

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

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

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

32. At the Customize Disks dialog box, modify the appropriate fields based on your system configuration. See Table 2-4 on page 2-9 through Table 2-3 on page 2-8 for the recommended boot drive partition settings. When you finish filling in the fields, choose OK.

Use Table 2-1 if you are installing a single-system NMS that has two drives.

The second drive uses raw devices for the Sybase database. The installation requires you to partition the second drive later in Chapter 3, "Preparing for a Sybase 11.0.3.3 Installation."

The recommended partition settings are only a guideline. The examples in the table assume a 2.1 GB drive using a raw partition. If you are installing the operating system on a different size drive, consult your UNIX System Administrator or call Ascend Technical Assistance Center at **1-800-DIAL-WAN** (1-800-342-5296).

Table 2-1. Single-System NMS with Two Drives

File Systems Drive 1 (2.1 GB Drive, 128 MB memory)		
Slice	**Mount Point**	**Size**
Slice 0	/	250
Slice 1	swap	(Recommend 3*RAM, maximum of 1 GB) For example, 384 MB for 128 MB RAM
Slice 2	(DO NOT CHANGE)	
Slice 3	(DO NOT CHANGE)	
Slice 4	(DO NOT CHANGE)	
Slice 5	/usr	500
Slice 6	/opt	(Remaining unallocated space on drive after all other settings have been configured) (Recommend a minimum of 600 MB)
Slice 7	(DO NOT CHANGE)	

Use Table 2-2 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. The installation requires you to partition the second drive later in Chapter 3, “Preparing for a Sybase 11.0.3.3 Installation.”

The recommended partition settings are only a guideline. The examples in the table assume a 2.1 GB drive using a raw partition. If you are installing the operating system on a different size drive, consult your UNIX System Administrator or call Ascend Technical Assistance Center at **1-800-DIAL-WAN** (1-800-342-5296).

Table 2-2. Two-System NMS (Sybase Server)

File Systems Drive 1(internal) (2.1 GB Drive, 128 MB memory)		
Slice	**Mount Point**	**Size**
Slice 0	/	250
Slice 1	swap	(Recommend 3*RAM, maximum of 1 GB) For example, 384 MB for 128 MB RAM
Slice 2	(DO NOT CHANGE)	
Slice 3	(DO NOT CHANGE)	
Slice 4	(DO NOT CHANGE)	
Slice 5	/usr	500
Slice 6	/opt	(Remaining unallocated space on drive after all other settings have been configured) (Recommend a minimum of 600 MB)
Slice 7	(DO NOT CHANGE)	

Use Table 2-3 if you are installing the HP Server in a two-system NMS configuration. This system has two drives.

The recommended partition settings are only a guideline. The examples in the table assume a 2.1 GB drive using a raw partition. If you are installing the operating system on a different size drive, consult your UNIX System Administrator or call Ascend Technical Assistance Center at **1-800-DIAL-WAN** (1-800-342-5296).

Table 2-3. 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	/	250	Slice 0		
Slice 1	swap	(Recommend 1.5*RAM maximum of 500 MB) For example 192 MB for 128 MB RAM	Slice 1	swap	(Recommend 1.5*RAM maximum of 500 MB) For example 192 MB for 128 MB RAM
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	500	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)	

Use Table 2-4 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**.

The recommended partition settings are only a guideline. The examples in the table assume a 2.1 GB drive using a file system database (**lab configuration only**). If you are installing the operating system on a different size drive, consult your UNIX System Administrator or call Ascend Technical Assistance Center at **1-800-DIAL-WAN** (1-800-342-5296).

Table 2-4. Single-System NMS with One Drive (Lab-Configurations only)

File System Files Using One Drive (2.1GB Drive, 128 MB memory)		
Slice	**Mount Point**	**Size**
Slice 0	/	250
Slice 1	swap	(Recommend 3*RAM, maximum of 1 GB) For example, 384 MB for 128 MB RAM
Slice 2	(DO NOT CHANGE)	
Slice 3	(DO NOT CHANGE)	
Slice 4	(DO NOT CHANGE)	
Slice 5	/usr	500
Slice 6	/opt	(Remaining unallocated space on drive after all other settings have been configured) (Recommend a minimum of 600 MB)
Slice 7	(DO NOT CHANGE)	

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

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

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

36. At the Auto Reboot dialog box, choose Auto Reboot.

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

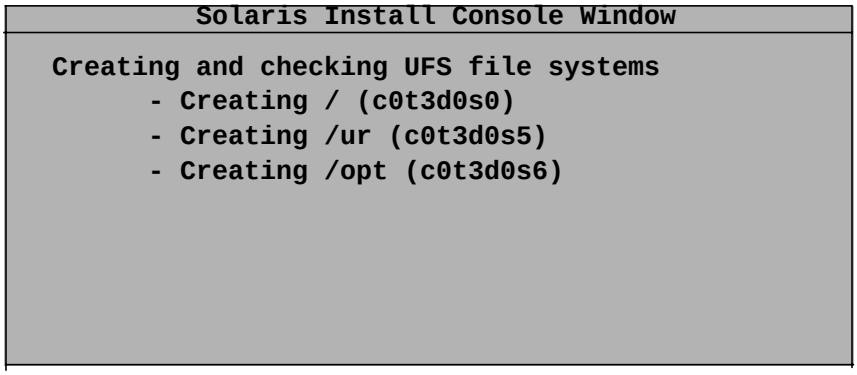


Figure 2-2. Solaris Install Console Window

Completing the Installation

The Solaris 2.6 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 then displays the following message:

   ```
   ************************************************************

   This system is configured to conserve energy.
   After 30 minutes without activity, the system state will be
   saved to disk and the system will be powered off
   automatically.


   A system that has been suspended in this way can be restored
   back to exactly where it was by pressing the power key.
   The definition of inactivity and the timeout are user
   configurable. The dtpower (1m) man page has more
   information.
   ************************************************************

   Do you wish to accept this default configuration, allowing
   your system to save its state then power off automatically
   when it has been idle for 30 minutes? (If this system is used
   as a server, answer n. By default autoshutdown is
   enabled.) [y, n, ?]
   ```

2. Enter **n**.

   The following message appears:

   ```
   Autoshutdown has been disabled.


   Should the system save your answer so it won't need to ask
   The question again when you next reboot? (By default the
   Question will not be asked again.) [y, n, ?] n
   ```

3. Enter **y**.

The system displays the console login prompt after finishing the boot process.

4. 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).
5. When the software prompts you for a windowing system, select either Common Desktop Environment (CDE) or OpenWindows. Ascend recommends using CDE.
6. Open an Xterm window and at the # prompt enter:

   ```
   eject cdrom
   ```

7. Remove the CD-ROM from the CD-ROM drive.
8. Proceed to "Installing the Solaris 2.6 Cluster Patch".

Installing the Solaris 2.6 Cluster Patch

You must install the Solaris 2.6 cluster patch file *2.6_Recommended.tar.Z* on your system. There are several versions of the *2.6_Recommended.tar.Z* file (*Patch.0*, *Patch.1*, *Patch.2*, *Patch.3*). Select the latest numerical version.

Perform the following steps to install the Solaris 2.6 cluster patch:

1. Put the Solaris 2.6 cluster patch file in */tmp*.
2. In an Xterm window, enter:

   ```
   cd /tmp
   uncompress 2.6_Recommended.tar.z
   tar xvf 2.6_Recommended.tar
   ```

The minimum kernel patch is 103640-12.

3. When the # prompt appears, enter:

   ```
   cd /tmp/2.6_Recommended/
   ./install_cluster
   ```

   After several lines of output, the following message appears:

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

4. Enter **y** to continue.

   The installation takes several minutes to complete.

5. When the # prompt appears, enter:

   ```
   init 6
   ```

6. Proceed to Chapter 3, “Preparing for a Sybase 11.0.3.3 Installation.”

3

Preparing for a Sybase 11.0.3.3 Installation

The Sybase 11.0.3.3 SQL server is a relational database application that manages backup and recovery of database files. This chapter describes how to prepare for a Sybase 11.0.3.3 installation, which includes the following tasks:

- Review the Sybase 11.0.3.3 installation worksheet
- Partition the second disk using raw partitions
- Load the Ascend-supplied Sybase media and extract the scripts
- Set up the system before Sybase 11.0.3.3 installation

Before You Begin

Before you begin, verify you:

- ☑ Installed Solaris 2.6
- ☑ Installed the Solaris cluster patch file

Reviewing the Sybase 11.0.3.3 Installation Worksheet

Review the Sybase 11.0.3.3 installation worksheet in Appendix F. In addition, fill out the applicable blank lines.

Partitioning the Second Disk Using Raw Partitions

Before you proceed with the steps in this section, determine your configuration as follows:

- 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. Proceed to "To partition the second disk:" on page 3-3.
- If you have an NMS with one drive and you partitioned that drive using file systems, proceed to "Loading the Ascend-supplied Sybase Media" on page 3-10.

Table 3-1 lists the recommended partition settings for the second disk.

Table 3-1. Partition Settings

Partition(s)	Function
1,3, and 7	These partitions are not used
0	Master device for Sybase
4	System Procs device for Sybase
5	NavisCore device for Sybase
6	Log device for Sybase

Each partition's (0, 4, 5, and 6) size can be a maximum of 2048 MB (2 GB).

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 2-1 or Table 2-2, consult your UNIX Administrator before completing this section.

To partition the second disk:

1. At the Login prompt, enter **root**. When prompted for the root password, enter **[*root password*]**.
2. In an Xterm window, 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:

   ```
   Warning: Current Disk has mounted partitions.
   ```

4. At the “format” prompt, enter **quit**.
5. Go to step 2 and select the disk that you did not partition.

   The Format Menu appears (Figure 3-1).

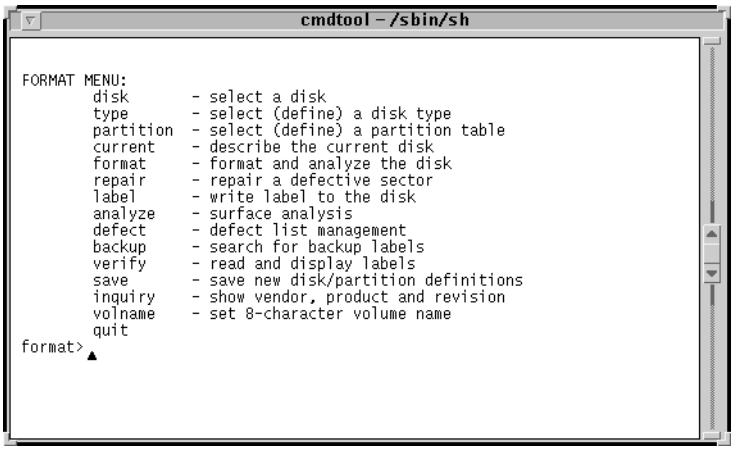


Figure 3-1. Format Menu

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

The Partition Menu appears (Figure 3-2).

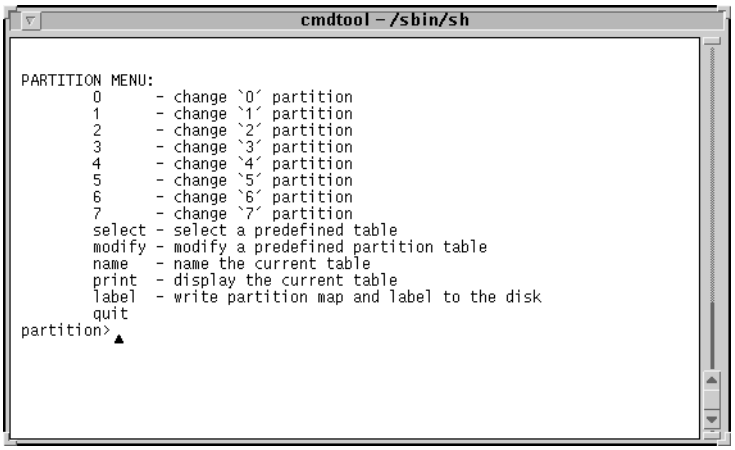


Figure 3-2. Partition Menu

Defining Partitions 1, 3, and 7

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

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 and 7.

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

3. When you finish defining partitions 1, 3, and 7, at the **`partition>`** prompt, enter:

   `print`

   The partition table appears. **DO NOT MAKE** changes to partition 2 if the partition table shows it as the backup partition, and using the entire disk in the cylinders (as shown below for a 4GB disk drive):

   ```
   2      backup      wu      0-8891      4.01GB      (8892/0/0)      8402940
   ```

4. If partition 2 is shown as the tag “swap,” go to “Defining Partition 2” on page 3-5. If the partition is shown as the tag “backup partition”, proceed to “Creating a Master Device on Partition 0” on page 3-6.

Defining Partition 2

If partition 2 is shown as the tag “swap,” perform the following steps:

1. At the “partition” prompt, enter **print**.

   The current partition table appears.

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 number next to reserved cylinders.

3. At the “partition” prompt, enter **2**.

4. At the “Enter partition id tag [unassigned]” prompt, enter **backup**.

5. At the “Enter partition permission flags [wm]” prompt, enter **wu**.

6. At the “Enter new starting cyl [0]” prompt, enter
   [*`Total disk cylinders Available - 1`*]
   (for example, in Figure 3-3, **8891**)

7. At the “Enter partition size” prompt, enter **0**.

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

Creating a Master Device on Partition 0

To create a master device for Sybase on Partition 0:

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, view the partition table by entering **print**.

   The following partition is an example of a completed partition table after you defined all 4 partitions.

```
xterm
partition> print
Current partition table (original):
Total disk cylinders available: 8892 + 2 (reserved cylinders)
Part      Tag    Flag     Cylinders        Size            Blocks
  0 unassigned    wm       1 -   87       40.14MB    (87/0/0)     82215
  1 unassigned    wm       0               0         (0/0/0)          0
  2       swap    wu    7781 - 8058      128.28MB    (278/0/0)   262710
  3 unassigned    wm       0               0         (0/0/0)          0
  4 unassigned    wm      88 -  142       25.38MB    (55/0/0)     51975
  5 unassigned    wm     143 - 4260        1.86GB    (4118/0/0) 3891510
  6 unassigned    wm    4261 - 8378        1.86GB    (4118/0/0) 3891510
  7 unassigned    wm       0               0         (0/0/0)          0
```

Figure 3-3. Partition Table

Partition 0 is complete.

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

Creating a System Procs Device on Partition 4

To create a System Procs device for Sybase on Partition 4:

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 **100mb**.
5. At the “partition” prompt, view the partition table by entering **print**.

   Partition 4 is complete.

6. Proceed to “Creating a NavisCore Device on Partition 5.”

Creating a NavisCore Device on Partition 5

To create a NavisCore device for Sybase on Partition 5:

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 half of the remaining unallocated space.

   For example, for a 4GB drive:

   4096 - (40MB for partition 0) -(100MB for partition 4) / 2 = 1978MB

5. At the “partition” prompt, view the partition table by entering **print**.

   Partition 5 is complete.

6. 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 6:

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 number next to reserved cylinders.

   The following partition table is an example of a 4GB disk drive.

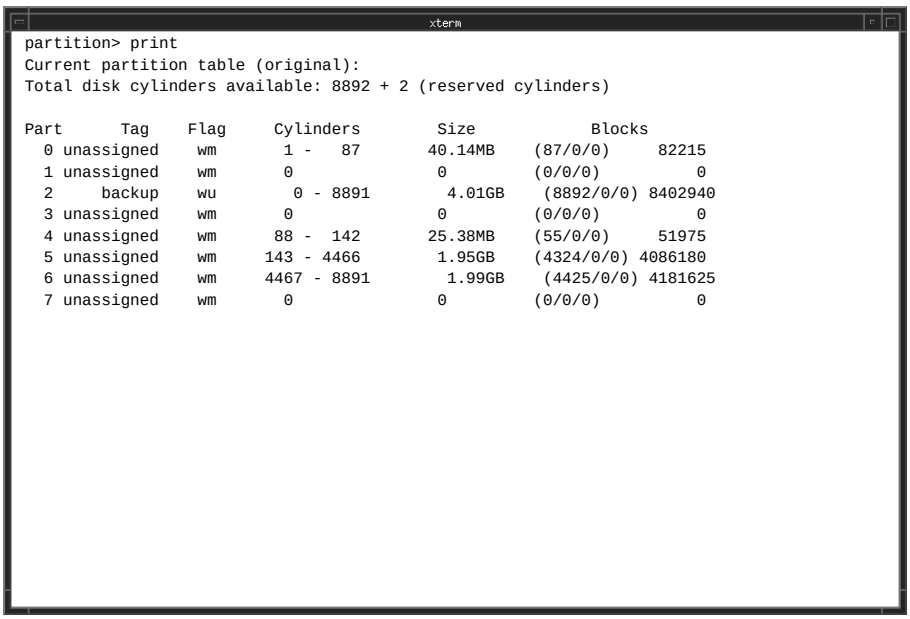


Figure 3-4. Unallocated Space Window

3. Subtract Partition 5’s ending cylinder number from the “Total disk cylinders available” number, then subtract 1 (using the example in Figure 3-4, **`8892 - 2 - 1 = 8889`**).
4. Make a note of this number.
5. Proceed to “Creating a Log Device on Partition 6.”

