Fisher-Rosemount Systems

Installing and Upgrading ENVOX® Configuration Software on DEC VAX and DEC AXP Systems

*This manual applies to ENVOX software version **P4.0 only**. Retain and use previous versions of this manual for earlier versions of ENVOX software.*

Installation Manual
PN6.1:SW3151:VMS
Revision B — May 1998
This manual supercedes the issue dated July 1996.

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- ☐ **Excellent** — parallels product's operation, very usable
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☐	☐	**Good** — easy to understand, applicable
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☐	☐	**Fair** — not very understandable/applicable, should be improved
☐	☐	**Poor** — not understandable/applicable, must be improved
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- ☐ **Average** — fairly easy to understand, usable
- ☐ **Fair** — not easy to understand, should be improved, not very usable
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- ☐ **Too much information** — not all required to perform task
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- ☐ **Too little information** — needed additional information to perform task
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Sections **Index**

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Sections	Index	
☐	☐	**Excellent** — very easy to locate information, extremely usable
☐	☐	**Good** — easy to locate information, very usable
☐	☐	**Average** — fairly easy to locate information, usable
☐	☐	**Fair** — not easy to locate information, should be improved, not very usable
☐	☐	**Poor** — cannot locate information, must be improved, totally unusable
☐	☐	**Did Not Use**
☐	☐	**No Opinion**

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- ☐ **Not Useful**
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- ☐ **Excellent** — met all needs, extremely usable
- ☐ **Good** — met most of my needs, very usable
- ☐ **Average** — usable
- ☐ **Fair** — should be revised, not very usable
- ☐ **Poor** — must be revised, totally unusable
- ☐ **No Opinion**

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1 Introduction

This installation manual describes the procedures necessary to install or upgrade and to verify proper operation of ENVOX® configuration software, version P4.0, and SYBASE software on DEC OpenVMS operating systems. The ENVOX software types are:

- Type SW3151 ENVOX Configuration Software (ENVOX DEC VAX)
- Type SW3155 ENVOX Configuration Software (ENVOX DEC AXP)

Note ... ENVOX, Version P4.0, runs on SYBASE SQL Server, Version 10.0.2.6. With this server, the client-server method is the same as it is for the ENVOX P3.4 release. The upgrade procedure described in section 5 is a sequence of using the PDX Utility to dump out existing ENVOX databases, installing ENVOX P4.0 and SYBASE SQL Server 10.0.2.6 as an initial installation, recreating ENVOX databases, and then reloading the ENVOX data into the newly created databases.

1.1 Intended Audience

This installation manual is intended for persons familiar with DEC OpenVMS and Fisher-Rosemount Systems software products. Persons with a limited knowledge of computers can install the software on small systems such as the AlphaStation 200 series, MicroVAX 3100, VAXstation 3100, and VAXstation 4000. A system administrator should install the software on large systems.

1.2 ENVOX Software Version This Manual Supports

This manual applies to ENVOX configuration software version P4.0. For manuals applicable to previous ENVOX versions, see the Document History list at the back of this manual.

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1.3 New This Release

ENVOX P4.0 includes several product and document enhancements. The enhancements are listed below and further explained in appropriate ENVOX documents.

- ENVOX P4.0 operates on a SYBASE 10.0.2.6 SQL Server. With this server, installation and upgrade procedures for Client-Server systems use the Portable Database Transfer (PDX) utility to improve the installation and upgrade process.
- Year 2000 and beyond is correctly calculated. All years are shown in 4-digit format.
- Configuration of SRx and SR90 controller, Release P6.0, is supported.
- Configuration of PROVOX® Smart Device I/O card, Release P3.0, is supported.
- The Notes form now allows up to 255 notes entries per item. Previously, the entry limit was 32 entries
- A new menu path, Utilities -> Populate HACL, available from the ENVOX Top Level Form allows you to automatically populate the HACL.
- In the Audit Trail facility, one new event type, Populate HACL has been added.
- The HILT utility has been enhanced to provide information to AMS systems.
- ENVOX P4.0 is compatible only with Control Desktop P2.0.
- For ENVOX P4.0, only the PDX utility is recommended for transferring databases.
- ENVOX Daemon goes through an automatic re-start if a task which is run by ENVOX Daemon “crashes”. Certain tasks do not occur in auto-restart. See the ENVOX System Manager’s Guide for details.
- PDX Dump can be accessed through the ENVOX Administration forms.
- For UOC Loop points, configuration and generation of the Watch Dog Timer alarm word is allowed.
- ENVOX diagnostics now displays the correct device name and TCP/IP address for HDLs.

