SYBASE 11 SQL Server Upgrade Guide

Ascend Communications, Inc.

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About This Guide

This guide describes software installation instructions for upgrading your SYBASE 4.9.2 SQL Server to SYBASE 11. The *SYBASE 11 SQL Server Upgrade Guide* is a task-oriented guide that describes, step-by-step, the upgrade process and related tasks. This guide is intended for the system administrator who is responsible for the installation and setup of the Network Management Station (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 Cascade switch hardware. Refer to one of the following hardware installation guides for more information:

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

How To Use This Guide

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

Read	To Learn About
Chapter 1	Installation prerequisites, system, hardware, and software requirements.
Chapter 2	Prerequisite tasks.
Chapter 3	SYBASE 11 upgrade procedures.
Appendix A	Remote Backup Server configuration
Appendix B	SYBASE 11 backups to the Remote Backup Server

Related Documents

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

Cascade

- *Cascade 6000 Hardware Installation Guide* (Product Code: 80006)
- *Cascade B-STDX 8000/9000 Hardware Installation Guide* (Product Code: 80005)
- *Cascade Networking Services Technology Overview* (Product Code: 80001)
- *CascadeView/UX Network Management Station Installation Guide* (Product Code: 80014)
- *CascadeView/UX Network Configuration Guide* (Product Code: 80017)
- *CascadeView/UX Diagnostic and Troubleshooting Guide* (Product Code: 80018)
- *Bulk Statistics for UNIX User's Guide* (Product Code: 80032)
- *Customer Network Management User's Guide* (Product Code: 80016)

- *NMS Provisioning Server User's Guide* (Product Code: 80023)

Third Party

- *SYBASE Commands Reference Manual*
- *SYBASE 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 and screen or system output.	`eject cdrom`
		
		`Please wait...`

[*bold italics*]	Variable parameters to enter.	**[*your IP address*]**
`<Return>`	Press Return or Enter.	`<Return>`
Boldface	User input and screen options in text.	Type **cd install** and ... Select **None** ...
Menu ⇒ Option	Select an option from the menu.	CascadeView ⇒ Logon
Blue border surrounding text	Notes and warnings.	See examples below.
Italics	Book titles, new terms, and emphasized text.	*CascadeView/UX Network Management Station Installation Guide*

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

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

Terminology

SYBASE SQL Server, Version 4.9.2 is referred to as SYBASE 4.9.2 and SYBASE SQL Server, Version 11 is referred to as SYBASE 11 throughout this manual.

Customer Comments

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

1

Overview

SYBASE SQL Server™, Version 11 is a relational database application that manages backup and recovery of database files. Cascade sells SYBASE to customers as a third party product. However, Cascade does not do any software development on the database itself. Cascade does provide two scripts that enable users to upgrade to SYBASE 11. Once installed, SYBASE operates in conjunction with Cascade's Network Management Station (NMS) platform.

Features

Cascade provides two installation scripts that enable an easy method of upgrading to SYBASE 11:

Disk Check Script (check_sys):

- Checks the SYBASE 4.9.2 database size
- Checks the file system size
- Validates database integrity

Upgrade Script (install_sybase):

- Installs the SYBASE 11 software on the system
- Saves the SYBASE 4.9.2 software to a tar and compressed image
- Converts all SYBASE 4.9.2 databases to SYBASE 11 format
- Installs and configures the Backup Server

Upgrade Requirements

The check_sys script must be run several days before the upgrade. Using the check_sys output, verify:

- Each database has 30% free device space (refer to “Checking the SYBASE Database Size” on page 2-13).
- Your local file system has 75 MB free space (refer to “Checking the File System” on page 2-15).
- Your databases are suitable for an upgrade (refer to “Validating Database Integrity” on page 2-16).

Hardware Requirements

The workstation must be equipped with the following:

- 1/4-inch Tape Drive
- SCSI device addresses

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

Table 1-1. SCSI Device Addresses

SCSI Device	Address
Tape drive	4
First hard disk	0
Second hard disk	1

Software Requirements

The following software programs must be installed prior to upgrading to SYBASE 11:

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

Motif Window Manager, Version 1.2.4 (Cascade recommends Sun Express Motif 1.2.4) — Runs client applications, such as electronic mail, and enables you to customize your visual display, such as change the position and size of windows.

SYBASE SQL Server™, Release 4.9.2 — A relational database software program used to store database information and provide backup and recovery of database files.

HP OpenView, Version 3.3.1 — HP OpenView is the platform on which the CascadeView/UX software resides. *SNMP Management Platform* - A graphical user interface designed to integrate network management and system management applications, providing network management functionality through pull-down menus and dialog boxes. *Network Node Manager (Optional)* - Provides the alarm-filtering user interface and enables the Event Browser.

CascadeView/UX, Version 2.0 — Provides the Cascade-specific configuration and monitoring tools needed to configure, monitor, and control a Cascade network. CascadeView/UX configuration and monitoring tools are fully integrated within the HP OpenView graphical user interface.

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Completing Prerequisite Tasks

This chapter describes the prerequisite tasks you must complete before upgrading to SYBASE 11. Cascade recommends that you perform these steps in the following sequence:

- Complete the SYBASE 11 Upgrade Worksheet
- Bulk copy your databases
- Log off all SYBASE users
- Back up and verify your databases
- Run the disk check script to ensure that your databases are ready for an upgrade

Completing the SYBASE 11 Upgrade Worksheet

Fill out the SYBASE 11 Upgrade Worksheet in the back of this guide. You will need this information during the upgrade.

Bulk Copying Your Databases

Bulk copying a database creates a copy of every table in your database. The copy can then be restored in a different version of SYBASE. This feature enables you to restore SYBASE 4.9.2 into a SYBASE 11 environment, if necessary.

The SYBASE 11 upgrade procedures do not require such a restoration. However, having a bulk copy does provide an alternate upgrade path if problems occur. After performing the bulk copy, any changes you make to the database will not appear in the bulk copy output.

For further information on bulk copying your databases, refer to your SYBASE Administrator's manual.