Creating a Log Device on Partition 6

To create a log device for Sybase on Partition 6:

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:

   [*number from step 4 on page 3-8*]c

5. At the “partition” prompt, enter **quit**.
6. At the “format” prompt, label and save the partitions by entering **label**.
7. At the “Ready to label disk” prompt, enter **y**.
8. At the “format” prompt, enter **quit**.

   You have completed the second disk. The next section describes how to load the Ascend-supplied Sybase media and extract the scripts from the media.

Loading the Ascend-supplied Sybase Media

To load the Ascend-supplied Sybase media and extract the installation scripts from the media:

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

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

2. Use either procedure in Table 3-2 to run the Sybase installation script:

See the Sybase 11.0.3.3 worksheet in Appendix F for your media type.

Table 3-2. Sybase Installation Media Types

Media Type	Procedure
CD-ROM	**1.** Insert the Sybase CD-ROM into the CD-ROM drive. **2.** In an Xterm window, change to the *cv_scripts* directory by entering: **`cd /cdrom/cdrom0/cv_scripts`** **3.** Run the Sybase installation script by entering: **`./install_sybase`**
From Ascend's FTP Server	**1.** Put the Sybase tar file in the */opt* directory. **2.** In an Xterm window, enter: **`cd /opt`** **3.** Extract only the scripts from the Sybase tar file by entering: **`tar xvf /opt/syb_install.02.00.00.00 cv_scripts`** **4.** Change to the *cv_scripts* directory by entering: **`cd cv_scripts`** **5.** Run the Sybase installation script by entering: **`./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 installation log.

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

In a new Xterm 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.

The following message appears:

```
What display should the install log xterm go to
(default:0.0)?
```

7. Press Return or enter **[*local hostname*]:0.0**.

The Tail Window appears (Figure 3-5).

Figure 3-5. Tail Window

The Sybase Installation Menu appears:

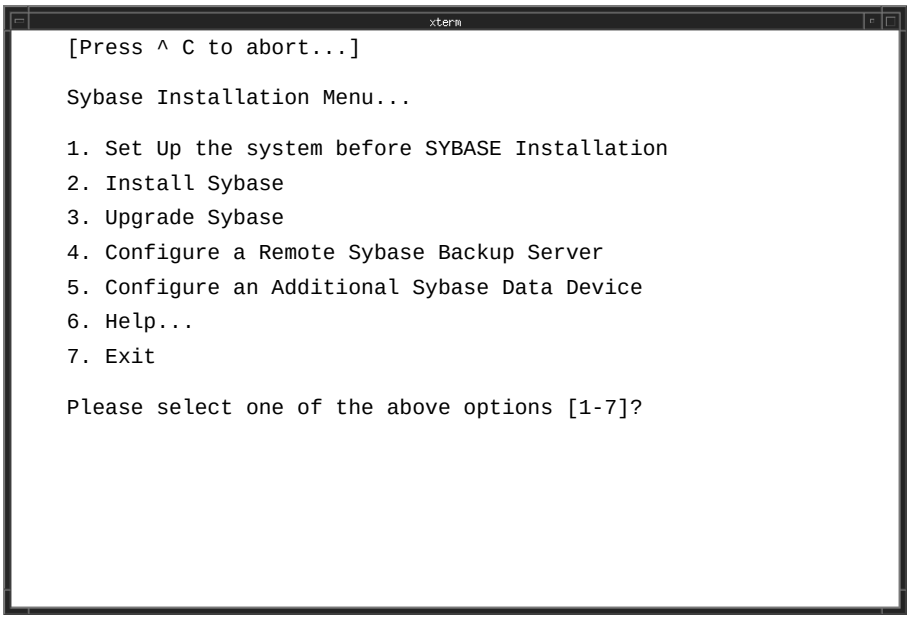


Figure 3-6. Sybase Installation Menu

The Ascend-supplied Sybase installation scripts is loaded on your system. The next section describes how to set up your system before installing the Sybase 11.0.3.3 software.

Setting Up the System

Run the Sybase installation script to set up your system before installing Sybase 11.0.3.3. The Sybase installation script:

- Creates the Sybase and NMS user accounts
- Creates additional user accounts
- Assigns TCP socket numbers to the Sybase and backup servers
- Sets the NavisCore device name
- Sets the Master, System Procs, Data, and Log devices

To set up your system:

1. At the Sybase Installation Menu, set up the system by entering **1**.

The following message appears:

```
Complete all prerequisite tasks before continuing. See
Ascend'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] ?
```

See the Sybase 11.0.3.3 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 (CASCADE).
5. At the “Enter the name of the error log” prompt, press Return to accept the default (*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 secure 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 the three listed files that activate and deactivate the Sybase 11.0.3.3 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 (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 Ascend script increases Sybase’s shared memory. The script accomplishes this by adding 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 Ascend script assigns TCP socket numbers to Sybase and the local backup server. The socket number 1025 is assigned to Sybase and 1026 is assigned to the local 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]?
```

11. Either:

- Enter **1** to create additional user accounts.

  The script prompts you for information similar to what you provided for the nms user account. See step 7 on page 3-15. Once you create the additional user, the Creating Additional User Accounts menu reappears.

- Enter **2** to proceed to the next step.

The Device Installation menu appears.

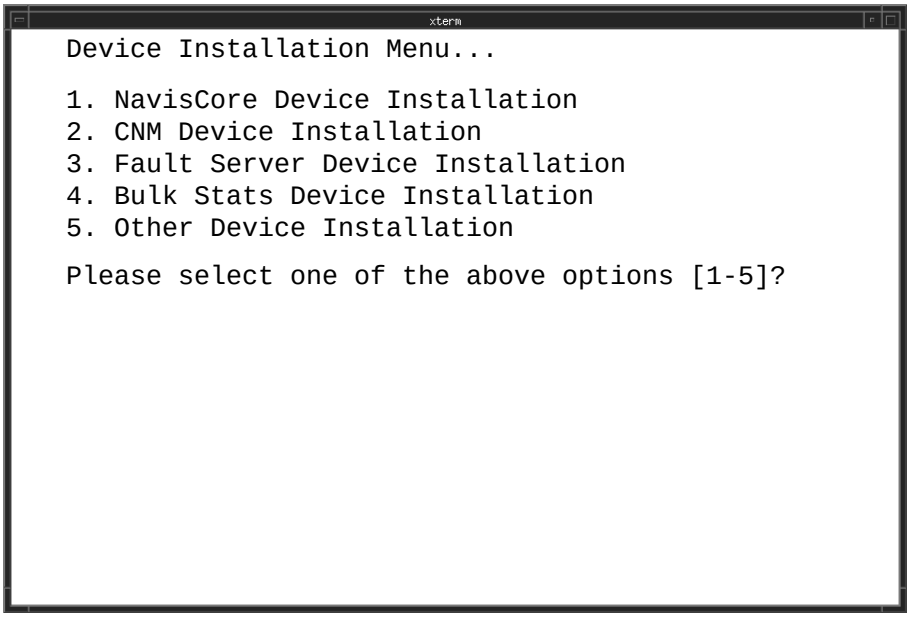


Figure 3-7. Device Installation Menu

12. Install the NavisCore device by entering **1**.

The following message appears:

```
NavisCore Device Installation Selected...
```

If you use Sybase in conjunction with other Ascend products (CNM Proxy Agent, NavisXtend Statistics Server (Bulk Statistics), and NavisXtend Fault Server, you must configure additional devices for these products. See the appropriate manual (*e.g. NavisXtend Fault Server User's Guide*) for more information.

The following menu appears:

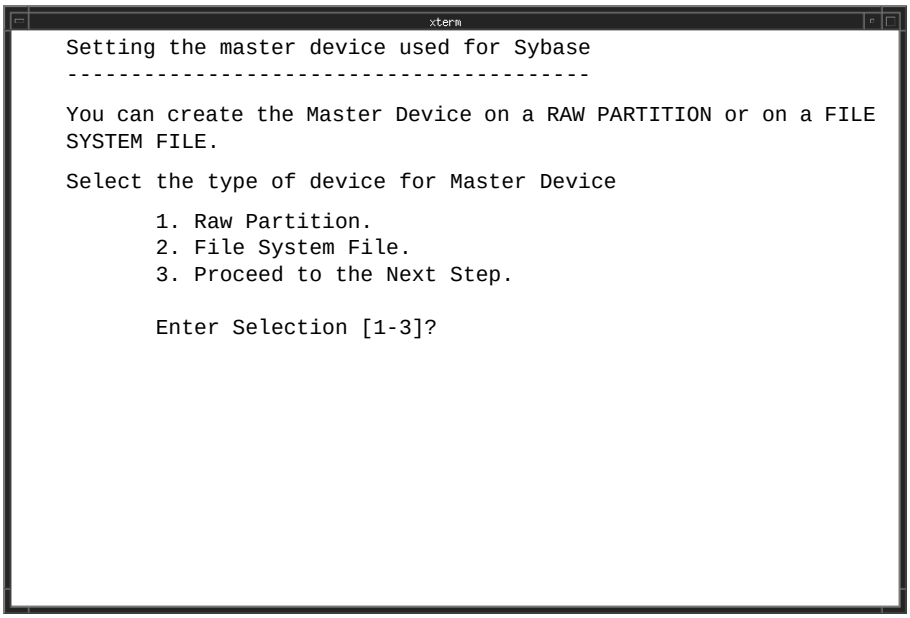


Figure 3-8. Sybase Master Device Menu

13. Specify your master device as follows:

- To select Raw Partitions, enter **1**.

  Proceed to "Using Raw Partitions for the Master Device" on page 3-19.

- To select File System Files (for **lab configurations only**), enter **2**.

  Proceed to "Using File System Files for the Master Device (For Lab Configurations Only)" on page 3-21.

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 Ascend script does not provide defaults for the following prompts because customer configurations vary. See 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 **[*master device pathname*]**.

   For example, **/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 **[*procs device pathname*].**

   For example, **/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 **[*NavisCore device pathname*].**

   For example, **/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 **[*log device pathname*]**.

   For example, **/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, reboot the system by entering:

   `init 6`

9. Proceed to Chapter 4, “Installing Sybase 11.0.3.3.”

Using File System Files for the Master Device (For Lab Configurations Only)

The following message appears if you selected File system files:

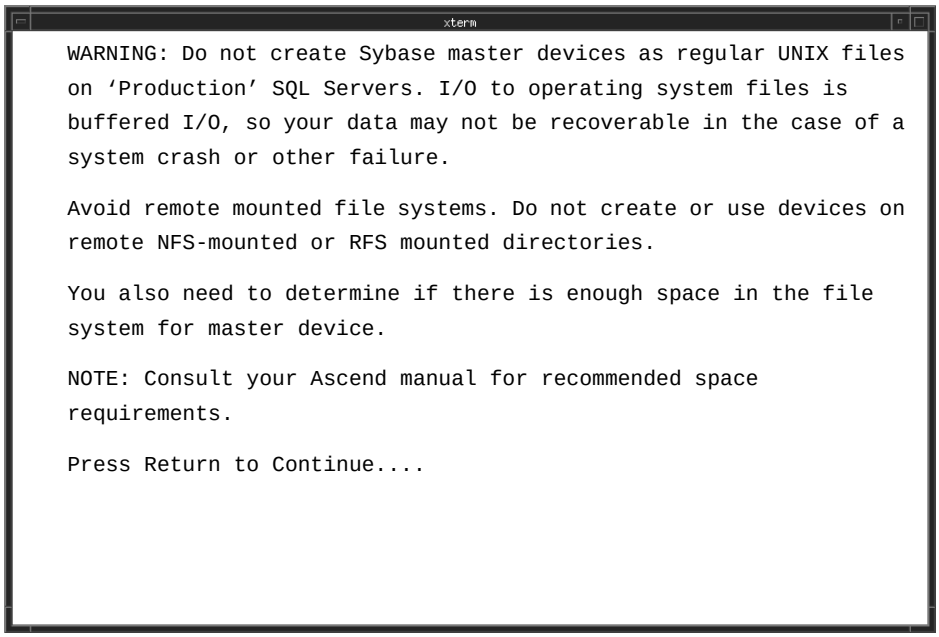


Figure 3-9. Warning Window

1. Press Return to continue.

The following screen appears:

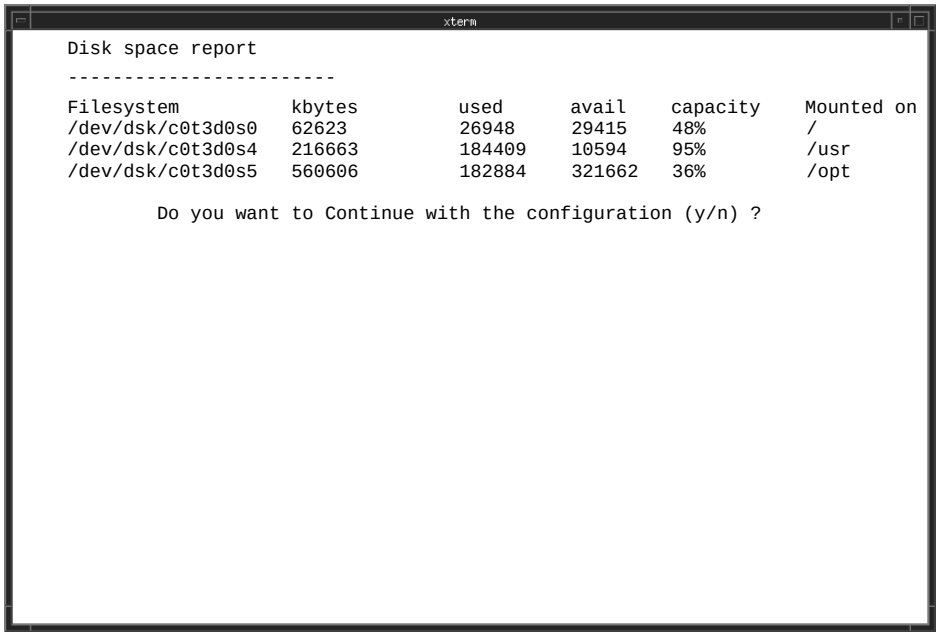


Figure 3-10. Disk Space Report Screen

2. To continue, enter **y**.

See 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.

Ascend supports the default device sizes in step 6 and step 7 in NavisCore lab installations only. Other Ascend 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, reboot the system by entering **init 6**.

   The Sybase prerequisite tasks are complete.

10. Proceed to Chapter 4, “Installing Sybase 11.0.3.3.”

4

Installing Sybase 11.0.3.3

This chapter provides instructions for installing Sybase 11.0.3.3 and local Backup server.

Before You Begin

Before you install Sybase 11.0.3.3, verify you:

- ☑ Reviewed the Sybase 11.0.3.3 installation worksheet (Appendix F)
- ☑ Loaded the Ascend-supplied Sybase media
- ☑ Prepared the system for Sybase installation

Installing Sybase 11.0.3.3

To run the Sybase 11.0.3.3 installation script:

1. At the console login, enter **root**. When prompted, enter **[*root password*]**.
2. Use either procedure in Table 4-1 to run the Sybase installation script:

See the Sybase 11.0.3.3 worksheet in Appendix F for your media type.

Table 4-1. Sybase Installation Media Types

Media Type	Procedure
CD-ROM	1. Insert the Sybase CD-ROM into the CD-ROM drive. 2. In an Xterm window, change to the *cv_scripts* directory by entering: **`cd /cdrom/cdrom0/cv_scripts`** 3. Run the Sybase installation script by entering: **`./install_sybase`**
From Ascend's FTP Server	1. In an Xterm window, change to the *cv_scripts* directory by entering: **`cd /opt/cv_scripts`** **Note**: This step assumes you extracted the scripts already and put them in */opt/cv_scripts*. 2. Run the Sybase installation script by entering: **`./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, see Figure 3-5 on page 3-11.

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

In a new Xterm 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.

The following message appears:

```
What display should the install log xterm go to
(default:0.0)?
```

4. Press Return or enter **[*local hostname*]:0.0**.

   The Sybase Installation Menu appears:

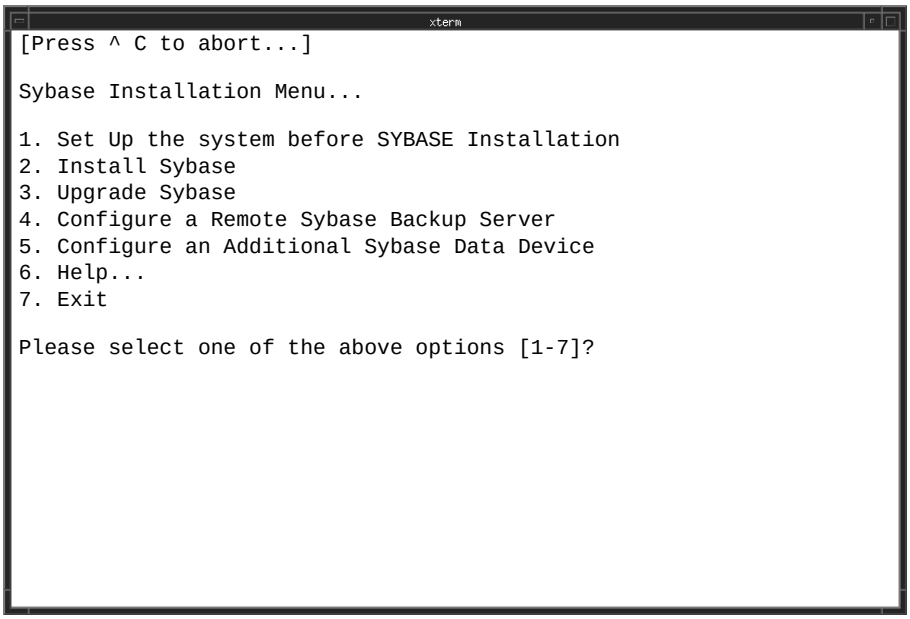


Figure 4-1. Sybase Installation Menu

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. Figure 4-2 shows an example of file system file parameters.