- In installation and upgrade logs, the Installation log file now distinguishes more clearly between subsequent attempts.
- Field help has been enhanced for the Console Device Definition Operation Display List Display No. field.
- CHIP generate performance has been enhanced.
- Interactive abort has been added for the Item Delete operation.
- Table provue_target_data and bit1, bit2, bit3, bit4, expected_value, and scale columns can be updated via isql, using a valid uppercase user name.
- The Rename tag utility now indicates the table and field name of a referenced field for messages 1310 and 1311.
- The Display Editor has been enhanced to allow CTRL-D to delete selected elements.
- This manual has been written in an updated format, using new section headings, header and footer information, and notes styles.

1.4 Structure of this Manual

This manual contains the following sections and appendixes:

Section 1 — Introduction: includes an overview of this manual, the intended audience, the stylistic typographical conventions used, and defines documentation available for ENVOX configuration software.

Section 2 — System Requirements: provides an overview of the installation process, and lists the supported systems, software module sizes, and installation times.

Section 3 — Installing SYBASE Software: provides installation instructions for SYBASE software

Section 4 — Installing ENVOX Software: provides installation instructions for ENVOX software.

Section 5 — Upgrading Software on Client-Server Systems: provides upgrade instructions for upgrading SYBASE and ENVOX software on P2.x, P3.0, P3.2, P3.3 and P3.4 client-server systems to run on the OpenVMS Operating System with an ENVOX version P4.0 client–server system.

Section 6 — Upgrading Software on Client-Only Systems: provides upgrade instructions for upgrading SYBASE and ENVOX software to run on client-only systems with ENVOX version P4.0

Section 7 — Creating ENVOX User Accounts: provides instructions on how to add extra ENVOX users.

Section 8 — Backing Up, Restoring and De-Installing the Software: provides instructions for backing up and restoring the system and de-installing the SYBASE and ENVOX software.

Section 9 — Retrieving Files from the Installation Tape: provides instructions on getting the ENVOX and SYBASE directories and files from the installation tape without running the installation again.

Section 10 — System Tuning: describes how to change the number of ENVOX users and amount of dataserver memory.

Section 11 — Transferring Non-ENVOX Databases: provides unsupported instructions on how to deal with non-ENVOX databases which will be lost in the upgrade to P4.0.

Section 12 — Installing and Upgrading CDOS for Control Desktop: provides installation and upgrade instructions for CDOS software, and procedures for upgrading ENVOX databases for use with Control Desktop.

Appendix A — Error Messages: lists the ENVOX, SYBASE, and CDOS error messages that can be displayed before and during installation and upgrade of the software.

Appendix B — Transact-ISQL Reserved Words: lists reserved ISQL words that cannot be used as database names, table names, and so on.

Appendix C — Installation and Upgrade Logs: contains log files of ENVOX and SYBASE installations and upgrades.

1.5 Conventions Used in This Manual

This manual uses the following conventions:

Abbreviations — The glossary of this manual contains abbreviations, their phrases, and explanations for the abbreviations of terms used in this manual.

Revision Control — The title page and the footer of each page list the revision level and the print date of this manual. The title page and subsection 1.2 also describe the applicability of this manual to the versions of ENVOX configuration software. When the manual is revised, the revision level and the date are changed.

Cross Referencing — References to other documents give the document name and document catalog number.

Prompt Style — This manual may present displays and prompt lines differently than they appear on your screen. Enter the commands shown in this manual at the equivalent prompt as shown on your screen.

Commands — Commands do not include a notation to enter the command with the **Return** key. When the manual describes an operating system command, assume that a **Return** is required to enter the command.

Note ... A **command line** which normally appears as one line on a screen may be too long to fit as one line in this manual. However, whenever possible, always enter the command as one line on the screen.

Typographic Conventions — Table 1-1 describes the type styles this manual uses to distinguish different types of information.