To bulk copy the cascview database:

1. Log in as sybase user by typing **su - sybase** <Return>.
2. At the prompt, type **[*sybase password*]** <Return>.
3. Move to the install directory by typing cd install <Return>
4. Type **showserver** <Return> to verify that the SYBASE 4.9.2 Server is running.
5. If the SYBASE 4.9.2 Server is not running,
   type **startserver -f RUN_CASCADE** <Return>
6. Create a directory to store the SYBASE database, for example:

   mkdir storedb <Return>

7. Copy the database to the new directory by typing

   /opt/CascadeView/bin/cv20-bulkcopy-out.sh storedb <Return>

   where cv20 represents your version of CascadeView.

Logging Off All SYBASE Users

You must log off all SYBASE users before upgrading to SYBASE 11.

To log off all SYBASE users:

1. From the HP OpenView File menu, choose File ⇒ Exit to exit CascadeView/UX.
2. Log in as the root user by typing **su - root** <Return>.
3. At the prompt, type **[*root password*]** <Return>.
4. Type the following line to shut down HP OpenView services:

   /usr/OV/bin/ovstop <Return>

5. Log in as the sybase user by typing

   su - sybase <Return>

6. At the prompt, type **[*sybase password*]** <Return>.
7. Verify the SYBASE 4.9.2 Server is running by typing **showserver** <Return>.
   The following window appears:

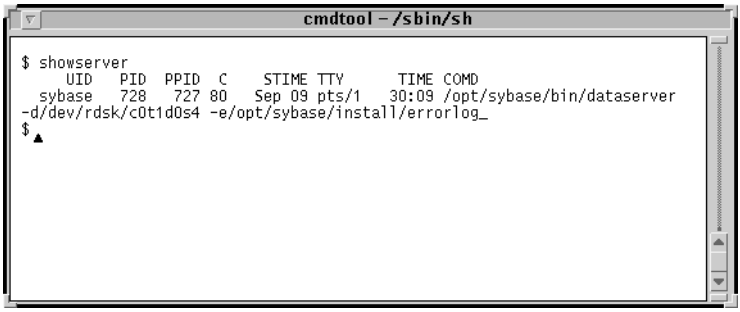

Figure 2-1. Showserver Window

If the server is not running, proceed to Step 10 on page 2-4.

8. Log into isql by typing

   isql -U sa -P superbase <Return>

9. Type the following commands to shut down the SYBASE 4.9.2 Server:

```
1> shutdown <Return>
2> go <Return>
```

The following message appears:

```
Server SHUTDOWN by request
The SQL Server is terminating this process.
DB-LIBRARY error:
         Unexpected EOF from SQL Server.
```

10. Move to the install directory by typing

```
cd install <Return>
```

11. Restart the SYBASE 4.9.2 Server by typing

```
startserver -f RUN_CASCADE <Return>
```

The screen displays several lines of output, ending with the line `'iso_1' (ID = 1).`

Backing Up and Verifying Your Databases

You must back up your databases before performing the upgrade. This enables you to restore SYBASE 4.9.2 if necessary. In addition, you must verify the integrity of your databases before performing the upgrade.

There are two procedures for backing up your databases:

- If this is your *first* database backup, follow the instructions in "Backing Up the SYBASE 4.9.2 Server the First Time."
- If you routinely back up your databases, follow the instructions in "Backing Up the SYBASE 4.9.2 Server."

Backing Up the SYBASE 4.9.2 Server the First Time

Use the following steps the first time you back up the SYBASE Server:

1. Log in as the sybase user by typing

   ```
   su - sybase <Return>
   ```

2. Create a backup directory by typing

   ```
   mkdir backup <Return>
   ```

3. Create two files for the backup process by typing

   ```
   touch backup/masterbackup <Return>
   touch backup/cascbackup <Return>
   ```

4. Log into isql by typing

   ```
   isql -U sa -P superbase <Return>
   ```

   The system displays the 1> prompt.

5. Type the following commands:

```
1> sp_addumpdevice "disk", "masterbackup",
"/opt/sybase/backup/masterbackup",2 <Return>
2> go <Return>

1> sp_addumpdevice "disk", "cascbackup",
"/opt/sybase/backup/cascbackup",2 <Return>
2> go <Return>
```

6. Type the following commands:

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

7. Exit isql by typing

```
1> quit <Return>
```

   The system displays the $ prompt.

8. Make a backup copy of the file by typing

```
cp backup/cascbackup backup/tempcascbackup <Return>
```

9. Re-enter isql by typing

```
isql -U sa -P superbase <Return>
```

   The system displays the 1> prompt.

10. Check the integrity of the databases by typing

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

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

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

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

11. After the commands in Step 10 complete successfully, dump the databases by typing

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

1> dump database cascview to cascbackup <Return>
2> go <Return>

1> quit <Return>
```

12. To back up everything to tape, insert the tape in the tape drive and close the latch. Type the following:

```
cd <Return>
tar -cvf /[Tape device] backup/* <Return>
```

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

Backing Up the SYBASE 4.9.2 Server

Use the following steps if you back up the server on a regular basis. (If you are backing up for the first time, refer to "Backing Up the SYBASE 4.9.2 Server the First Time".)

1. Log in as the sybase user by typing

   ```
   su - sybase <Return>
   ```

2. Log into isql by typing

   ```
   isql -U sa -P superbase <Return>
   ```

   The system displays a 1> prompt.

3. Type the following commands:

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

4. Exit isql by typing

   ```
   1> quit <Return>
   ```

   The system then displays the $ prompt.

5. Make a backup copy of the file by typing

   ```
   cp backup/cascbackup backup/tempcascbackup <Return>
   ```

6. Re-enter isql by typing

```
isql -U sa -P superbase <Return>
```

The system then displays the 1> prompt.

7. Check the integrity of the databases by typing

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

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

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

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

8. Dump the databases by typing

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

1> dump database cascview to cascbackup <Return>
2> go <Return>

1> quit <Return>
```

9. If you complete Step 1 through Step 8 without errors, proceed to Step 10. If you receive errors, call the Technical Response Center.