```
                Sybase Installation Parameter
                *****************************


Parameter                                   Value
*********                                   **********************

 0. Done Editing

1. SYBASE                                   /opt/sybase

2. DSQUERY                                  CENTRAL

3. HOSTNAME                                 central

4. BACKUP_HOSTNAME                          central

5. SYB_TCP_Sock                             1025

6. SYB_BACKUP_TCP_Sock                      1026

7. SA_USER                                  sa

8. SYB_ERR_LOG
                                            /opt/sybase/install/CENTRAL_err.log

9. SYB_Master_Dev                           /opt/databases/master.dat

10. SYB_Master_Size (MB                     40

11. SYB_Procs_Dev                           /opt/databases/sysprocsdev.dat

12. SYB_Procs_Size (MB)                     25

13. SYB_Cascade_Dev                         /opt/databases/cascview.dat

14. SYB_Cascade_Size (MB)                   300

15. SYB_Log_Dev                             /opt/databases/log.dat

16. SYB_Log_Size (MB)                       300

17. SYB_Dev_Type                            FileSystem


      Enter the number of the parameter you wish to alter : 0
```

Figure 4-2. Raw Partition Parameters Window

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

   - If you change parameters 9 through 17, the Sybase Master Device Menu reappears. See Figure 3-8 on page 3-18.
   - If you change parameter 1, the script prompts you to change parameter 8 (SYB_ERR_LOG).

   Table 4-2 provides a description for each of the Sybase parameters.

Table 4-2. Sybase Configuration Parameters

Sybase Parameter	Description
SYBASE	Target directory for Sybase installation.
DSQUERY	Sybase server name.
HOSTNAME	Name of Sybase workstation.
BACKUP_HOSTNAME	Name of Sybase workstation (same as HOSTNAME).
SYB_TCP_Sock	TCP socket number for Sybase.
SYB_BACKUP_TCP_Sock	TCP socket number for backup Sybase.
SA_USER	Default Sybase system administrator user name.
SYB_ERR_LOG	Default pathname of log file that contains all SQL Sybase errors.
SYB_Master_Dev	Pathname of Sybase Master device.
SYB_Master_Size (MB)	Size (in megabytes) of Master device.
SYB_Procs_Dev	Pathname of Sybase Procs device.
SYB_Procs_Size (MB)	Size (in megabytes) of Sybase Procs device.
SYB_Cascade_Dev	Pathname of data device.
SYB_Cascade_Size (MB)	Size (in megabytes) of data device
SYB_Log_Dev	Pathname of Sybase log device
SYB_Log_Size (MB)	Size (in megabytes) of Sybase log device.
SYB_Dev_Type	Type of installation of Sybase devices (FileSystem or Raw). The install program sets this value automatically.

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

   The following message appears:

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

9. Press Return.

   The following message appears:

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

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

10. Use one of the following examples:

    - For CD ROM drives, enter:

      `/cdrom/cdrom0/syb_install.02.00.00.00`

    - For files from Ascend’s FTP server, enter:

      `/opt/syb_install.02.00.00.00`

    See the Sybase 11.0.3.3 worksheet in Appendix F for the name of the media device. The media extraction takes approximately five minutes.

The following messages appear:

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

11. Press Return to continue.

The following messages appear:

```
Extracting Sybase Installation 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 Ascend script increases memory allocation to allow basic Sybase commands to execute. The script increases the allocation because the system defaults have insufficient byte memory for Sybase commands. For more information, see the *Sybase SQL Server Installation and Configuration Guide.*

The screen displays the following:

```
Increasing the Number of Users Connections

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

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]?
```

12. Do one of the following:

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

13. Press Return to continue.

The following message appears:

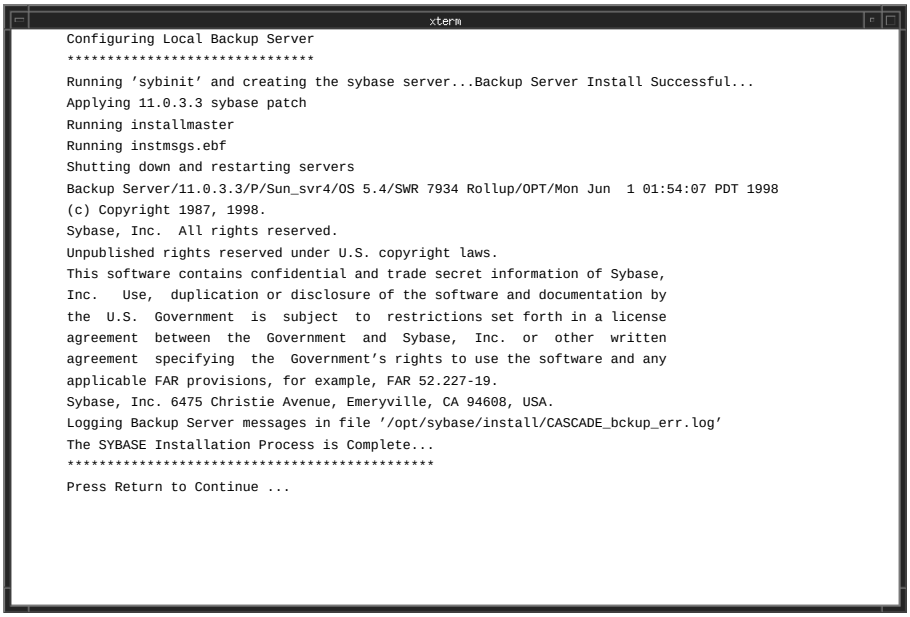
```
Done...

Now increasing number of open objects for NavisCore
--------------------------------------------------

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, contact the Ascend Technical Assistance Center at one of the following numbers:
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

Installing a Local Backup Server

The script automatically installs a local backup server and displays the message:



The Sybase Installation Menu appears.

14. At the Sybase Installation Menu, enter **7** to exit.

The following message appears:

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

Exiting Installation script.
```

15. Remove the media from the media device.
16. Close the Tail window by placing the mouse pointer in the window, holding down the **<Ctrl>** button, then pressing the **c** button.

    The Sybase installation is complete.
17. Initiate an isql session by entering:

    `isql -U sa -P [`*`SA password`*`]`

    For example, superbase.
18. Check the Sybase version that is currently running by entering:

    ```
    1> select @@version
    2> go
    ```

    The following output should display:

    ```
    ------------------------------------------------------------
    SQL Server/11.0.3.3/P/Sun_srv4/OS 5.4/SWR 7934
    Rollup/OPT/Sun May 31 23:28:44 PDT 1998
    ```
19. If the correct output (Step 18) is displayed, delete the */opt/sybase1103.tar* file by entering:

    `rm /opt/sybase1103.tar`
20. If you are installing a remote Backup Server, proceed to Appendix A. If not, proceed to Chapter 5, “Installing HP OpenView 5.01.”

5

Installing HP OpenView 5.01

HP OpenView for Sun SPARCstation, Version 5.01, is the network management software application that runs in conjunction with NavisCore on the NMS. This chapter describes how to:

- Set up the system
- Install HP OpenView 5.01 software on the system
- Disable IP Discovery
- Verify the installation
- Install HP OpenView patches

Before You Begin

Before you set up the system, verify you:

- ☑ Installed Solaris 2.6
- ☑ Installed Sybase 11.0.3.3
- ☑ Installed the backup server (local, remote, or both)

Setting Up the System

The procedure in this section includes:

- Loading the Ascend-supplied HP OpenView media
- Extracting the installation script from the media
- Running the installation script
- Setting 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 Xterm window.

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

2. Insert the HP OpenView CD-ROM into the CD-ROM drive.

3. Change to the scripts directory by entering:

   `cd /cdrom/cdrom0/cv_scripts`

4. Run the HP OpenView installation script by entering:

   `./install_cvux`

   The following message appears:

   `Verifying superuser privileges.....`

   The NavisCore/UX Installation Menu appears:

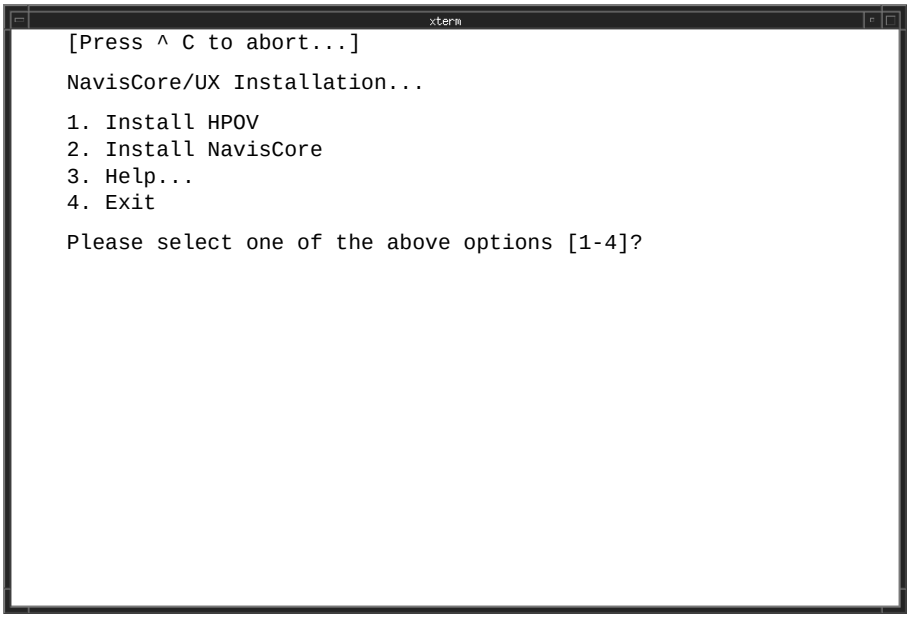


Figure 5-1. NavisCore/UX Installation Menu

5. At the NavisCore/UX Installation Menu, view the HP OpenView installation menu by entering **1**.

The HP OpenView Installation Menu appears.

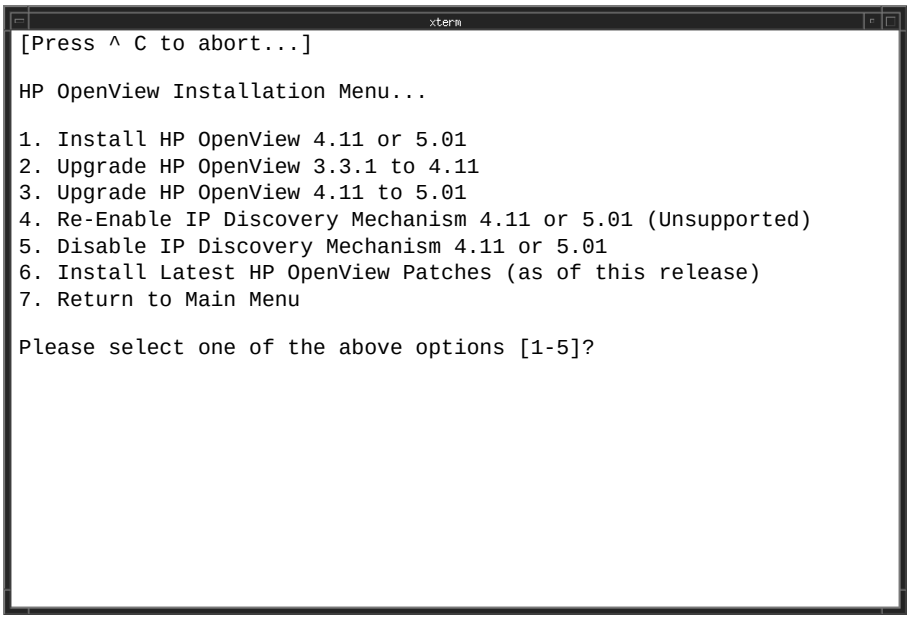


Figure 5-2. HP OpenView Installation Menu

6. At the HP OpenView Installation Menu, set up the system by entering **1**.

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 5.01.

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, see Figure 3-5 on page 3-11.

7. Press Return.

In a new Xterm 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.

The following message appears:

```
What display should the install log xterm go to
(default:0.0)?
```

8. Press Return or enter **[*local hostname*]:0.0**.

   The Tail Window appears and the following message appears in the Xterm window:

```
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]:
```

9. Press Return to continue.

The following message appears:

```
Modifications have been made to '/etc/system'. For the
changes to take effect, you must REBOOT the workstation now.
Then re-run the scripts after the system resumes.

#
```

10. At the # prompt, 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 does not shut down because Sybase now resides on another system.

The setup is complete.

11. Proceed to the section "Installing HP OpenView 5.01."

Installing HP OpenView 5.01

Before you begin, verify you set up the system. See "Setting Up the System" on page 5-2.

In this section, you will:

- Run the installation script
- Install HP OpenView 5.01 software on the system
- Disable IP map discovery
- Verify the installation

To install HP OpenView 5.01:

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

   If you are not logged in as root, enter:

   ```
   su - root
   ```

   When prompted, enter:

   ```
   [root password]
   ```

2. Change to the *cv_scripts* directory by entering:

   ```
   cd /cdrom/cdrom0/cv_scripts
   ```

3. Run the HP OpenView installation script by entering:

   ```
   ./install_cvux
   ```

The following message appears:

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

The NavisCore/UX Installation Menu appears:

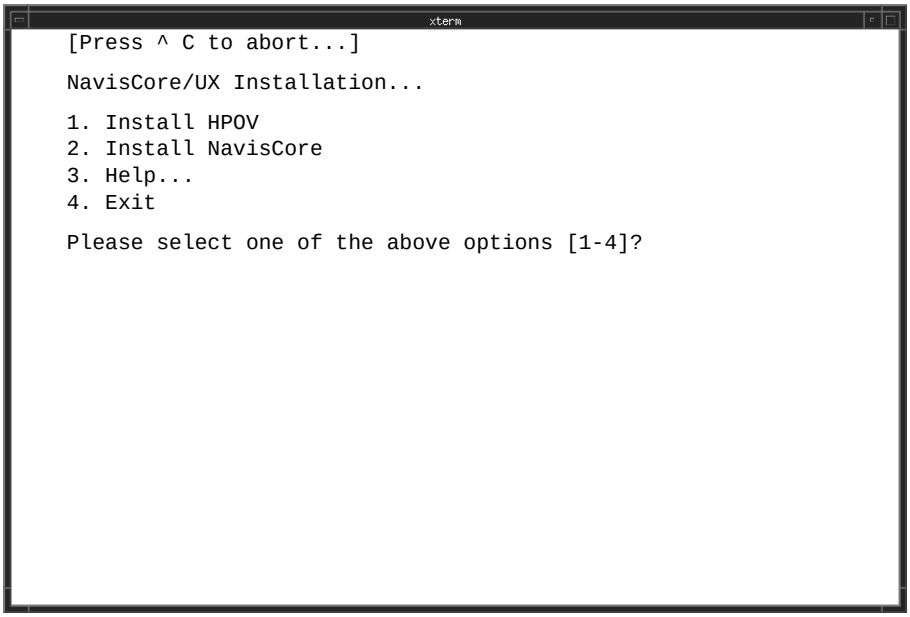


Figure 5-3. NavisCore/UX Installation Menu

4. At the NavisCore/UX Installation Menu, view the HP OpenView installation menu by entering **1**.

The HP OpenView Installation Menu appears.