Table 1-1. Type Style Conventions

When Text Appears This Way ...	It Means ...
ENVOX® Technical Reference	This style designates the title of another manual as referenced in this manual. (Helvetica font, italic)
BACKUP	This style designates an operating mode or status, or a key function (used instead of a specific keyboard key). (Helvetica font, upper case)
Return	This style designates a keyboard key on some system keyboards. On other keyboards, the Return key may be the Enter key (with or without an arrow). When Return is indicated in this manual, enter the command using the key appropriate for your keyboard. (Helvetica font, bold)
Ctrl-v	This style designates a keyboard key or key combination. The word *key* does not appear after the key name. (Helvetica font, bold)
`Database`	This style designates a message or prompt that appears on a screen. (Courier font)
`CREATE`	This style designates the words that you should type in as it appears on the printed page. Examples are commands you enter at an operating system prompt and keywords in a configuration source file. (Courier font, bold)
`filename.type`	This style designates a name or path which you must type into a command. You decide on the appropriate terms for your system. (Courier font, bold italic)
detail display	Italized words in text emphasize the importance of the words and are meant to catch your attention. (Helvetica font, italic)

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1.6 Cautions and Notes

Special attention and Notes forms and symbols are used to attract attention to essential or critical information in a document. The types of information included in each are explained in the following:

Caution ... All cautions have this form and symbol. Do not disregard cautions. They are installation, operation, or maintenance procedures, practices, conditions, statements, and so forth, which if not strictly observed, may result in damage to equipment, interruption of normal software operation, or cause a long term health hazard.

Note ... Notes have this form and symbol. Notes contain installation, operation, or maintenance procedures, practices, conditions, statements, and so forth, that alert you to important information which may make your task easier or increase your understanding.

1.7 ENVOX Documents

Although ENVOX software is your primary configuration tool, the documentation is also a tool for getting the most value out of developing an effective configuration. Different users require different documentation support, depending on their background and the tasks they are doing.

Documentation available for ENVOX configuration software, version P4.0, includes the following items:

- Installation manual, *Installing and Upgrading ENVOX Configuration Software on DEC VAX and DEC AXP Systems*, PN6.1:SW3151:VMS (Revision B — May 1998): describes ENVOX system requirements and provides instructions for installing and upgrading SYBASE and ENVOX software on DEC VAX and DEC AXP systems.
- Installation manual, *Installing and Upgrading ENVOX Configuration Software on HP-UX Systems*, PN6.2:SW3153:HPX (Revision C — May 1998): describes ENVOX system requirements and provides instructions for installing and upgrading ENVOX software on HP computers running the HP-UX operating system.

- User manual, *Using ENVOX Configuration Software*, UM6.1:SW3151 (Revision J — May 1998): describes how to use ENVOX Configuration Software to configure your PROVOX® system databases. Includes generating, downloading, uploading, trace and tune functions, diagnostic procedures, and documenting.

- Technical reference, *The Technical Reference for ENVOX Configuration Software*, TR1.0:SW3151 (Revision G — May 1998): provides information about the structure of ENVOX configuration data, and procedures for reading and changing this data. The manual also defines the ASCII format (CDV format) used to import data into the ENVOX configuration database. ENVOX software uses a relational database for data storage, retrieval, and manipulation.

- System Manager's manual, *The System Manager's Guide to ENVOX Configuration Software*, SM1.0:SW3151 (Revision E — May 1998): describes the features available in ENVOX configuration software for the ENVOX system manager. The features let the system manager tailor the software to each user and to structure the ENVOX system to support multiple databases and users.

- Open Database Manual, *Installing and Using the ENVOX Open Database*, UM6.2:SW3152 (Revision F — May1998): describes how to use the Open Database Module built into ENVOX software and the Type SW3152 Open Database PC Client Server Software.

- On-line help screens: describe the menu options, forms, and each field on the forms, and provide navigation help. The screens are embedded in the ENVOX software.

- Configuration engineering manuals: describe the functions of the PROVOX products so that you can apply the right functions to your process. The manuals provide guidelines for using ENVOX forms specific to the associated product.

- Relational database documentation: You can purchase ENVOX software with or without the Sybase relational database software. When you purchase ENVOX software with the SYBASE software, you also receive a complete set of SYBASE documentation.