10. To back up everything to tape, insert the tape in the tape drive and close the latch. Type the following:

    cd <Return>
    tar -cvf /[*Tape device*] backup/* <Return>

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

Running the Disk Check Script

You must run the disk check script prior to upgrading to SYBASE 11. The script checks critical information about your databases.

To run the disk check script:

1. Log in as root by typing **su - root** <Return>.
2. Insert the SYBASE tape into the tape drive and close the door.
3. In a new command tool window, type **cd /opt** <Return> at the system prompt.
4. To extract the scripts from the media device, enter

   tar -xvf [*media device pathname*] cv_scripts

5. Move to the *cv_scripts* directory by entering

   cd cv_scripts

6. Run the disk check script by typing

   ./check_sys <Return>

Refer to your SYBASE 11 Upgrade Worksheet to complete the following steps.

7. At the "What is your Sybase Home Directory [default=/opt/sybase]" prompt, do one of the following:

   - Press Return to accept the default of /opt/sybase.
   - Enter **[*SYBASE 4.9.2 release path*]** <Return>.

8. At the "What is the Database Server Name [default=CASCADE]" prompt, do one of the following:

   - Press Return to accept the default of CASCADE.
   - Enter **[*Existing Database Server Name*]** <Return>.

9. At the "What is your Sybase SA Passwd" prompt, enter ***[4.9.2 Database SA Password]*** <Return>.

10. At the "Do you wish to run the database consistency utility (e.g. dbcc) [Y]" prompt, press Return.

11. At the "Where would you like to save the output to [default=/tmp/check_sys.21105]" prompt, do one of the following:

    - Press Return to accept the default of /tmp/check_sys.21105.

      At the end of the filename, the script appends a unique number specific to the output, for example "21105."

    - Enter ***[filename]*** <Return>.

*The output is also saved to an additional file, which is the filename with a **.cascade** extension. For example, if you save the output to the default file, the filename is **check_sys.21105.cascade**. Send this file via email to Cascade at syb@casc.com for support and troubleshooting.*

The script begins checking the system, and the following lines appear:

```
This may take a few minutes
.....................................................................
.....................................................................
.....................................................
```

After several minutes, the SYBASE configuration information appears, which can be several hundred lines of text.

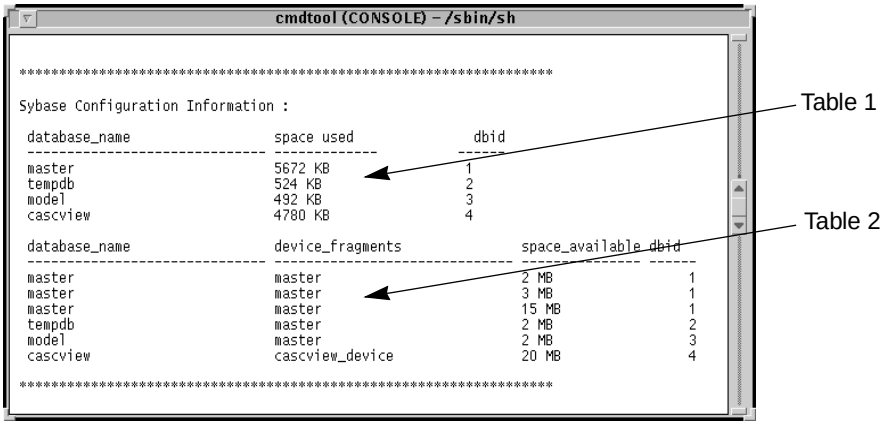

Figure 2-2. Check_Sys Script Output

When the output is complete, the check_sys script has finished. Proceed to the following sections to interpret the results and validate the condition of the databases.

Using the Disk Check Script Output

When the check_sys script completes, refer to Figure 2-2 and use the table information to calculate and verify SYBASE database sizes, file system sizes, and database integrity.

Checking the SYBASE Database Size

1. In Table 1 (refer to Figure 2-2), find the space used for each database. Make note of this number, rounding to the next highest whole integer. In the example below, the space used for the master database is 5672 KB.

```
database_name     space used        dbid
-------------     --------          ----
master            5672 KB           1
tempdb            524 KB            2
model             492 KB            3
cascview          4780 KB           4
```

2. Convert the space used to megabytes by dividing by 1000, rounding to the next highest whole integer. Make note of this number. In the example above, the converted space used for the master database is 6 MB (5672/1000 = 5.672 or 6).

3. In Table 2 (refer to Figure 2-2), to calculate the total space available for each database, add the sizes of the individual device fragments listed in the "**space_available"** column. Add only those fragments that have the same database ID (in the "**dbid"** column). Make note of the total space available. In the example below, the total space available for the master database is 20 MB (2 + 3 + 15).

```
database_name     device_fragments  space_available dbid
-------------     ----------------  -------------   ------
master            master            2 MB            1
master            master            3 MB            1
master            master            15 MB           1
tempdb            master            2 MB            2
model             master            2 MB            3
cascview          cascview_device   20 MB           4
```

4. To upgrade to SYBASE 11, the file system requires 30% free space. Test each database for the required space by multiplying the space used by 1.3. This number should be less than the total size available for the database, or **space used x 1.3 <= space available.**

   For example, using the information for the master database, the calculation is 6x1.3<=20. This indicates there is enough available space on the master database for the upgrade.

If each database (cascview, master) passes the space test, proceed to the next step. If any database fails this test, delete the transaction log by using the **`dump transaction with truncate_only`** *command in each database (refer to Step 3 in "Backing Up the SYBASE 4.9.2 Server" on page 2-8) and re-run the test. If any database fails again, increase the size of your database before you proceed.*

Checking the File System

The information shown in Figure 2-3 lists the disk space used on your local file systems. This information includes file system name, size in kbytes, space used, space available, capacity, and mounted on information.