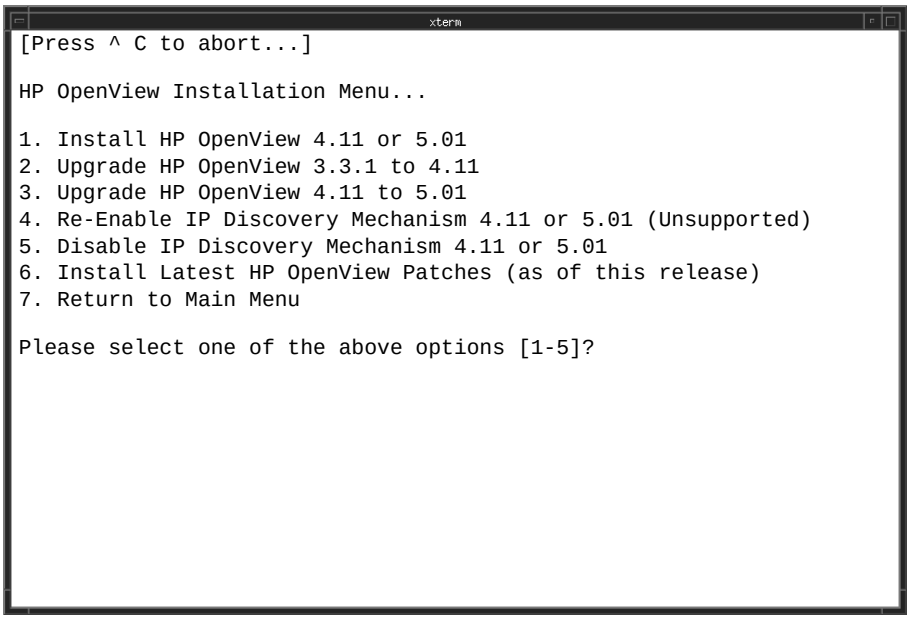


Figure 5-4. HP OpenView Installation Menu

5. At the HP OpenView Installation Menu, enter **1** to install HP OpenView 5.01.

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, see Figure 3-5 on page 3-11.

6. Press Return.

In a new Xterm 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.

The following message appears:

```
What display should the install log xterm go to
(default:0.0)?
```

7. Press Return or enter **[*local hostname*]:0.0**.

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]:
```

8. 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 NavisCore 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] ?
```

9. 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]?
```

10. Press Return to accept the default.

11. At the "Enter group to which the new user belongs" prompt, press Return to accept the default of staff. The following message appears:

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

The user, nms, already exists.

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

12. 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] ?
```

13. 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. See step 12 on page 5-11. Once you create the additional user, the Creating Additional User Accounts menu reappears.

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

14. Different installation messages appear, depending on your installation. Use Table 5-1 or Table 5-2 to perform the appropriate step.

Table 5-1. Scenario 1

Message	Action

If the CD ROM is not in the CD-ROM device, the following message appears:
`Install the media in your device now.`
`**********`
`What is the path on the Local Host:`
	Enter **[*CD-ROM device pathname*]**.

Table 5-2. Scenario 2

Message	Action

If the CD ROM is in the CD-ROM device, the following message appears:
`The CD Installation media was found!`
`[Hit Return to continue with the installation.]`
	Press Return to continue.

After performing the appropriate step, 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:
```

15. 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 Enterprise product
2) Network Node Manager 250 product

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

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

The following message appears:

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

17. Enter **y**.

The following message appears:

```
Do you want to install printable 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 full product for Solaris
2.x
HP OpenView Network Node Manager man pages
Emanate SNMP Simple Agent
Emanate SNMP Simple Agent Man Pages
HP OpenView Network Node Manager printable English manuals

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. To continue, enter **y**.

The installation takes approximately 30 to 45 minutes.

The following messages appear during the installation:

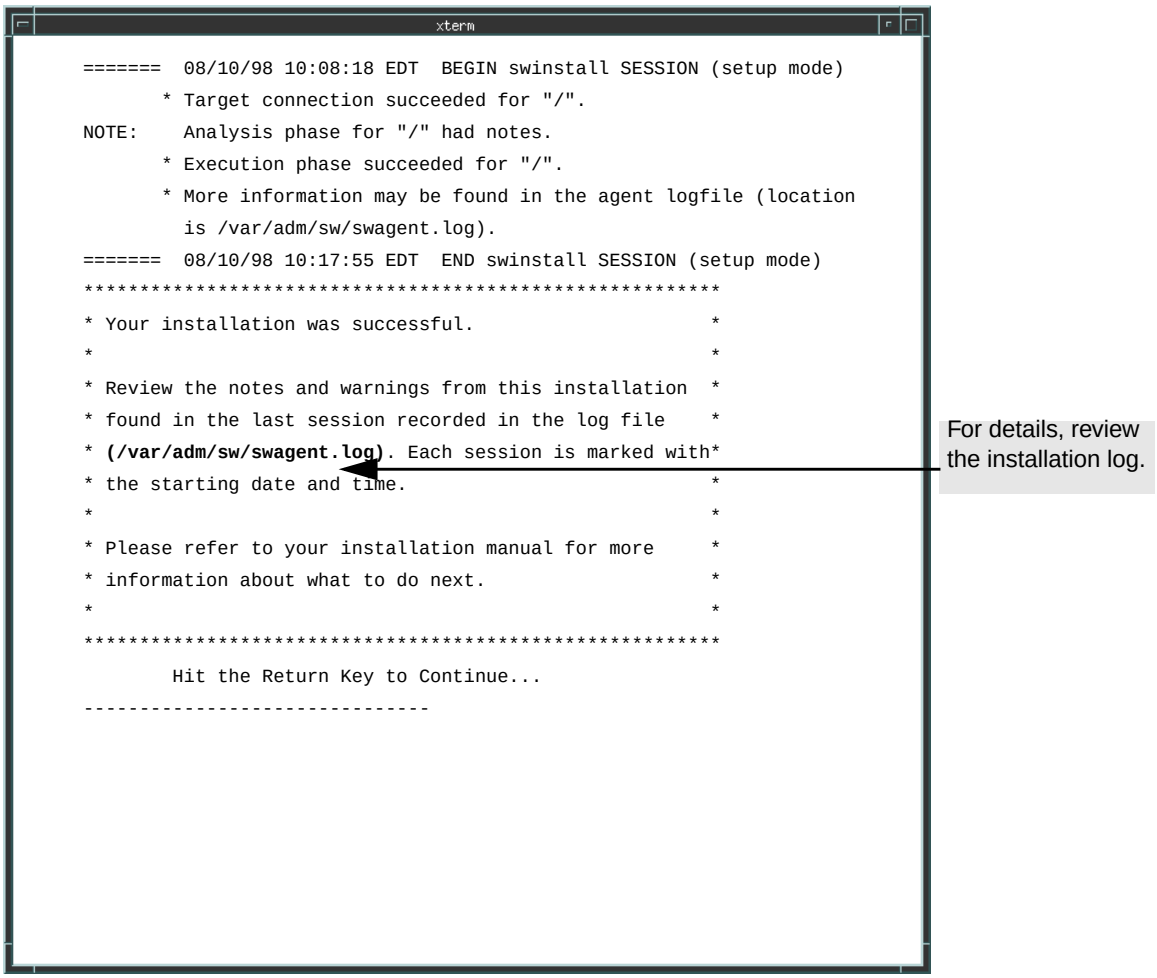


Figure 5-5. HP OpenView Installation Messages

For details on the installation, review the log file (*/var/adm/sw/swagent.log*).

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

The following messages appear:

```
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. Ascend switches do not respond to IP Discovery. Therefore the script disables it. See Appendix C, “IP Discovery” to re-enable IP Discovery.

ASCEND 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]:
```

21. 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 5.01 installation successfully completes when you see the HP OpenView Window and Event Categories window.

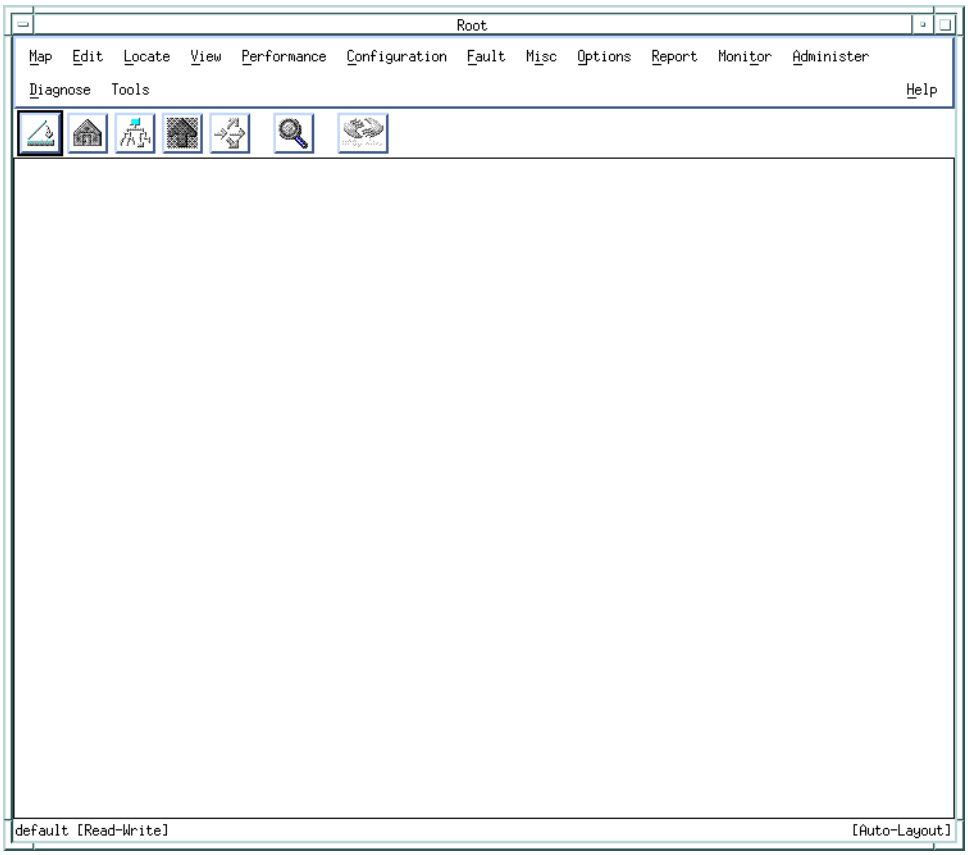


Figure 5-6. HP OpenView 5.01 Window

Completing the Installation

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 **7** to return to the main menu.
4. At the NavisCore/UX Installation Menu, exit by entering **4**.

   The following message appears:

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

   Exiting Installation script.
   ```
5. Close the Tail window by placing the mouse pointer in the window, holding down the **<Ctrl>** button, then pressing the **c** button.
6. Proceed to "Installing the HP OpenView Patches."

Installing the HP OpenView Patches

The PSOV_02091 patch and the PSOV_02161 patch resolve an anomaly that occurs when you run HP OpenView 5.01 on a Solaris 2.6 operating system. If you run HP OpenView 5.01 on Solaris 2.6 without installing these patches and the HP OpenView database is empty, you receive the error message `unable to connect to HP OpenView object databases`. The patches resolve this problem.

To install the HP OpenView patches PSOV_02091 and PSOV_02161:

1. In the Xterm window, enter **su - root**. When prompted, enter **[*root password*]**.
2. Change to the cv_scripts directory by entering:

   `cd /cdrom/cdrom0/cv_scripts`
3. Start the HP OpenView installation script by entering

   `./install_cvux`

   The following message appears:

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

   The NavisCore/UX Installation menu appears (Figure 5-1).
4. At the NavisCore/UX Installation menu, enter **1** to view the HP OpenView Installation menu.

   The HP OpenView Installation menu appears (Figure 5-2).
5. Enter **6**.

   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.
6. Press Return.

In a new Xterm 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.

The following message appears:

```
What display should the install log xterm go to
(default:0.0)?
```

7. Press Return or enter **[*local hostname*]:0.0**.

   The following message appears:

   ```
   Enter a temporary working directory with at least 170 MBytes
   for the patch installation [default=/tmp/HP_PATCH]?
   ```

8. Press Return or enter **[*patch installation directory*]**.

   The following message appears:

   ```
   Enter a directory with at least 160 MBytes for the patch
   uninstall save files [default=/system/]? /tmp
   ```

9. Press Return or enter **[*patch uninstall save files directory*]**.

   The following message appears:

   ```
   Beginning Patch Installation...
   Patch installation complete.

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

   Stopping the OV Platform...Done.
   Removing netmon...Done.
   Removing ovrepId...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.
   ```

Two possible scenarios occur if the patch installation fails:

Scenario 1

If your workstation does not have enough space in the patch installation directory, the following message appears:

```
There is insufficient space in /tmp/HP_PATCH.
The Patch Installation requires at least 170 MBytes of free
space, you only have xx MBytes. Try again when more space is
available. Exiting....
```

where xx is the free space you have.

Scenario 2

If your workstation does not have enough space in the uninstall directory, the following message appears:

```
There is insufficient space in /system/[Patch Directory].
The Uninstall Directory requires at least 160 MBytes of
free space you only have xx MBytes. Try again when there is
more space. Exiting....
```

where xx is the free space you have. **Note**: The final uninstall tar file takes up approximately 98 MB of space.

Resolving either scenario

If you do not have enough space for either directories, free up space in the directory(ies) (for example, shown in bold in the error messages above) and install the patch files again.

10. When the patch installation completes, press Return.

11. At the HP OpenView Installation Menu, exit by entering **7**.

12. At the NavisCore/UX Installation Menu, exit by entering **4**.

If you need to remove the patches, see "Removing the HP OpenView Patches" on page 5-21.

13. In the Xterm window, enter:

```
eject cdrom
```

14. Remove the media from the media device.

15. Proceed to Chapter 6, "Installing NavisCore."

Removing the HP OpenView Patches

When you install the PSOV_02091 and PSOV_02161 patches, the PSOV_02091.save.tar and PSOV_02161.save.tar files are created and placed in the uninstall save files directory (e.g., */system/PSOV_02091* and */system/PSOV_02161*). These files enable you to remove the patches if you need to.

To remove PSOV_02091:

1. Log in as root.
2. Extract the PSOV_02091.save.tar file by entering:

   ```
   tar -xvf PSOV_02091.save.tar
   ```

3. To start the deinstall program, enter:

   ```
   deinstall_patch
   ```

To remove PSOV_02161:

1. Log in as root.
2. Extract the PSOV_02161.save.tar file by entering:

   ```
   tar -xvf PSOV_02161.save.tar
   ```

3. To start the deinstall program, enter:

   ```
   deinstall_patch
   ```

6

Installing NavisCore

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

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

The sections in this chapter describe how to install NavisCore and add a static route to the NMS.

Before You Begin

Before you install NavisCore, verify you:

- ☑ Installed Solaris 2.6
- ☑ Installed Sybase 11.0.3.3
- ☑ Installed HP OpenView 5.01

Installing NavisCore

To install NavisCore:

1. Verify you are logged in as root. 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:

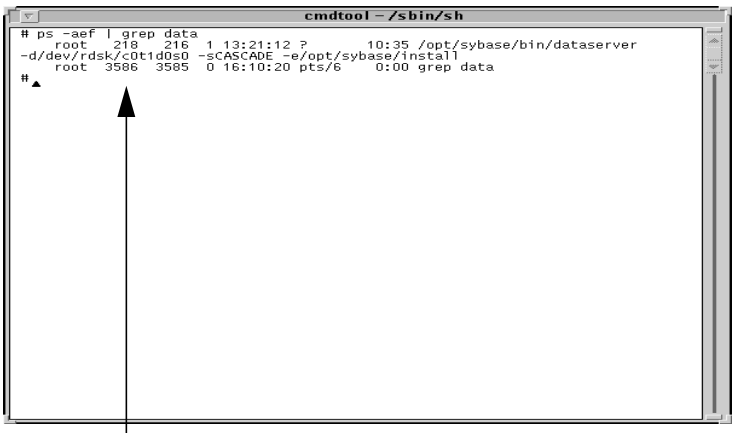


Figure 6-1. Running the Sybase Server

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:

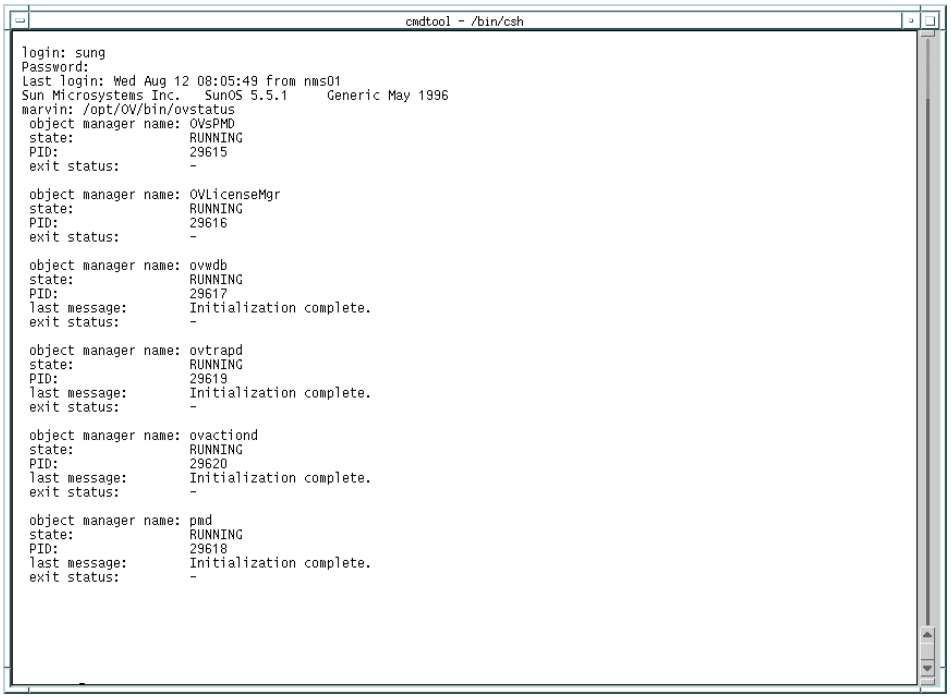


Figure 6-2. HP OpenView Services window

5. If HP OpenView Services is not running, enter:

   `/opt/OV/bin/ovstart`

6. Use either procedure in Table 6-1 to run the Sybase installation script:

Table 6-1. NavisCore Installation Media Types

Media Type	Procedure
CD-ROM	**1.** Insert the NavisCore CD-ROM into the CD-ROM drive. **2.** Change to the *cv_scripts* directory by entering: **`cd /cdrom/cdrom0/cv_scripts`** **3.** Run the installation script by entering: **`./install_cvux`**
From Ascend's FTP Server	**1.** Put the tar file in */tmp* directory **2.** In an Xterm window, enter: **`cd /opt`** **3.** Extract only the scripts from the NavisCore tar file by entering: **`tar xvf /tmp/[`*`filename`*`] cv_scripts`** where [***filename***] is the filename, for example *CascadeView.04.01.00.00.tar*. **4.** Move to the *cv_scripts* directory by entering: **`cd cv_scripts`** **5.** Run the installation script by entering: **`./install_cvux`**

The NavisCore/UX Installation menu appears (Figure 6-3).

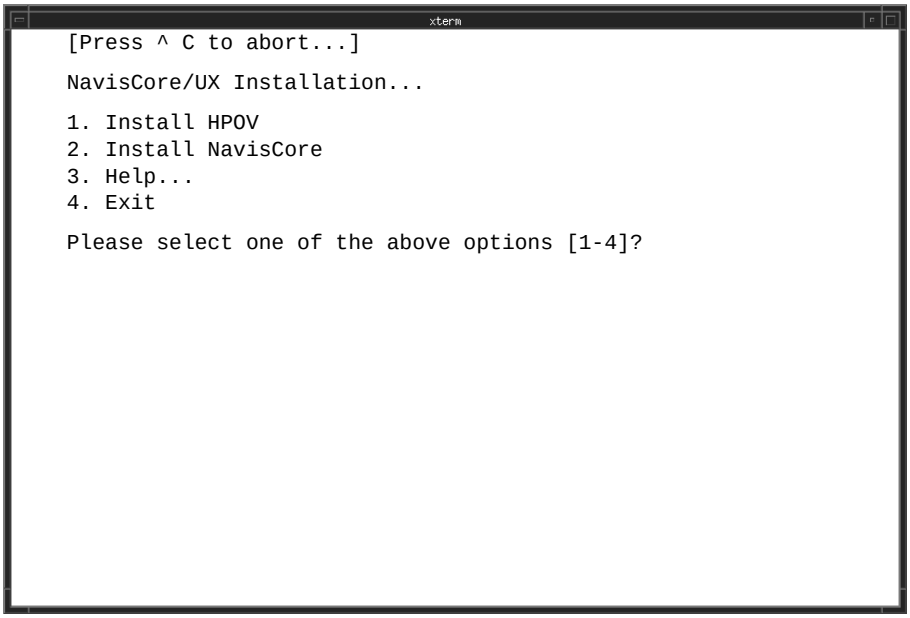


Figure 6-3. NavisCore/UX Installation Menu

6. At the NavisCore/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 a log of the installation process. To view an example of the Tail window, see Figure 3-5 on page 3-11.

7. Press Return.

In a new Xterm 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.

   The following message appears:

   ```
   What display should the install log xterm go to
   (default:0.0)?
   ```

8. Press Return or enter **[*local hostname*]:0.0**.

The Tail Window and the NavisCore Installation menu appear:

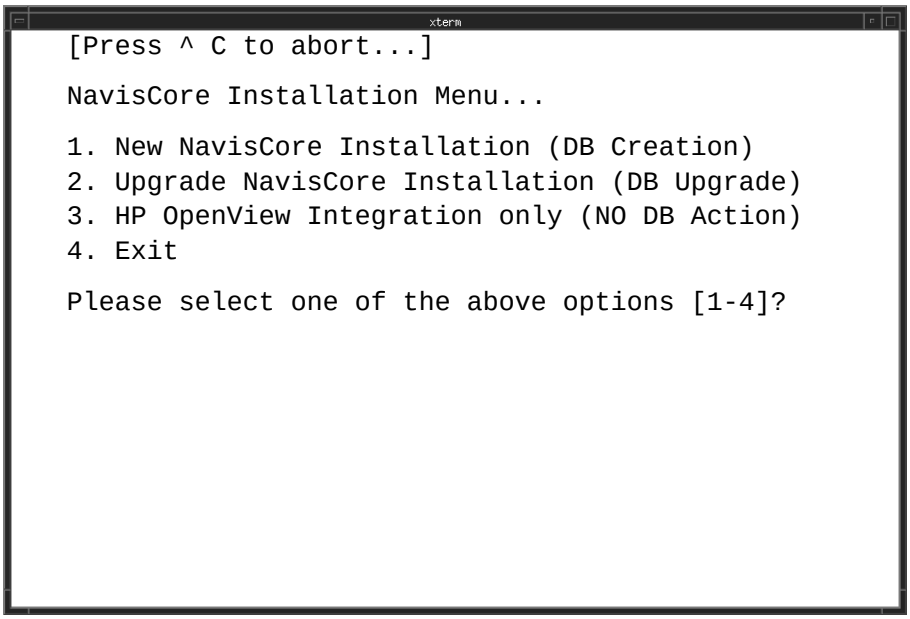


Figure 6-4. NavisCore Installation Menu

9. Select a new NavisCore installation by entering **1**.

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]:
```

10. Press Return to continue.

See the Sybase 11 worksheet in Appendix F for step 11 through step 15.

The following message appears:

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

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

11. Press Return to accept the default of */opt/sybase* or enter **[*Sybase install path*]**.

12. At the “Enter Database Server Name” prompt, press Return to accept the default, CASCADE or enter **[*Database Server Name*]**.

13. At the “Enter the Sybase system administrator user name” prompt, press Return to accept the default, sa or enter **[*Sybase SA user name*]**.

14. At the “Enter the NavisCore database name” prompt, press Return to accept the default, cascview or enter **[*NavisCore database name*]**.

15. At the “Enter 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’) ?
```

16. Press Return.

The following message appears:

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

What is the path of the local host:
```

17. Do one of the following:

- For CD ROM drives, enter:

  `/cdrom/cdrom0/[`*`filename`*`]`

  where **[*filename*]** is the NavisCore filename, *CascadeView.04.01.00.00.tar*

- For files from Ascend's FTP server, enter:

  `/tmp/[`*`filename`*`]`

  where [***filename***] is the NavisCore filename, for example *CascadeView.04.01.00.00.tar.*

See the Sybase 11 worksheet in Appendix F for the name of the media device. The media extraction takes approximately five minutes. The following message appears:

```
The CD Installation Media was found!

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

18. Press Return to continue.

The following message appears:

```
Extracting CV/UX Installation Media into /opt...Done.

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

19. Press Return to continue.

The following message appears:

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

Creating a New NavisCore database
*********************************

Enter the NavisCore database size (default: 100):
```

20. Press Return to accept the default of 100.

21. At the "Enter the NavisCore database Log size" prompt, press Return to accept the default, 100.

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

```
************************************
Install NavisCore Successful...
Hit Return to Continue
```

The NavisCore Installation menu reappears.

22. At the NavisCore Installation menu, exit by entering **4**.
23. At the NavisCore/UX Installation menu, exit by entering **4**.
24. Close the Tail window by placing the mouse pointer in the window, holding down the **<Ctrl>** button, then pressing the **c** button.

    The installation of NavisCore is complete.
25. Proceed to "Defining a Static Route to the NMS" on page 6-11.

Defining 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 6-5 shows a sample static route connection. When you first create the Map, the default internal network address (152.148.0.0) is displayed.

This section assumes you have already installed the gateway switch. See the appropriate manual.

If you use Routing Information Protocol (RIP) to communicate with your network, you do not have to define a Static Route to the NMS. For more information on RIP, see the *NavisCore IP Navigator Configuration Guide.*

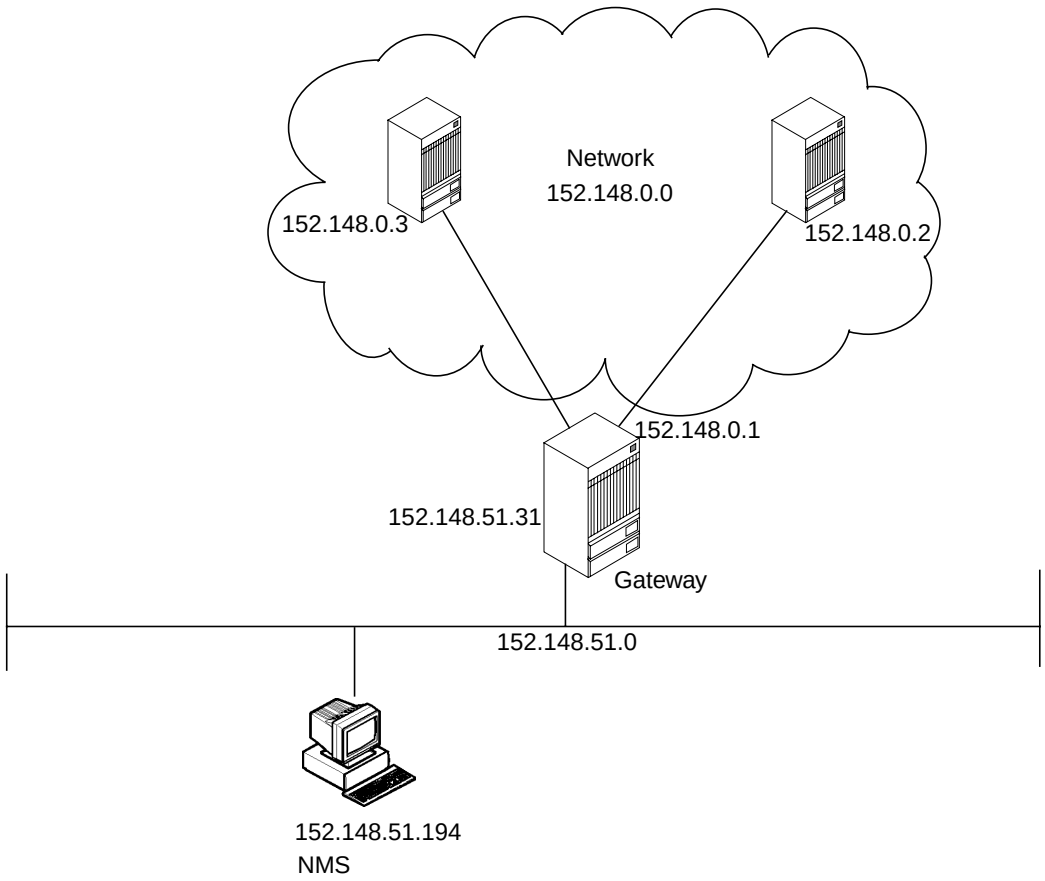


Figure 6-5. Static Route Connection Example

To define a static route from the switch to the NMS:

1. Verify that you are logged in as the root user. You should see a # prompt.
2. Enter the following command:

   `vi /etc/rc2.d/S98netmgt`

   The script */etc/rc2.d/S98netmgt* adds the static route automatically during system reboot.
3. While holding down the Shift key, type **G** and press Return to go to the end of the file.
4. Type **o** and press Return to open a new line.
5. Add the following lines to the end of the file:

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

For the switch network number, use a valid IP address assigned to you by the American Registry for Internet Numbers (ARIN).

6. Press the Escape key.
7. Type **:wq!** and press Return.
8. Log in as root user. Enter the password when prompted.
9. Enter the following command to add the static route:

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

10. Follow the steps in Appendix D, “Integrating NavisCore with HP OpenView” to integrate NavisCore with HP OpenView.

7

Backup Procedures

This chapter describes how to:

- Back up the Sybase 11.0.3.3 server to the local backup server the first time
- Perform subsequent Sybase 11.0.3.3 backups to the local backup server
- Back up HP OpenView 5.01 databases
- Save Sybase 11.0.3.3 and HP OpenView databases to tape
- Change the SA password

The Technical Assistance Center recommends that you perform daily backups of the Sybase 11.0.3.3 Server. For more information on Sybase 11.0.3.3 backup procedures, see 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 Assistance Center for specific instuctions. Do not attempt to restore this database without Ascend's help. You can contact the Technical Assistance Center at one of the following numbers:
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

Ascend recommends customers to periodically test the integrity of Sybase and HP OpenView backups by loading the backups on a separate test SPARC workstation.

You can script the backup procedures to perform backups automatically. However, Ascend does not provide these scripts. These scripts are left to the customer's discretion.

Backing Up to the Local Backup Server the First Time

To back up the Sybase 11.0.3.3 server to the local backup server the *first* time:

1. Log in as the Sybase user by entering:

   `su - sybase`

   If you have a two-system configuration, Sybase on one workstation, HP/NavisCore on another, log on to either the Sybase or HP/NavisCore server workstation.

2. Create a backup directory by entering:

   `mkdir backup`

3. Enter the following command:

   `script /opt/sybase/backup/sybck.out`

   The script command saves any database output from the dbcc checkdb command (Step 5) and places it in the *sybck.out* file. In addition, output is displayed on screen.

4. Initiate an isql session by entering:

   `isql -U sa -P [`*`SA password`*`]`

   For example, superbase.

5. Check for database errors by entering:

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

1> dbcc checkdb(cascview)
2> go

1> dbcc checkalloc(master)
2> go

1> dbcc checkalloc(cascview)
2> go

1> dbcc checkcatalog(master)
2> go

1> dbcc checkcatalog(cascview)
2> go

1> quit
```

   The following message is normal and should be disregarded:

```
*** NOTICE:  Notification of log space used/free cannot be
reported because the log segment is not on its own device.
```

If you encounter errors when you perform the **dbcc checkdb** command, do not proceed any further and call the Technical Assistance Center (TAC):
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

6. Close the Tail window by placing the mouse pointer in the window, holding down the **<Ctrl>** button, then pressing the **d** button.
7. Check for errors in the */opt/sybase/backup/sybck.out* file.
8. Initiate an isql session by entering:

   isql -U sa -P [*SA password*]

   For example, superbase.

9. If there are no dbcc errors, save the master and cascview databases by entering:

```
1> dump database master to
"/opt/sybase/backup/masterbackup.[Date]"
2> go

1> dump database cascview to
"/opt/sybase/backup/cascbackup.[Date]"
2> go

1> quit
```

   The **[*Date*]** refers to today's date in MM-DD-YY format.

10. Proceed to "Backing Up HP OpenView Databases" on page 7-7.

Subsequent Backups to the Local Backup Server

Use these steps to back up the Sybase 11.0.3.3 Server to the local backup server on a daily basis.

The Ascend Technical Assistance Center (TAC) strongly recommends that you back up the Sybase Server daily.

1. Log in as the Sybase user by entering:

```
su - sybase
```

   If you have a two-system configuration, Sybase on one workstation, HP/Navis-Core on another, log on to either the Sybase or HP/NavisCore server workstation.

2. Enter the following command:

```
script /opt/sybase/backup/sybck.out
```

   The script command saves any database output from the dbcc checkdb command (Step 4) and places it in the *sybck.out* file. In addition, the output is displayed on screen.