1.8 Control Desktop Documentation

Type SW331 Control Desktop is the Windows NT interface to ENVOX configuration software. Control Desktop, version P2.0, is compatible with ENVOX, version P4.0. The user documentation available for Control Desktop P2.0 is:

- Installation and User Manual, *Getting Started with Control Desktop*, UM6.3:SW3311:G (Revision A — May 1998): describes computer requirements, the NT interface, the online help systems, installation, startup, and navigation.
- Control Desktop Module Manual, *Using Control Desktop Modules*, UM6.3:SW3311:M (Original — May 1998): describes how to use Control Designer, Diagnostics, Client Administration, Report Writer, and Task Monitor.
- Online help systems for Control Desktop and the five modules.

1.9 Related Documents

Many Digital OpenVMS documents exist. Some manuals which may be of help with ENVOX and Sybase databases are listed below. See your Digital sales representative for further listings.

- *OpenVMS, Version 7.1, Installation and Upgrade Manual*
- *OpenVMS User's Manual*
- *OpenVMS DCL Dictionary: A—M*
- *OpenVMS DCL Dictionary: N—Z*
- *OpenVMS System Manager's Manual: Essentials*
- *OpenVMS System Manager's Manual: Tuning, Monitoring, and Complex Systems*
- *OpenVMS System Management Utilities Reference Manual: A—L*
- *OpenVMS System Management Utilities Reference Manual: M—Z*

Other PROVOX documentation which may be helpful is listed below. Contact your Fisher-Rosemount Systems' representative or sales office for a complete list of available documentation or copies.

- Installation manual, *Installing Type DH6215 CHIP DEC OpenVMS VAX and Type DH6219 CHIP DEC OpenVMS AXP* (PN3.1:DH6215)

- Configuration engineering manual, *Configuring DH6200-Series Computer/Highway Interface Package (CHIP)* Software (CE8.0:DH6200)
- User manual, *Using DH6200-Series Computer/Highway Interface Package (CHIP) Software* (UM3:0:DH6200)

1.10 Electronic Documentation

This manual is also available in DOCVUE™ Electronic Documentation, a CD-ROM Documentation set containing current and past Fisher-Rosemount Systems sales literature, manuals, and technical service bulletins.

DOCVUE documentation runs on OpenVMS, UNIX, and Microsoft Windows systems with the advantages of full-text searches, menus, bookmarks, browsing. and point and click navigation. We recommend that you call your Fisher-Rosemount Systems representative or sales office and find out if DOCVUE documentation can make your application of Fisher-Rosemount instrumentation easier.

1.11 Where to Find Answers About This Product or Manual

Fisher-Rosemount Systems' goal is to provide products and documentation that exceed your needs. If you have questions or comments about this product or manual, please contact your Fisher-Rosemount Systems' representative or sales office.

To help us evaluate how well this manual fills your needs, please complete and send in the evaluation form located in the front of this manual. We also appreciate your suggestions on ways to improve any page of the manual. Please mark your suggestions on a copy of the page and include it with the evaluation form. Thank you for providing this information.

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2 System Requirements

This section describes the system requirements for running Type SW3151 ENVOX® Configuration Software (ENVOX DEC VAX) and Type SW3155 ENVOX Configuration Software (ENVOX DEC AXP) on OpenVMS systems, the time required to install ENVOX configuration software, the software module sizes, and the required disk memory sizes. Procedure overviews with flow diagrams for installing and upgrading a system are included.

2.1 Product Media

Installation tapes contain:

- SYBASE 10.0
- ENVOX P4.0
- OPEN DATABASE P1.3
- CDOS P2.0
- OpenVMS and SYBASE Software Patches

For DEC AXP computers, the programs are supplied on one 4mm DAT cartridge tape. For DEC VAX computers, the programs are supplied on either two TK50 tapes or one 4mm DAT tape, depending on your system.

Note ... If your VAX uses TK50 tapes, be sure to use the tape that contains the appropriate software for the particular installation procedure. The tape marked Vol. 1 of 2 holds the SYBASE, ENVOX, and OPEN DATABASE software. The tape marked Vol. 2 of 2 holds the CDOS software and the software patches.

2.2 Product Compatibility

ENVOX P4.0, Control Desktop P2.0, and CDOS P2.0 are compatible. Earlier versions of these products are *not* compatible with later versions. For instance, when you upgrade ENVOX software to version P4.0, and you wish to use Control Desktop, you must also upgrade Control Desktop and CDOS to P2.0.