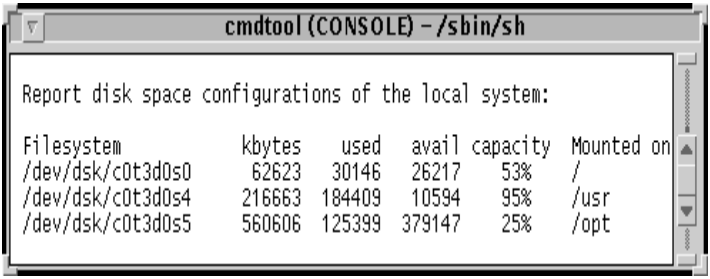

Figure 2-3. Local System Disk Space Window

Verify the local file system has 75 MB of free space. The SYBASE 11 tar file requires 50 MB and the SYBASE System Procs device requires 25 MB.

Validating Database Integrity

In the information shown in Figure 2-4, the system reports the size of each table. This indicates the databases are in good condition. However, if any databases are marked “suspect” or “read only,” the database integrity is not suitable for the upgrade.

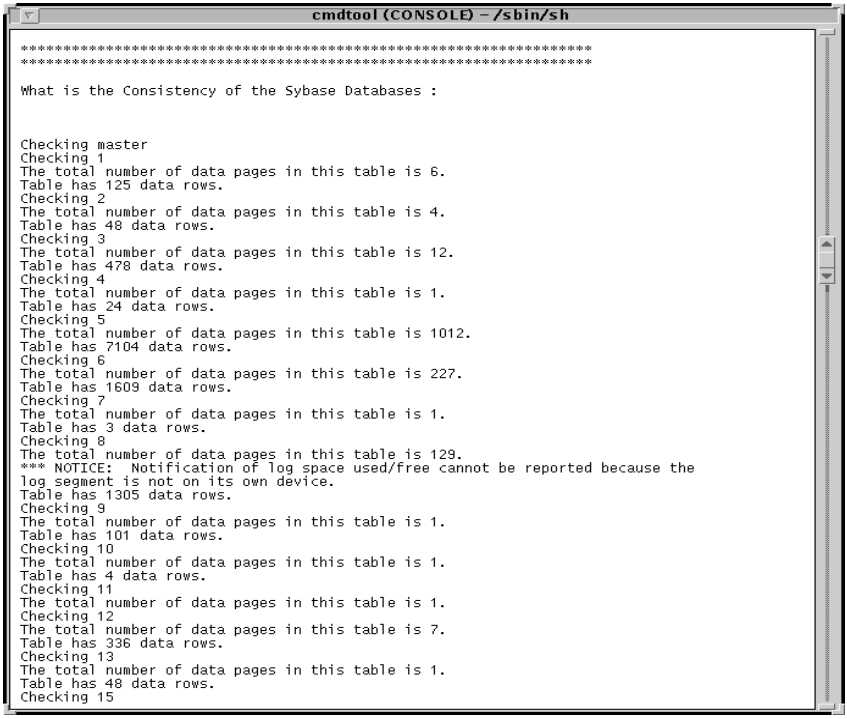

Figure 2-4. SYBASE Database Consistency Window

3

Upgrading to SYBASE 11

This chapter provides installation instructions for upgrading from SYBASE 4.9.2 to SYBASE 11 on your Network Management Station (NMS). The upgrade process requires you to do the following:

- Upgrade to SYBASE 11
- Configure a SYBASE 11 Backup Server
- Back up your SYBASE 11 databases
- Integrate SYBASE 11 with CascadeView

Upgrading to SYBASE 11

Before upgrading to SYBASE 11, verify that the following tasks (described in Chapter 2) are complete:

- ☑ Bulk copy your databases
- ☑ Log off all SYBASE users
- ☑ Back up all your databases
- ☑ Extract the scripts and run the Disk Check script

Running the Upgrade Script

The upgrade script performs the following tasks during the installation:

- Installs the SYBASE 11 software on the system.
- Saves the SYBASE 4.9.2 software in a tar and compressed image called sybase492.tar.Z.
- Converts all SYBASE 4.9.2 databases to SYBASE 11 format.

To run the upgrade script:

1. Log in as root by typing

   su - root <Return>

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

DISPLAY=[type in appropriate host name]***:0.0*** <Return>
export DISPLAY <Return>

(This example uses the Korn shell syntax.)

In addition, in a new command tool window, run **xhost +** *as the user who controls the system console. Executing this command enables you to open the window that displays the installation log.*

2. Move to the /opt directory by typing

   cd /opt <Return>

   If you did not extract the scripts to /opt, substitute the correct directory.

3. Change to the scripts directory by typing

   cd cv_scripts <Return>

4. Type the following command to run the Cascade script:

   ./install_sybase <Return>

   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.

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

   The SYBASE Installation menu appears:

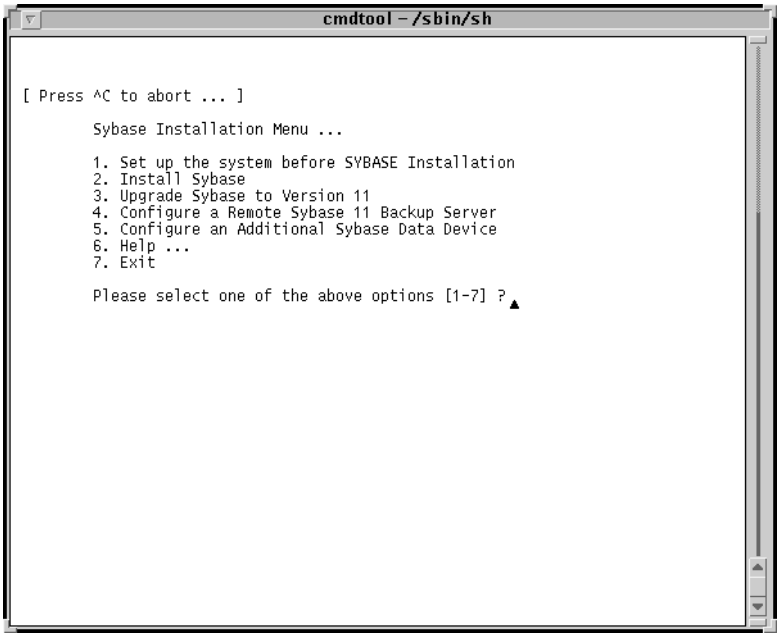

Figure 3-1. Sybase Installation Menu

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

6. At the SYBASE Installation menu, type **3** <Return>.

   The following message appears:

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

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

7. Press Return to continue, or type **n** <Return> to exit the script.

   The following message appears:

   ```
   Sybase 11 Upgrade Information Request
   ************************************
   ```

Refer to your SYBASE 11 Upgrade Worksheet to complete Step 8 through Step 12.