3. Initiate an isql session by entering:

```
isql -U sa -P [SA password]
```

   For example, superbase.

4. To check the consistency of the database, enter:

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

1> dbcc checkdb(cascview)
2> go

1> dbcc checkalloc(master)
2> go

1> dbcc checkalloc(cascview)
2> go

1> dbcc checkcatalog(master)
2> go

1> dbcc checkcatalog(cascview)
2> go

1> quit
```

   The following message is normal and should be disregarded:

```
*** NOTICE:  Notification of log space used/free cannot be
reported because the log segment is not on its own device.
```

If you encounter errors when you perform the **dbcc checkdb** command, do not proceed any further and call the Technical Assistance Center (TAC):
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

5. Stop the script command by holding down the **<Ctrl>** button, then pressing the **d** button.
6. Check for errors in the file */opt/sybase/backup/sybck.out* .
7. Initiate an isql session by entering:

```
isql -U sa -P [SA password]
```

   For example, superbase.

8. Save the transaction log by entering:

```
1> dump transaction cascview to
"/opt/sybase/backup/transbackup.[Date]"
2> go
```

   The **[*Date*]** refers to today's date in MM-DD-YY format.

9. Save the master and cascview databases by entering:

```
1> dump database master to
"/opt/sybase/backup/masterbackup.[Date]"
2> go
```

```
1> dump database cascview to
"/opt/sybase/backup/cascbackup.[Date]"
2> go
```

```
1> quit
```

The **[*Date*]** refers to today's date in MM-DD-YY format.

The backup procedures now require you to bulk copy out your Sybase database.

10. If you do not have a directory to save the bulk copy files, create a directory by entering:

```
mkdir /opt/sybase/backup/storedb
```

11. Bulk copy the database to the storedb directory by entering:

```
/opt/CascadeView/bin/cv-copydb.sh out cascview
[SA user password] /opt/sybase/backup/storedb
```

For example,**[*SA user password*]** could be superbase.

Below is sample output. Tables vary with each NavisCore release.

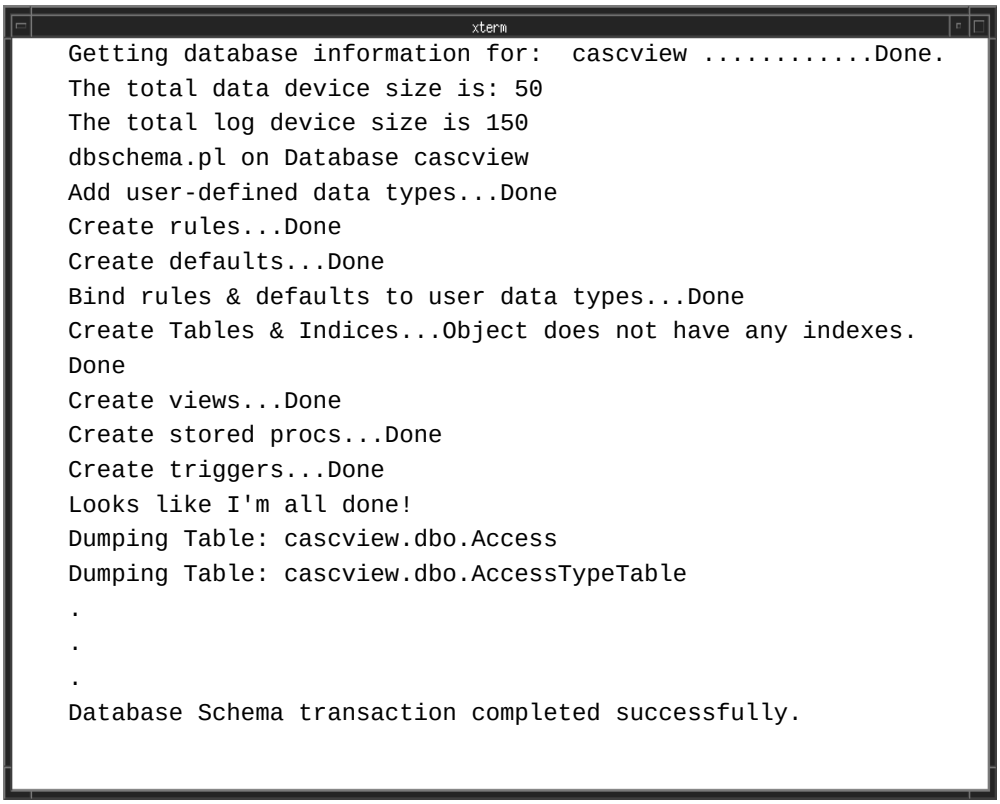


Figure 7-1. Bulk Copy Output

A file called CVCOPY_cascview_data.tar is created in the */opt/sybase/backups/storedb directory.*

12. Proceed to "Backing Up HP OpenView Databases" on page 7-7.

Backing Up HP OpenView Databases

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

1. Log in as the root user by entering:

`su - root`

When the system prompts you for the root password, enter:

`[root password]`

If you have a two-system configuration (Sybase on one workstation, HP and NavisCore on another), you must log on to the HP/NavisCore workstation to perform HP OV backups.

2. Shut down all NavisCore sessions. Verify all NavisCore sessions are shut down by entering:

   `ps -ef | grep ovw`

   If all NavisCore sessions are shut down, the only process you should see running is ovwdb.

3. Shut down HP OpenView services by entering:

   `/opt/OV/bin/ovstop`

4. Access the databases directory by entering:

   `cd /opt/sybase/backup`

5. Enter the following command:

   `tar -cvf ovwdb.tar.[Date] /usr/OV/databases/openview`

   The **[*Date*]** refers to today's date in MM-DD-YY format.

6. Restart HP OpenView Services directory by entering:

   `/opt/OV/bin/ovstart`

Saving Sybase 11.0.3.3 and HP OpenView Databases to Tape

To back up the Sybase 11.0.3.3 and HP OpenView databases to tape:

1. Back up the */opt/sybase/backup* directory to tape. For example, as the root user, type:

   ```
   tar cvf /dev/rmt/0 /opt/sybase/backup
   ```

   If you have a two-system configuration (Sybase on one workstation, HP and NavisCore on another), you must log on to the HP/NavisCore workstation to save the Sybase and HP OV databases to tape.

Ascend recommends daily backups. The preceding steps create multiple backups because the date extension changes daily. Keep at least one week's worth of backups.

Changing the System Administrator (SA) Password

For security purposes, Ascend recommends you change the default password (superbase) to one you define yourself. This password is similar to the UNIX root password. If you lose the SA password, you cannot log in as the system administrator.

To change the Sybase password:

1. At the # prompt, enter:

   ```
   su - sybase
   ```

   When prompted, enter **[*Sybase password*]**.

2. Initiate an isql session by entering:

   ```
   isql -U sa -P [SA user password]
   ```

   For example, superbase.

3. At the prompts, enter:

   ```
   1> sp_password [old SA user password],
   [new SA user password]
   2> go

   1> quit
   ```

Do not forget the SA password. You need the SA password to initiate an isql session.

4. Log in as root by entering **su - root**. When prompted, enter **[*root password*]**.
5. To change the ownership of the */etc/rc0.d/K01sybase* file so only root can read it, enter:

   ```
   chmod 444 /etc/rc0.d/K01sybase
   ```

6. If necessary, vi the file and change the default SA password to the password you defined above.

8

Installing a Two-System Configuration

A two-system NMS configuration requires Solaris and Sybase installed on one workstation, and Solaris, HP OpenView, and NavisCore installed on another workstation.

Two-System Installation Outline

The following outline provides the sequence in which you install a two-system configuration:

System 1 Installation Sequence

- Install the Solaris Operating System (Chapter 2)
- Install Sybase 11.0.3.3 (Chapter 3 and Chapter 4)

System 2 Installation Sequence

- Install the Solaris Operating System (Chapter 2)
- Install HP OpenView 5.01 (Chapter 5)
- Install NavisCore (Chapter 6)

Post NMS Installation Sequence

After you install the NMS software on both systems, do the following:

- Verify Sybase is running (System 1) (page 8-3)
- Verify HP OpenView Services is running (System 2) (page 8-4)
- Add Sybase Server hostname and IP address to HP OpenView Server's */etc/hosts* file (System 2) (page 8-5)
- Create an interfaces file and add Sybase Server information to HP OpenView Server's interfaces file (System 2) (page 8-7)

If you are installing the backup server on a remote workstation, see Appendix A, "Installing a New Remote Backup Server." Note that you will have three workstations running NMS applications.

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**. When prompted, enter **[*Sybase password*]**.
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:

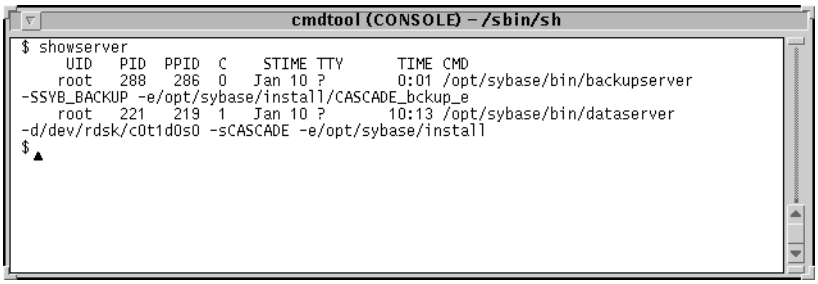


Figure 8-1. Showserver Window

   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 that HP OpenView Services are running
- Add the 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 that HP OpenView Services are running:

1. Make sure 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:

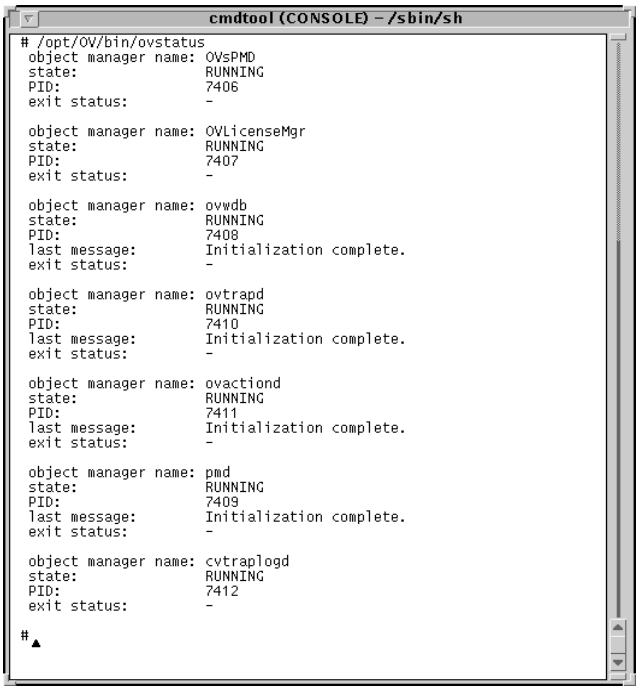


Figure 8-2. HP OpenView Services Window

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 Xterm window, enter:

   `admintool &`

   The Admintool: Users window appears.

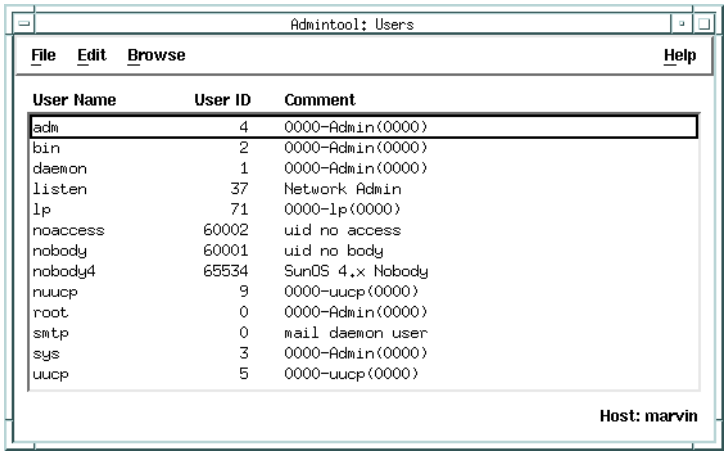


Figure 8-3. Admintool: Users Dialog Box

3. Select Browse ⇒ Hosts.

The Admintool: Hosts window appears.

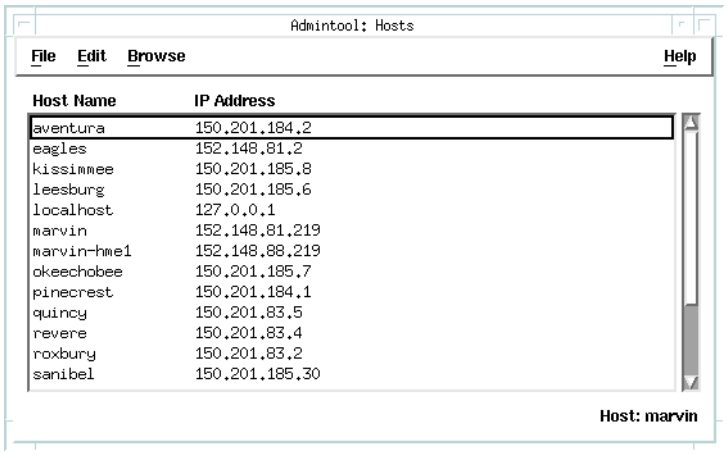


Figure 8-4. Admintool: Hosts Dialog Box

4. Select Edit ⇒ Add.

The Admintool: Add Host dialog box appears.

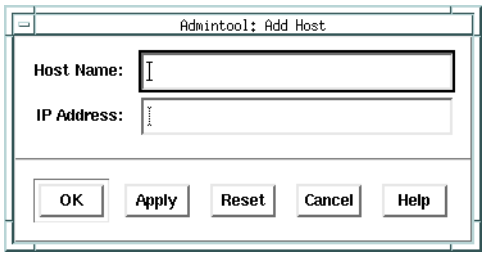


Figure 8-5. Admintool: Add Host Dialog Box

5. In the Admintool: Add Host dialog box, enter:

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 "Copying the Interfaces File (System 2)."

Copying the Interfaces File (System 2)

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

- Extract the Sybase bin and syb directories and place it onto the HP OpenView Server
- Copy an interfaces file for the HP OpenView Server

To create an interfaces file:

1. Verify you are logged in as root. You should see a # prompt.
2. Use either procedure in Table 8-1 to extract the Sybase bin and syb directories from the Sybase tar file:

Table 8-1. Sybase Installation Media Types

Media Type	Procedure

CD-ROM	**1.** Put the CD-ROM in the CD-ROM drive.
	2. In an Xterm window, enter:
	`cd /opt/sybase`
	3. Extract the bin and syb directories from the Sybase tar file by entering:
	`tar xvf /cdrom/cdrom0/syb_install.02.00.00.00 bin`
	`tar xvf /cdrom/cdrom0/syb_install.02.00.00.00 syb`

From Ascend's FTP server	**1.** Put the Sybase tar file in the */tmp* directory.
	2. In an Xterm window, enter:
	`cd /opt/sybase`
	3. Extract the bin and syb directories from the Sybase tar file by entering:
	`tar xvf /tmp/syb_install.02.00.00.00 bin`
	`tar xvf /tmp/syb_install.02.00.00.00 syb`

4. FTP to the Sybase Server workstation by entering:

   `ftp [`***`Sybase Server IP address or hostname`***`]`

5. When prompted, log in as root user.
6. Move to the */opt/sybase* directory by entering:

   `cd /opt/sybase`

7. Copy the interfaces file by entering:

   ```
   get interfaces
   quit
   ```

8. Change to the */opt* directory by entering:

   ```
   cd /opt
   ```

9. Change ownership to Sybase user by entering:

   ```
   chown -R sybase sybase
   ```

10. Change the group to dba by entering:

    ```
    chgrp -R dba sybase
    ```

11. Verify you completed the task successfully by logging into isql. Enter:

    ```
    isql -U sa -P [SA password]
    ```

    For example, superbase.

    The 1> prompt appears.

12. At the 1> prompt, enter:

    ```
    quit
    ```

13. Add a static route to the NMS. (See “Defining a Static Route to the NMS” on page 6-11).

A

Installing a New Remote Backup Server

This appendix describes the steps to install a new remote backup server. These steps are:

Step # 1 — On the Sybase server workstation, add the remote backup server hostname and IP address to the Sybase server host table.

Step # 2 — On the remote backup server workstation, install the remote backup server.

Step # 3 — On the Sybase server workstation, add the remote backup server interface file to the Sybase server interface file.

Before you install a new remote backup server, contact the Technical Assistance Center at one of the following numbers:
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

Adding the Remote Backup Server Hostname

Before you configure a remote backup server, you must add the backup server hostname to the Sybase server host table.

On the Sybase Server Workstation

1. In an Xterm window, log in as root by entering:

   `su - root`

   When prompted, enter:

   `[root password]`

2. In the Xterm window, enter:

   `admintool &`

   The Admintool: Users window appears.

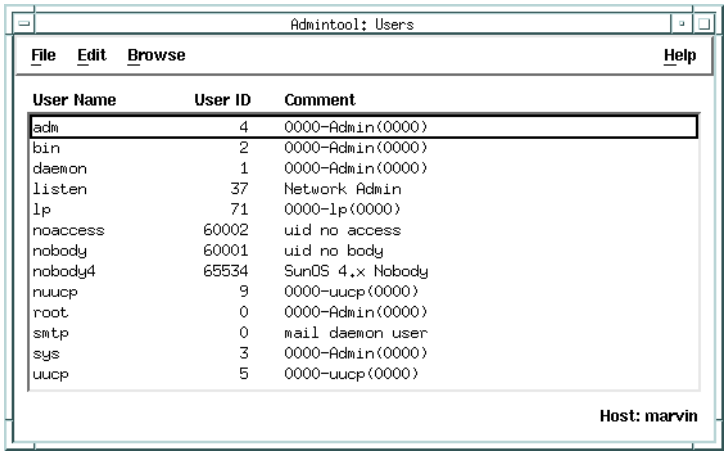


Figure A-1. Admintool: Users Dialog Box

3. Select Browse ⇒ Hosts.

The Admintool: Hosts window appears.

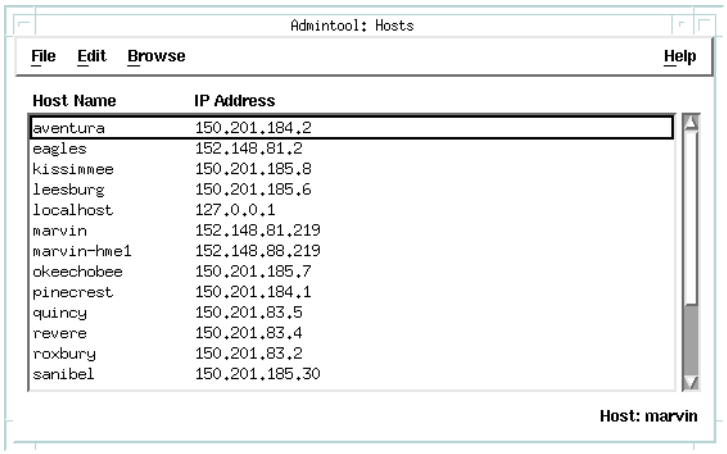


Figure A-2. Admintool: Hosts Dialog Box

4. Select Edit ⇒ Add.

The Admintool: Add Host dialog box appears.

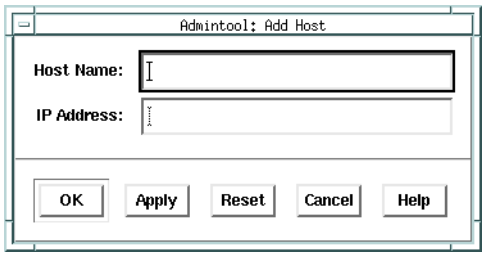


Figure A-3. Admintool: Add Host Dialog Box

5. Complete the fields as described below:

Host Name – Enter remote backup server's hostname.

IP Address – Enter remote backup server's IP address.

See Appendix F to complete the fields.

6. Choose Apply.

The system adds the remote backup server's hostname to the Sybase server's host table.

7. Choose OK.

The Admintool:Hosts dialog box reappears.

8. Select File ⇒ Exit.

Installing a Remote Backup Server

This section describes how to:

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

A remote backup server requires 101 MB available space.

On the Remote Backup Server Workstation

1. Log in as the root user by entering:

`su - root`

When prompted, enter:

`[root password]`

2. Use either procedure in Table A-1 to run the Sybase installation script:

See the Sybase 11.0.3.3 worksheet in Appendix F for your media type.

Table A-1. Sybase Installation Media Types

Media Type	Procedure
CD-ROM	**1.** Insert the CD-ROM into the CD-ROM drive. **2.** In an Xterm window, change to the *cv_scripts* directory by entering: **`cd /cdrom/cdrom0/cv_scripts`** **3.** Run the Sybase installation script by entering: **`./install_sybase`**
From Ascend's FTP Server	**1.** Put the Sybase tar file in */opt* directory. **2.** In an Xterm window, enter: **`cd /opt`** **3.** Extract only the scripts from the Sybase tar file by entering: **`tar xvf /opt/syb_install.02.00.00.00 cv_scripts`** **4.** Change to the *cv_scripts* directory by entering: **`cd cv_scripts`** **5.** Run the Sybase installation script by entering: **`./install_sybase`**

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

In a new Xterm 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.

The following message appears:

```
What display should the install log xterm go to
(default:0.0)?
```

7. Press Return or enter **[*local hostname*]:0.0.**
8. At the Sybase Installation menu, enter **4** to configure a remote Sybase 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:

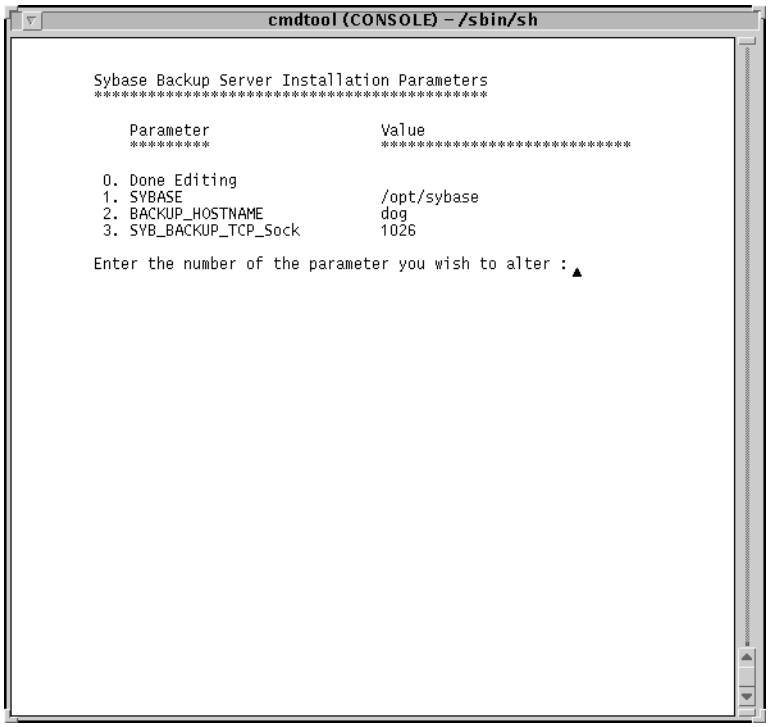


Figure A-4. Sybase Backup Server Installation Parameters Window

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

13. When you have made your changes, continue by entering **0**.

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. Use one of the following examples:

- For CD ROM drives, enter:

  `/cdrom/cdrom0/syb_install.02.00.00.00`

- For files from Ascend's FTP server, enter:

  `/opt/syb_install.02.00.00.00`

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...

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

Running the sybinit utility takes approximately 5 minutes.

16. To continue, press Return.

The Sybase Installation menu appears.

17. At the Sybase Installation menu, exit by entering **7**.

18. Remove the media from the media device drive.

19. Open an Xterm 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 an Xterm window and enter:

   `su - sybase`

2. Run the Sybinit utility by entering:

   `sybinit`

   The following menu appears:

   ```
   SYBINIT

   1. Release directory: /opt/sybase

   2. Edit / View Interfaces File

   3. Configure a Server product

   4. Configure an Open Client/Server product

   Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

   Enter the number of your choice and press return:
   ```

3. Enter **2**.

The following menu appears:

```
INTERFACES FILE TOP SCREEN
Interfaces File:
1. Add a new entry
2. Modify an existing entry
3. View an existing entry
4. Delete an existing entry
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

4. Enter **1**.

   The following menu appears:

```
CREATE NEW INTERFACES FILE ENTRY
1. Server name:
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

5. Enter **1**.
6. At the "Enter the number of your choice and press return" prompt, enter **1**.
7. At the "Enter the name of the server to add (default is '')" prompt, enter **REMOTE_SYB_BACKUP**.

   The following message appears:

```
CREATE NEW INTERFACES FILE ENTRY
1. Server name: REMOTE_SYB_BACKUP
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

8. Hold down the **<Ctrl>** button, then press the **a** button to continue.

The following message appears:

```
SERVER INTERFACES FILE ENTRY SCREEN
   Server name: REMOTE_SYB_BACKUP
1. Retry Count: 0
2. Retry Delay: 0
3. Add a new listener service
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

9. Enter **3**.

   The following message appears:

```
EDIT TCP SERVICE
1. Hostname/Address:
2. Port:
3. Name Alias:
4. Delete this service from the interfaces entry
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

10. Enter **1**.
11. At the "Enter the name of the hostname" prompt, enter **[*name of remote backup server workstation*]**.
12. At the "Press <return> to continue" prompt, press Return.
13. At the "Enter the number of your choice and press return" prompt, enter **2**.
14. At the "Enter the port number to use for this entry (default is ''):" prompt, enter **1027**.
15. At the "Press <return> to continue" prompt, press Return.

    The following message appears:

```
EDIT TCP SERVICE
1. Hostname/Address: csnetux2
2. Port: 1027
3. Name Alias:
4. Delete this service from the interfaces entry
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

16. Hold down the **<Ctrl>** button, then press the **a** button to continue.
17. At the "Is this information correct" prompt, enter **y**.

    The following message appears:

```
SERVER INTERFACES FILE ENTRY SCREEN
Server INTERFACES FILE ENTRY SCREEN
   Server name: REMOTE_SYB_BACKUP
1. Retry Count: 0
2. Retry Delay: 0
Modify or delete a service
Listener services available:
   Protocol     Address     Port     Name Alias
4. tcp          csnetux2    1027
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

18. Hold down the **<Ctrl>** button, then press the **a** button to continue.
19. At the "Write the changes to the interfaces file now" prompt, enter y.

    The following message appears:

```
INTERFACES FILE TOP SCREEN
Interfaces File:
1. Add a new entry
2. Modify an existing entry
3. View an existing entry
4. Delete an existing entry
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

20. Hold down the **<Ctrl>** button, then press the **x** button to exit.

The following menu appears:

```
SYBINIT
1. Release directory: /opt/sybase
2. Edit / View Interfaces File
3. Configure a Server product
4. Configure an Open Client/Server product
Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.
Enter the number of your choice and press return:
```

21. Hold down the **<Ctrl>** button, then press the **x** button to exit.
22. At the $ prompt, view the updated interfaces file by entering:

    `cat interfaces`

    Figure A-5 shows an example of an interfaces file.

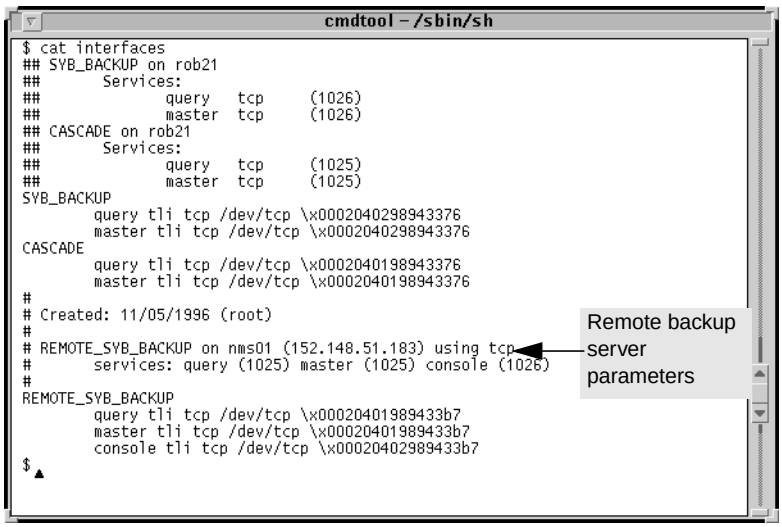


Figure A-5. Interfaces File Window

23. Log into isql by entering:

    `isql -U sa -P [`*`SA password`*`]`

    For example, superbase.

24. Shut down Sybase backup server by entering:

```
1> shutdown SYB_BACKUP
2> go
```

```
1> quit
```

25. Move to the install directory by entering:

```
cd /opt/sybase/install
```

26. Re-start Sybase backup server by entering:

```
startserver -f RUN_SYB_BACKUP
```

B

Backing up to the Remote Backup Server

This appendix describes how to back up Sybase 11.0.3.3 to the remote backup server and save the Sybase 11.0.3.3 database to tape.

The Ascend Technical Assistance Center recommends that you perform daily backups of the Sybase 11.0.3.3 Server. For more information on Sybase 11.0.3.3 backup procedures, see 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 Assistance Center for specific instructions. Do not attempt to restore this database without Ascend's help. You can contact the Technical Assistance Center at one of the following numbers:
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

Ascend recommends customers to periodically test the integrity of Sybase and HP OpenView backups by loading the backups on a separate test SPARC workstation.

You can script the backup procedures to perform backups automatically. However, Ascend does not provide these scripts. These scripts are left to the customer's discretion.

Backing Up to the Remote Backup Server the First Time

To back up the Sybase 11.0.3.3 Server to the remote backup server the *first* time:

On the Sybase/HP/NavisCore Server Workstation

If you have a three-system configuration (HP/NavisCore installed on a workstation, Sybase installed on another workstation, and Remote backup server installed on a third workstation), log on to the HP/NavisCore workstation.

1. Log in as the Sybase user by entering:

   `su - sybase`

2. Create a backup directory by entering:

   `mkdir backup`

   Sybase backups to the remote backup server do not go to the backup directory. This directory will contain the *sybck.out* log.

3. Enter:

   `script /opt/sybase/backup/sybck.out`

   The script command saves output from the dbcc checkdb command (Step 5) and places it in the *sybck.out* file. In addition, the output goes to the screen.

4. Initiate an isql session by entering:

   `isql -U sa -P [`*`SA password`*`]`

   For example, superbase.

5. Check for database errors by entering:

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

1> dbcc checkdb(cascview)
2> go

1> dbcc checkalloc(master)
2> go

1> dbcc checkalloc(cascview)
2> go

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

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

1> quit
```

The following message is normal and should be disregarded:

```
*** NOTICE:  Notification of log space used/free cannot be
reported because the log segment is not on its own device.
```

If you encounter errors when you perform the **dbcc checkdb** command, do not proceed any further and call the Technical Assistance Center:
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

6. Stop the script command by holding down the **<Ctrl>** button, then pressing the **d** button.
7. Check for errors in the */opt/sybase/backup/sybck.out* file.
8. Initiate an isql session by entering:

   ```
   isql -U sa -P [SA password]
   ```

   For example, superbase.

9. If there are no dbcc errors, save the master and cascview databases by entering:

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

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

   1> quit
   ```

   The **[*Date*]** refers to today's date in MM-DD-YY format.

Subsequent Backups to the Remote Backup Server

Use these steps to back up the Sybase 11.0.3.3 Server to the Remote Backup Server on a daily basis.

The Ascend Technical Assistance Center strongly recommends that you back up the Sybase Server daily.

On the Sybase/HP/NavisCore Workstation

If you have a three-system configuration (HP/NavisCore installed on a workstation, Sybase installed on another workstation, and Remote backup server installed on a third workstation), log on to the HP/NavisCore workstation.

1. Log in as the Sybase user by entering:

   ```
   su - sybase
   ```

2. Enter:

   ```
   script /opt/sybase/backup/sybck.out
   ```

   The script command saves output from the dbcc checkdb command (Step 4) and places it in the *sybck.out* file. In addition, the output goes to the screen.

3. Initiate an isql session by entering:

   ```
   isql -U sa -P [SA password]
   ```

   For example, superbase.

4. To check the consistency of the database, enter:

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

   1> dbcc checkdb(cascview)
   2> go

   1> dbcc checkalloc(master)
   2> go

   1> dbcc checkalloc(cascview)
   2> go

   1> dbcc checkcatalog(master)
   2> go

   1> dbcc checkcatalog(cascview)
   2> go

   1> quit
   ```

The following message is normal and should be disregarded:

```
*** NOTICE:  Notification of log space used/free cannot be
reported because the log segment is not on its own device.
```

In addition, if you encounter errors when you perform the **dbcc checkdb** command, do not proceed any further and call the Technical Assistance Center:
1-800-DIAL-WAN (1-800-342-5296) for the United States and Canada
0-800-96-2229 (in the United Kingdom)
1-978-952-7299 (outside the U.S., Canada, and the United Kingdom)

5. Stop the script command by pressing the <**Control**> button, then the **d** button.
6. Check for errors in the */opt/sybase/backup/sybck.out* file.
7. Enter the following command:

   isql -U sa -P [*SA password*]

   For example, superbase.