2.3 Hardware Requirements

ENVOX software will run on a MicroVAX, VAX, VAXstation, DEC AXP workstation or a DEC AXP server, as listed in Table 2-1.

Table 2-1. Supported Systems and Number of Users

System	Users
MicroVAX 3100 through MicroVAX 3900	unlimited(1)
VAXstation 3100	1
VAXstation 4000	unlimited(1)
VAXstation 4000-VLC	1 (client only)
VAX Computer System 725 through 785	1(2)
VAX Computer System 4100 through 4600	unlimited(1)
VAX Computer System 6210 through 7660	unlimited(1)
VAX Computer System 8200 through 8840	unlimited(1)
DEC 3000 AXP workstation(all models)	unlimited(1)
DEC 2000 AXP server	unlimited(1)

1. The number of users is the maximum licensed number of concurrent ENVOX software users. The practical maximum number of ENVOX users depends on the CPU, memory, available disk space, and the memory requirements of other applications running on the system. The number of VMS users can be larger or smaller, but the smaller of the two licenses (ENVOX software or VMS) is the effective maximum number of ENVOX software users.
2. Limited to one user due to CPU performance.

You can also use the installation procedure in this installation manual as a guide for systems other than the MicroVAX 3100, the VAXstation 4000, and the AlphaStation 200 series. In most cases, the only items in the procedure that are different are the names of the system disk drive (the drive where the ENVOX software is loaded), the name of the second disk (the disk where the SYBASE software is loaded), the name and type of tape drive (the software-load device) and the SYSGEN parameters.

2.4 Software Requirements

ENVOX software, version P4.0, requires an OpenVMS operating system, DECnet, CHIP software, SYBASE SQL (Data) Server, APT, and Open Client software, and DECwindows Motif software. Table 2-2 lists the required software versions.

Table 2-2. Software Version Levels

Software	Revision
OpenVMS	7.1 (3)
DECwindows Motif(VAX)	1.2–3
DECwindows Motif(AXP)	1.2–4
CHIP DEC OpenVMS VAX (1)	P5.0 or later
CHIP DEC OpenVMS AXP (1)	P5.0 or later
SYBASE SQL Server	10.0.2.6 (2)
SYBASE APT	5.3 (2)
SYBASE Open Client	10.0.4
ENVOX® software	P4.0

1. CHIP kernel or CHIP by point size. The CHIP tape contains Kermit software
2. This version of the Sybase software shipped with ENVOX P4.0 includes Sybase software fixes EBF6203 for the VAX platform and EBF6202 for the AXP system. If you use your software instead, be sure that these fixes are included.
3. This version of VMS requires ECO kit VAXY2K01_071 for the VAX platform and ECO kits ALPY2K01_071, ALPSCSI02_71, and ALPMOTF03_U4012 for the AXP platform.

2.5 Highway Interface

Downloading configurations and performing diagnostics requires a Type DH6215 Computer/Highway Interface Package (CHIP DEC OpenVMS VAX) or a Type DH6219 Computer/Highway Interface Package (CHIP DEC OpenVMS AXP). The CHIP software interfaces to the PROVOX® highway system using one of the following:

- Type DH6009 Serial Interface Unit (SIU) with the appropriate highway interface card — on a network using DECnet — VAX only
- Type DH6032 Highway Data Link (HDL), if the CHIP version is P4.3 or later — on a network using TCP/IP — AXP or VAX
- Type DC7611 Data Highway Interface (DHI) card for a PROVOX Data Highway — VAX only
- Type DC7711 Data Highway Interface II (DHI II) card for a PROVOX Highway II — VAX only
- Type DH6021 Network Interface Unit (NIU) — on a network using DECnet — AXP or VAX

2.6 Software and Disk Space Requirements for VAX Systems

Note ... While it is possible to install all of ENVOX, SYBASE, and the other required software on a single disk, it is recommended for best system performance that the software be installed on two disks, as described below.