8. At the "Enter the Sybase 4.9.2 release path" prompt, do one of the following:
   - Press Return to accept the default of /opt/sybase.
   - Enter ***[SYBASE 4.9.2 release path]*** <Return>.
9. At the "Enter the Sybase 11 install path" prompt, do one of the following:
   - Press Return to accept the default of /opt/sybase11.
   - Enter ***[SYBASE 11 install path]*** <Return>.
10. At the "Enter the Database Server Name" prompt, do one of the following:
    - Press Return to accept the default of CASCADE.
    - Enter ***[Existing Database Server Name]*** <Return>.
11. At the "Enter the name for the error log" prompt, do one of the following:
    - Press Return to accept the default of CASCADE_err.log.
    - Enter ***[SYBASE 11 Error log pathname]*** <Return>.

12. At the “Enter the Database SA Password” prompt, type ***[4.9.2 Database SA Password]*** <Return>. When prompted, re-enter the password and press Return.

The script verifies your password. If the password fails, the script exits. Restart the script using the procedures in “Running the Upgrade Script” on page 3-2.

The script searches the /etc/services file to locate the TCP socket number. If the script does not locate the number there, it searches the SYBASE interfaces file, as follows:

- If the script locates the TCP socket number in /etc/services, it displays the following message:

```
Setting TCP Socket Numbers for Sybase
-------------------------------------

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

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

a. After verifying the TCP socket number is correct, press Return.

- If the script locates the TCP socket number in the SYBASE interfaces file, it displays the message:

```
Searching for the TCP Socket Numbers under /opt/sybase/
interfaces. It’s possible that multiple entries exist.
You will need to enter the current selection.

I’ve found the following TCP Socket Numbers.

1025
1026

Enter the correct TCP Socket Number from the list above :
```

b. Enter **[*TCP Socket Number of SYBASE 4.9.2*]** <Return>.

After you enter the TCP socket number, the script enters it in the /etc/services file.

The following message appears:

```
Getting the Master Device currently being upgraded
-------------------------------------------------------
```

The script searches for the partition on which the Master device is mounted. If it cannot locate the Master device, the script prompts you for the correct path.

Note that the Master Partition Device may be different from the example.

The system displays the following:

```
Searching......Found.

Master Partition Device=/dev/rdsk/c0t1d0s4

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

13. Press Return to continue.

    The following message appears:

```
Configuring Sybase System Procs Device
**************************************

Enter name for System Procs device directory
[default=/opt/databases]?
```

14. At the “Enter name for System Procs device directory” prompt, do one of the following:

    - Press Return to accept the default of /opt/databases.
    - Type **[*SYBASE 11 System Procs device directory*]** and press Return.

The following message appears:

```
Creating Database Directory...

Making directory for the master device

Enter the size of your System Procs Device in MegaBytes
[default=25]:
```

15. At the “Enter the size of your System Procs Device in MegaBytes” prompt, do one of the following:

    - Press Return to accept the default of 25.
    - Type ***[SYBASE 11 System Procs device size]*** and press Return.

    The system displays the parameters you entered:

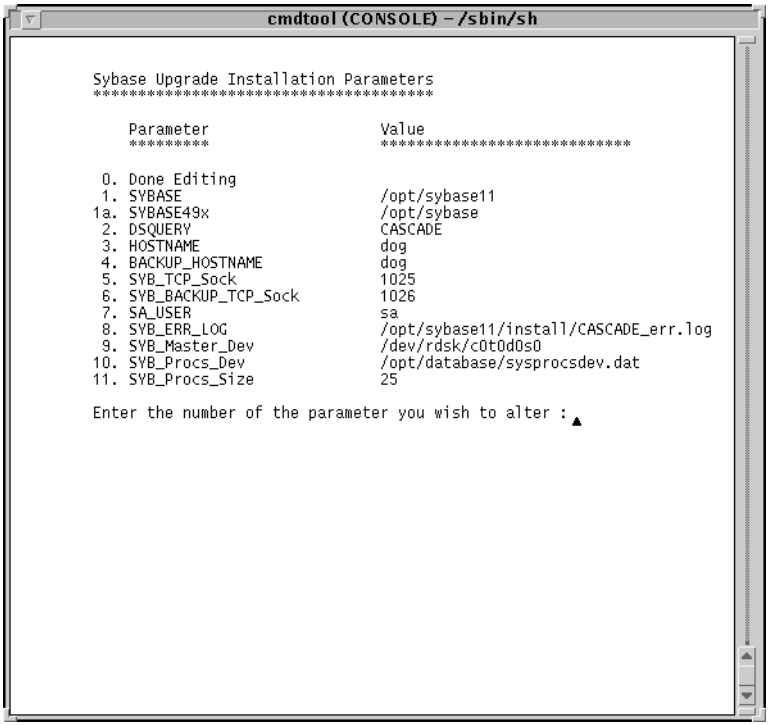

Figure 3-2. Sybase Upgrade Installation Parameters Window

16. To change any device parameters, type the number of the parameter and make the appropriate changes.

17. Once you have made your changes, type **0** (Done Editing) and press Return to continue.

    The following message appears:

```
Installing Sybase Installation Media...

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

18. At the "Enter the full path of tape device" prompt, type **[*Tape device pathname*]** `<Return>`.

    Refer to your SYBASE 11 Upgrade Worksheet for the name of the tape device.

    The following message appears:

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

19. Press Return to continue.

Do not interrupt this process. The upgrade time varies according to your databases sizes.

Call the Technical Response Center at **1-800-DIAL-WAN** *if the upgrade fails.*

The system displays the following:

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

Running 'sybinit' and creating the sybase server...00:
96/08/20 15:16:52.80 server: SQL Server shutdown by
request.00: 96/08/20 15:16:52.81 kernel: ueshutdown: exiting
Install sybase successful...
```

At this time, the sybinit utility shuts down the SYBASE 4.9.2 Server, and the SYBASE 11 Server takes over.