8. Save the transaction log by entering:

   ```
   1> dump transaction cascview to
   “/opt/sybase/backup/transbackup.[Date]” at REMOTE_SYB_BACKUP
   2> go
   ```

   The <***Date***> refers to today’s date in MM-DD-YY format.

9. Save the master and cascview databases by entering:

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

   ```
   1> dump database cascview to
   "/opt/sybase/backup/cascbackup.[Date]" at REMOTE_SYB_BACKUP
   2> go
   ```

   ```
   1> quit
   ```

   The **[*Date*]** refers to today’s date in MM-DD-YY format.

   The backup procedures now require you to bulk copy out your Sybase database.

10. If you do not have a directory to save the bulk copy files, create a directory by entering:

    mkdir /opt/sybase/backup/storedb

11. Bulk copy the database to the storedb directory by entering:

`/opt/CascadeView/bin/cv-copydb.sh out cascview [SA user password] /opt/sybase/backup/storedb`

For example, **`[SA user password]`** could be superbase.

Below is sample output. Tables vary with each NavisCore release.

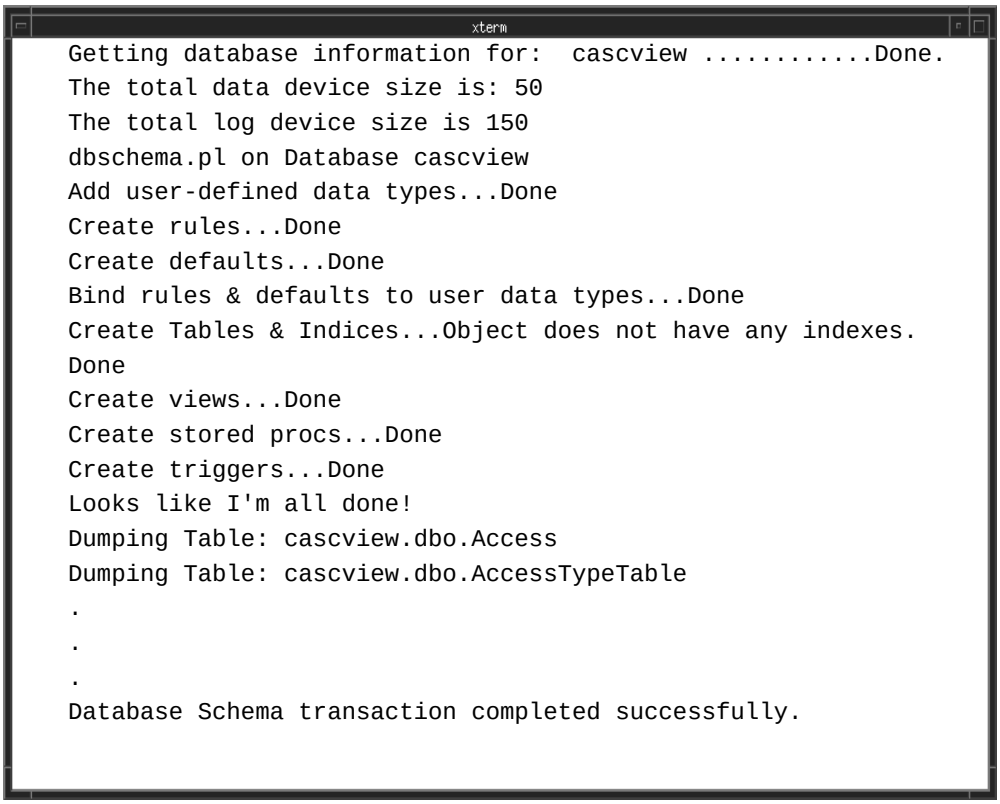


Figure B-1. Bulk Copy Output

A file called CVCOPY_cascview_data.tar is created in the */opt/sybase/backups/storedb directory.*

Backing Up HP OpenView Databases

See "Backing Up HP OpenView Databases" on page 7-7 to back up your HP OpenView databases.

Saving Sybase 11.0.3.3 and HP OpenView Databases to Tape

To back up the Sybase 11.0.3.3 and HP OpenView databases to tape:

On the Remote Backup Server Workstation

1. Back up the */opt/sybase/backup* directory to tape. For example, as the root user, type:

   ```
   tar cvf /dev/rmt/0 /opt/sybase/backup
   ```

Ascend recommends daily backups. The preceding steps create multiple backups because the date extension changes daily. Keep at least one weeks worth of backups.

You can script the backup procedures to perform backups automatically. However, Ascend does not provide these scripts. These scripts are left to the customer's discretion.

C

IP Discovery

This appendix describes how to enable/disable IP Discovery. IP Discovery finds all IP-addressable nodes on your network and creates an object for each discovered node.

The Ascend script automatically disables IP Discovery during the installation of HP OpenView 5.01. However, if you use HP OpenView to manage an IP network, you can re-enable it.

ASCEND DOES NOT SUPPORT IP DISCOVERY. RE-ENABLING THIS FEATURE SEVERELY AFFECTS THE PERFORMANCE OF YOUR NMS SERVER.

Enabling IP Discovery

To enable IP discovery:

1. Log in as root user by entering:

   `su - root`

   When prompted, enter:

   `[`*`root password`*`]`

2. Insert the HP OpenView CD-ROM in the CD-ROM device.
3. Change to the *cv_scripts* directory by entering:

   `cd /cdrom/cdrom0/cv_scripts`

4. Start the Ascend Installation script by entering:

   `./install_cvux`

5. At the NavisCore/UX Installation menu, enter **1** to view the HP OpenView installation menu.
6. At the HP OpenView Installation menu, enter **4** to re-enable IP discovery.
7. Press Return to view the Tail window.

   The following message appears:

   ```
   Ascend 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]
   ```

8. 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.]
```

9. Press Return to continue.
10. At the HP OpenView Installation Menu, go to the NavisCore/UX Installation menu by entering **7**.
11. At the NavisCore/UX Installation Menu, exit by entering **4**.

    The following message appears:

    ```
    Cleaning up temporary files. Done.

    Exiting Installation script.
    ```

12. Close the Tail window by placing the mouse pointer in the window, holding down the **<Ctrl>** button, then pressing the **c** button.

Disabling IP Discovery Mechanism

To disable IP Discovery:

1. Log in as root user by entering:

   su - root

   When prompted, enter:

   [*root password*]

2. Insert the HP OpenView CD-ROM in the CD-ROM device.
3. Change to the cv_scripts directory by entering:

   cd /cdrom/cdrom0/cv_scripts

4. Start the Ascend Installation script by entering:

   ./install_cvux

5. At the NavisCore/UX Installation menu, enter **1** to view the HP OpenView installation menu.
6. At the HP OpenView Installation menu, enter **5** to disable IP discovery.
7. 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.]
```

8. Press Return to continue.

   The following message appears:

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

9. At the HP OpenView Installation Menu, enter **7** to go to the NavisCore/UX installation menu.
10. At the NavisCore/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 pressing the **<Control>** button, then the **c** button.

D

Integrating NavisCore with HP OpenView

This appendix provides instructions on integrating NavisCore with HP OpenView. Perform the following steps to do this:

1. Log in as root by entering:

   `su - root`

   When prompted, enter:

   `[`*`root password`*`]`

2. Use either procedure in Table D-1 to run the NavisCore install script:

Table D-1. Methods for Running the Sybase Installation Script

Media	Description
CD-ROM	**1.** Insert the NavisCore CD-ROM into the CD-ROM drive. **2.** Change to the *cv_scripts* directory by entering: **`cd /cdrom/cdrom0/cv_scripts`** **3.** Run the installation script by entering: **`./install_cvux`**
From Ascend's FTP Server	**1.** Put the tar file in */tmp* directory **2.** In an Xterm window, enter: **`cd /opt`** **3.** Enter: **`tar xvf /tmp/[`*`filename`*`] cv_scripts`** where [***filename***] is the filename, for example *CascadeView.04.01.00.00.tar*. **4.** Move to the cv_scripts directory by entering: **`cd cv_scripts`** **5.** Run the installation script by entering: **`./install_cvux`**

The NavisCore/UX Installation menu appears (Figure D-1).

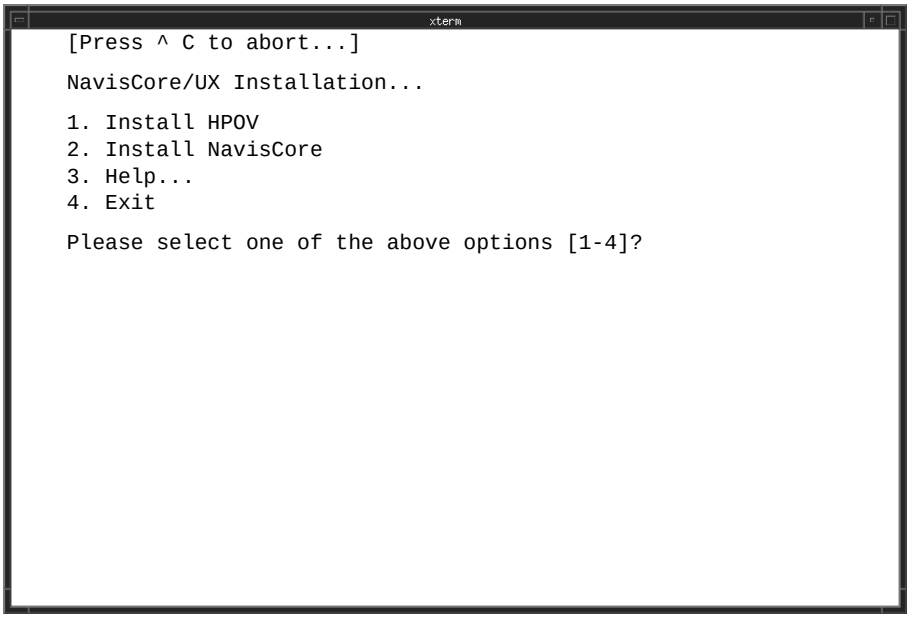


Figure D-1. NavisCore/UX Installation Menu

6. At the NavisCore/UX Installation menu, enter **2**.

   The NavisCore Installation menu appears.

7. At the NavisCore Installation menu, enter **3** to integrate NavisCore with HP OpenView 5.01**.**

   The following message appears:

   ```
   ****************************************
   No Sybase Functionality will be altered.
   ****************************************

   Do you wish to continue? <y|n>:
   ```

8. Press Return to continue.

   The following message appears:

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

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

9. Press Return to accept the default.

10. At the “Enter Database Server Name” prompt, press Return to accept the default of *CASCADE*.

11. At the “Enter Sybase system administrator user name” prompt, press Return to accept the default of sa.

12. At the “Enter the CascadeView database name” prompt, press Return to accept the default of *cascview.*

13. At the “Enter the 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’)?
    ```

14. Enter **n**.

    The following message appears:

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

15. Press Return.

    Various messages appear during the integration, for example:

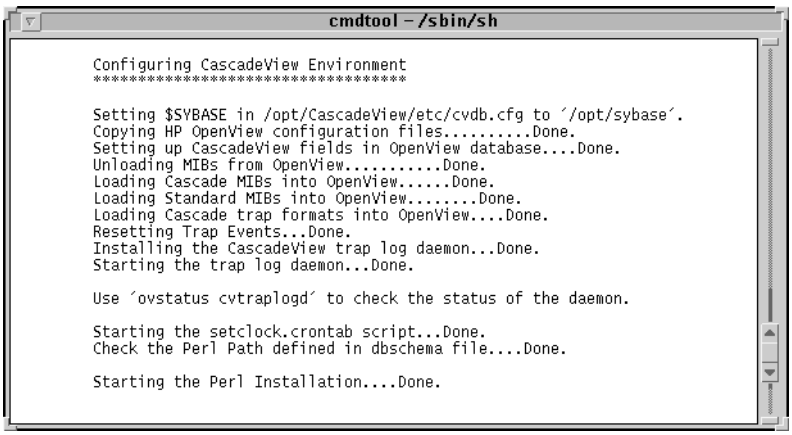


Figure D-2. Integration messages

After the integration completes, the NavisCore Installation menu appears.

16. At the NavisCore Installation menu, exit by entering **4**.

17. At the NavisCore/UX Installation menu, exit by entering **4**.

E

NMS Start Up and Shut Down Procedures

This chapter provides manual start up/shut down procedures. Ascend does not require you to perform these procedures because start up/shut down occurs automatically with the following Ascend-provided scripts (these scripts were installed during the Sybase install):

/etc/rc2.d/S97sybase — Starts Sybase.

/etc/rc2/d/S98sybase — Starts local backup server.

/etc/rc0/K01sybase — Shuts down Sybase.

For example, if a power outage occurs, the script */etc/rc0/K01sybase* shuts down the Sybase server automatically. When power is restored, the scripts */etc/rc2.d/S97sybase* and */etc/rc2d/S98sybase* restart Sybase and local backup servers automatically. To check if you have these files, type **cd [*file directory*]**.

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`

When the system displays the last line of text:

`'iso)_1' (ID = 1).`

Press Return.

3. Start HP OpenView Services by entering:

   `/opt/OV/bin/ovstart`

4. Log in as the nms user by entering:

   `su - nms`

5. To execute HP OpenView and NavisCore, enter:

   `/opt/OV/bin/ovw &`

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

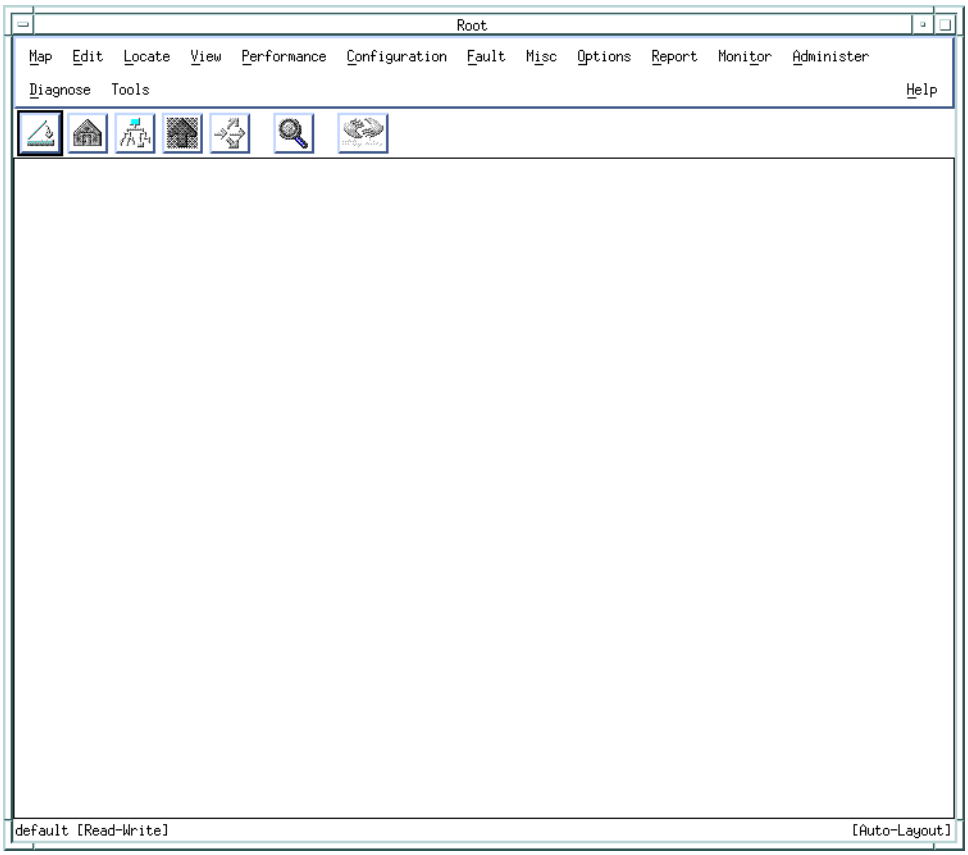


Figure E-1. HP OpenView 5.01 Window

Shutting Down the NMS

Perform the following steps to manually shut down the NMS:

1. To exit NavisCore, 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, halt the system by entering:

   `init 0`

   Shut down time varies according to site.
7. At the ok prompt, power off the system.

F

Sybase Worksheet

During the Sybase installation, the script prompts you for the parameters on this worksheet. The Ascend recommended parameter settings are in italics.

Prerequisites

1. Media Device pathname:_____
   (*for CD ROM devices, **/cdrom/cdrom0**, for files from the FTP server, **/tmp***)
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. NavisCore 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 Ascend Devices

Complete this information if you configure an additional Ascend Device.

1. Data Device:_____

Using Raw Partitions for the New Device

2. Data Device pathname:_____

Using File System Files for the New Device

3. Database Device directory:_____

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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