The following message appears:

```
To convert from Sybase 4.9.2 to Sybase 11 the script will
now backup the sybase 492 directory into a file called
/opt/sybase/sybase492.tar.Z

Shutting down the Sybase Server temporarily.

Relocating the Sybase 11 Media to /opt/sybase........Done
Successfully.

Restarting server...
```

The script shuts down the SYBASE 11 Server, and moves the SYBASE 4.9.2 directory from /opt/sybase to a tar and compressed image file called sybase492.tar.Z. The script moves the SYBASE 11 directory to /opt/sybase.

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

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

Running 'sybinit' and creating the sybase server...Backup
Server Install Successful....

The Sybase Upgrade Process is Complete...
*****************************************
```

20. Exit the program.
21. If you are configuring a remote Backup Server, proceed to Appendix A, "Configuring a Remote Backup Server".

Performing SYBASE 11 Backups to the Local Backup Server

Before backing up your SYBASE 11 databases, back up all SYBASE 4.9.2 databases to tape.

This section describes how to

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

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

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

If you need to recover switch data in the cascview database, contact the Technical Response Center at **1-800-DIAL-WAN** *for specific instructions.* ***Do not*** *attempt to restore this database without Cascade's help.*

Backing Up the SYBASE 11 Server to the Local Backup Server the First Time

Before you back up the SYBASE 11 Server, rename or delete any SYBASE 4.9.2 backup files.

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

1. Log in as the SYBASE user by typing

   ```
   su - sybase <Return>
   ```

2. Create a backup directory by typing

   ```
   mkdir backup <Return>
   ```

3. Log into isql by typing

   ```
   isql -U sa -P superbase <Return>
   ```

   The system displays the 1> prompt.

4. Type the following commands:

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

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

5. Check the consistency of the database by typing

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

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

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

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

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

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

1> dump database cascview to cascbackup <Return>
2> go <Return>

1> quit <Return>
```

7. If you completed Step 7 without errors, proceed to “Integrating SYBASE 11 With CascadeView” on page 3-16

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

Performing Subsequent SYBASE 11 Backups to the Local Backup Server

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

Before you back up the SYBASE 11 Server, rename or delete any SYBASE 4.9.2 backup files.

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

1. Log in as the SYBASE user by typing

   ```
   su - sybase <Return>
   ```

2. Log into isql by typing

   ```
   isql -U sa -P superbase <Return>
   ```

   The system displays a 1> prompt.

3. Type the following commands:

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

4. Exit isql by typing

   ```
   1> quit <Return>
   ```

   The system displays the $ prompt.

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

   ```
   cp backup/cascbackup backup/tempcascbackup <Return>
   ```

6. Re-enter isql by typing

   ```
   isql -U sa -P superbase <Return>
   ```

   The system displays the 1> prompt.

7. To check the consistency of the database, type

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

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

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

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

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

   1> dump database cascview to cascbackup <Return>
   2> go <Return>

   1> quit <Return>
   ```

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

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

    ```
    cd <Return>
    tar -cvf [Tape device] backup/* <Return>
    ```

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

Integrating SYBASE 11 With CascadeView

1. At the console login prompt, log in as the nms user and type the appropriate password.

   The system then starts Solaris OpenWindows and displays the $ prompt in the cmdtool (console) window.

2. Log in as the root user by typing

   su - root <Return>

3. Type the appropriate password and press Return.

4. To verify that HP OpenView services are running, type

   /usr/OV/bin/ovstatus <Return>

   The following screen appears:

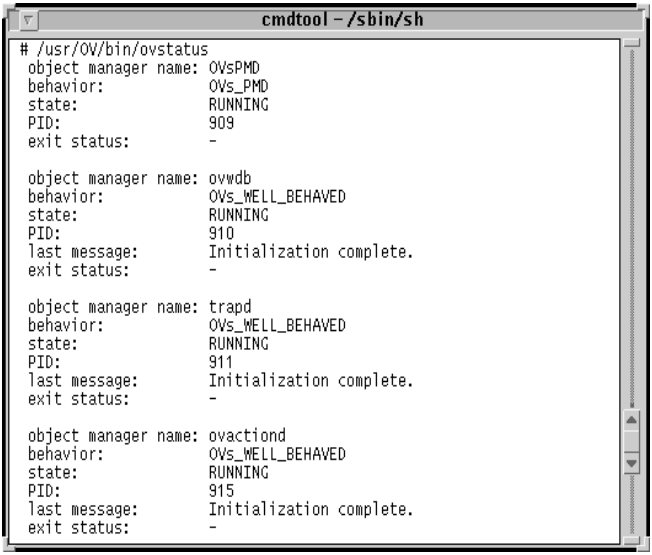

Figure 3-3. HP OpenView Services Window

If HP OpenView services are not running, the following message appears:

```
ovstatus: ovspmd not running.
```

5. If HP OpenView services are not running, type **/usr/OV/bin/ovstart** <Return>.
6. At the # prompt, type **exit** and press Return to log out as the root user.
7. Verify that you are still the nms user by typing **whoami** <Return>.
8. To run HP OpenView and CascadeView/UX, type **/usr/OV/bin/ovw &** <Return>.

   The system displays the HP OpenView Root window and the Event Categories window. The integration of SYBASE 11 with CascadeView is complete.

A

Configuring a Remote Backup Server

If you are configuring a “Remote Installation for Backup Server,” you must complete the installation by configuring backup server parameters.

Adding the Remote Backup Server Hostname

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

On the SYBASE Server Workstation:

1. Log in as root by typing **su - root** `<Return>`.
2. At the prompt, type **[*root password*]** `<Return>`.
3. In the command tool window, type **admintool &** `<Return>`.

The Administration Tool Window appears:

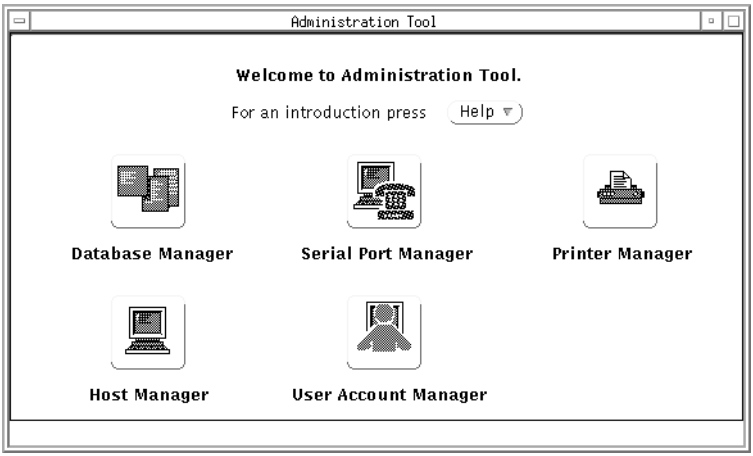

Figure A-1. Administration Tool Window

4. Click once on the Database Manager icon.

   The Load Database dialog box appears.

5. On the Load Database dialog box, do the following:

   – Select Hosts from the Database list

   – Select None for the Naming Service

   – Choose Load to load the host database

   The Database Manager-Hosts window appears.

6. At the Database Manager-Hosts window, select Edit ⇒ Add Entry.

   The Add Entry dialog box appears.

Refer to your SYBASE 11 Upgrade Worksheet to complete Step 7.

7. Complete the fields in the Add Entry dialog box as follows:
   - In the hostname field, type ***[Hostname of Remote Backup Server]***
   - In the IP address field, type [***IP address of Remote Backup Server]***
   - Leave the Aliases and Comment lines blank
8. Choose Add. The system adds the remote Backup Server's hostname to SYBASE Server's host table.
9. Exit the dialog boxes.

Installing a Remote Backup Server

A Remote Backup Server requires 50 MB available space. To install a remote Backup Server:

On the Remote Backup Server Workstation:

1. Log in as the root user by typing

   su - root <Return>

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

DISPLAY=[*type in appropriate host name*]:0.0 <Return>
export DISPLAY <Return>

(This example uses the Korn shell syntax.)

In addition, in a new command tool window, run **xhost +** *as the user who controls the system console. Executing this command enables you to open the window that displays the installation log.*

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

   tar -xvf [*media device pathname*] cv_scripts

5. Move to the *cv_scripts* directory by entering

   cd cv_scripts

6. To begin the SYBASE installation, type

   ./install_sybase <Return>

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

8. At the Sybase Installation menu, type **4** <Return> to configure a Remote Sybase 11 Backup Server.

   The following message appears:

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

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

9. Press Return to continue.

Refer to the SYBASE 11 Upgrade Worksheet to complete the following steps.

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. Do one of the following:

    - Press Return to accept the default of /opt/sybase.
    - Type **[*SYBASE 11 install path*]** `<Return>`.

    The following message appears:

```
Adding user sybase. Please Wait...

Successfully added user sybase...

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

Creating /etc/rc2.d/S97sybase ..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:

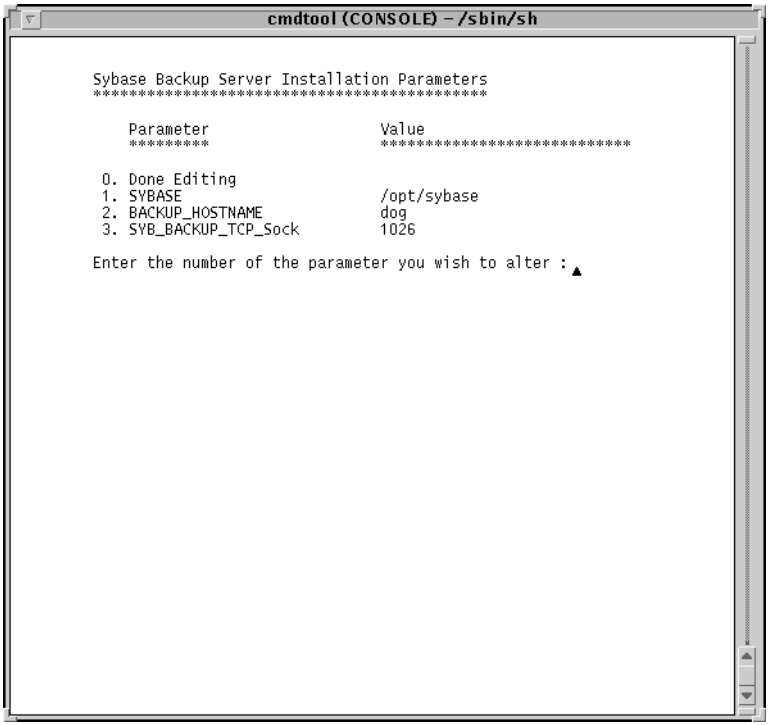

Figure A-2. SYBASE Backup Server Installation Parameters Window

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

13. When you have made your changes, type **0** (Done Editing) and press Return to continue.

The following message appears:

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

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

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

14. Press Return to continue.

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

15. At the “Enter the full path of tape device” prompt, type **[*Tape device pathname*]** <Return>.

    Refer to the SYBASE 11 Upgrade sheet for this information.

    The system displays the message:

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

Extracting Media from tape...Done.

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

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

16. Press Return.

    The Sybase Installation menu appears.

17. Open a command tool window and log in as the SYBASE user by typing

```
su - sybase <Return>
```

18. Create a backup directory by typing

```
mkdir backup <Return>
```

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

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

On the SYBASE Server Workstation:

1. Open a command tool window and type **su - sybase** <Return>.
2. At the $ prompt, run sybtli by typing **sybtli** <Return>.

   The Interface Tool Main menu appears.

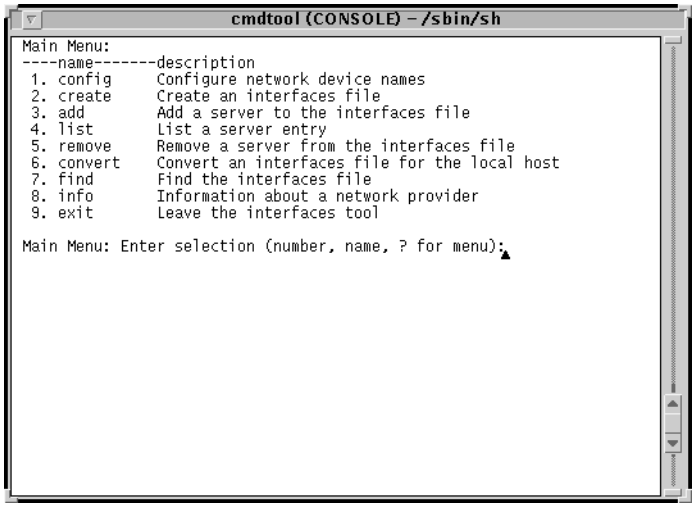

Figure A-3. Interface Tool Main Menu

3. At the "Main Menu: Enter selection" prompt, type **3** <Return> to add a server to the interfaces file.
4. At the "Add to interfaces file" prompt, press Return to accept the default /opt/sybase/interfaces.
5. At the "Server Name" prompt, type **REMOTE_SYB_BACKUP** <Return>.

6. At the “Number of networks to support” prompt, press Return to accept the default (1).

7. At the “Network Type for network 1” prompt, type **tcp** `<Return>`.

Refer to your SYBASE 11 Upgrade Worksheet to complete Step 8 and Step 9.

8. At the “Host Name” prompt, type **[*Hostname of Remote Backup Server*]** `<Return>`.

9. At the “Port Number for network 1” prompt, type **[*TCP Socket Number of Remote Backup Server*]** `<Return>`.

10. At the “Comments” prompt, press Return.

11. At the “Continue” prompt, press Return.

12. At the “Main Menu: Enter Selection” prompt, type **9** and press Return to exit.

13. At the $ prompt, type **cat interfaces** `<Return>` to view the updated interfaces file.

B

Performing SYBASE 11 Backups to the Remote Backup Server

Before backing up your SYBASE 11 databases to the Remote Backup Server, back up all SYBASE 4.9.2 databases.

This section describes how to

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

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

If you need to recover switch data in the cascview database, contact the Technical Response Center at **1-800-DIAL-WAN** *for specific instructions.* ***Do not*** *attempt to restore this database without Cascade's help.*

Backing Up the SYBASE 11 Server to the Remote Backup Server the First Time

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

1. **On the SYBASE Server workstation**, log in as the SYBASE user by typing

   ```
   su - sybase <Return>
   ```

2. Log into isql by typing

   ```
   isql -U sa -P superbase <Return>
   ```

   The system displays the 1> prompt.

3. Check the consistency of the database by typing

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

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

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

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

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

```
1> dump database master to “/opt/sybase/backup/masterbackup”
at REMOTE_SYB_BACKUP <Return>
2> go <Return>

1> dump database cascview to “/opt/sybase/backup/cascbackup”
at REMOTE_SYB_BACKUP <Return>
2> go <Return>

1> quit <Return>
```

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

6. **On the remote Backup Server workstation**, back up the files to tape. Perform the following steps to do this:

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

   b. Log in as the SYBASE user by typing **su - sybase** <Return>. When prompted, type the appropriate password.

   c. Type:

      ```
      cd <Return>
      tar -cvf [Tape device] /opt/sybase/backup/* <Return>
      ```

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

Performing Subsequent SYBASE 11 Backups to the Remote Backup Server

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

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

1. **On the SYBASE Server workstation**, log in as the SYBASE user by typing

   su - sybase <Return>

2. Log into isql by typing

   isql -U sa -P superbase <Return>

   The system displays a 1> prompt.

3. Type the following commands:

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

4. Exit isql by typing

   1> **quit** <Return>

   The system displays the $ prompt.

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

   cp backup/cascbackup backup/tempcascbackup <Return>

6. Re-enter isql by typing

   isql -U sa -P superbase <Return>

   The system displays the 1> prompt.

7. To check the consistency of the database, type

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

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

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

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

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

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

1> quit <Return>
```

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

11. **On the remote Backup Server workstation**, back up the files to tape. Perform the following steps to do this:

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

    b. Log in as the SYBASE user by typing **su - sybase** <Return>. When prompted, type the appropriate password.

    c. Type:

    ```
    cd <Return>
    tar -cvf [Tape device] /opt/sybase/backup/* <Return>
    ```

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

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SYBASE 11 Upgrade Worksheet

Complete this worksheet before you start the SYBASE 11 Upgrade. The installation script will prompt you for the following new and existing configuration information.

Required Parameters

1. Tape device pathname: _____
   (for example, /dev/rmt/0m)
2. SYBASE 4.9.2 release path: _____
   (for example, /opt/sybase)
3. SYBASE 11 install path: _____
   (for example, /opt/sybase11)
4. Existing Database Server Name: _____
   (for example, CASCADE)
5. SYBASE 11 Error log pathname: _____
   (for example, CASCADE_err.log)
6. 4.9.2 Database SA Password: _____
   (for example, superbase)
7. TCP Socket Number of SYBASE 4.9.2: _____
   (for example, 1025)
8. TCP Socket Number of Backup Server: _____
   (for example, 1026)
9. SYBASE 4.9.2 Master Partition device: _____
   (for example, /dev/rdsk/c0t1d0s4)
10. SYBASE 11 System Procs device directory: _____
    (for example, /opt/databases)
11. SYBASE 11 System Procs device size: _____
    (for example, 25 MB minimum)
12. Number of Remote Users: _____
    (for example, 25)
13. Remote Backup Server's hostname: _____
14. IP address of Remote Backup Server: _____
15. TCP Socket Number of Remote Backup Server: _____
    (for example, 1025)