To install ENVOX software on a DEC VAX system, a minimum of 32 Mbytes of memory is required. The minimum disk space requirements on two disks for all of the software used in the ENVOX system are:

- **System disk** — 426 Mbytes for OpenVMS, CHIP, ENVOX software, and transaction logs plus the space required for other PROVOX end-user applications.
- **Second disk** — 230 Mbytes for SYBASE software and the main ENVOX database. You must also allow enough space for other databases which you wish to place on the second disk.

Table 2-3 lists the software modules and the minimum disk sizing required for a standard ENVOX system. Extra disk space will be required for additional or larger ENVOX databases. The software module size is listed in blocks: one block equals 512 bytes.

Table 2-3. Software Module Sizes for VAX Systems

Disk	Software Module	Size in Blocks
System	VMS with DECnet and DECwindows Motif	400,000
	CHIP kernel	4150(1)
	ENVOX® software	111,000(2)
	Transaction log	42,000
Second	SYBASE	179,000
	Main ENVOX database	250,000

1. See Table 2-4 for CHIP database requirements
2. ENVOX upgrades require 7000 extra blocks on the system disk and 50000 temporary blocks for installation

If you have a Type DH6215 Computer/Highway Interface Package (CHIP DEC VAX/VMS) on your current system, use Table 2-4 to estimate the required memory and disk space size. Add the size of CHIP to the size of the software required by the ENVOX system to see if your system has enough space for both the CHIP and ENVOX software.

Table 2-4. Fixed System Requirements for CHIP on VAX Systems		
CHIP	**Memory**	**Disk Space**
CHIP Programs	165 Kbytes	2.1 Mbytes 4150 blocks
CHIP Database Options: (select one)		
500 points	235 Kbytes	1.56 Mbytes/ 3100 blocks
2500 points	870 Kbytes	2.5 Mbytes/ 5000 blocks
10,000 points	3341 Kbytes	5 Mbytes/ 10,000 blocks

Note ... If the disk drives used for ENVOX and SYBASE software contain any other software, be sure to include the size of that software when making your sizing estimates.

2.7 Installation Time on VAX Systems

Table 2-5 lists the approximate times required to do complete installations and upgrades of all software for an ENVOX system on a VAX platform.

Table 2-5. Installation Time on VAX Systems		
Software	**Function**	**Minutes**
VMS	Initialize system disk	20
	Initialize second disk	60
	Install VMS, register licenses, tailor VMS	150
CHIP	Install, tailor, tune	60
SYBASE	Install	60
ENVOX® software	Install and build	300
SYBASE_UPGRADE	Install	120
ENVOX_UPGRADE	Install and build	300

The total time required to install and build the ENVOX system on a VAX system is 12 to 14 hours. Once the system is installed and built, you need to do a system backup of all disks. See section 8 for backup information.

2.8 Software and Disk Space Requirements for AXP Systems

Note ... While it is possible to install all of ENVOX, SYBASE, and the other required software on a single disk, it is recommended for best system performance that the software be installed on two disks, as described below.

To install the ENVOX software on a DEC AXP system, a minimum of 64 Mbytes of memory is required. However, to optimize system performance, a system with a minimum of 128 Mbytes of memory is recommended. The minimum disk space requirements on two disks for all of the software used in an ENVOX system are:

- **System disk** — 1 Gbyte for OpenVMS, CHIP, ENVOX software, and transaction logs plus the disk space for other PROVOX system end-user applications.
- **Second disk** — 1 Gbyte for SYBASE software and the main ENVOX database plus the disk space for other PROVOX system end-user applications.

Table 2-6 lists the software modules and the minimum disk sizing required for an ENVOX system. The software module size is listed in blocks: one block equals 512 bytes.

Table 2-6. Software Module Sizes for AXP Systems

Disk	Software Module	Size in Blocks
System	VMS with DECnet and DECwindows Motif	1,043,000
	CHIP kernel	4150(1)
	ENVOX® software	131,000(2)
	Transaction log	42,000
Second	SYBASE	216,000
	Main ENVOX database	250,000

1. See Table 2-7 for CHIP database requirements
2. ENVOX upgrades require 7000 extra blocks on the system disk and 50,000 temporary blocks for installation

If you have a Type DH6215 Computer/Highway Interface Package (CHIP DEC OpenVMS VAX) or a Type DH6219 Computer/Highway Interface Package (CHIP DEC OpenVMS AXP) on your current system, use Table 2-7 to estimate the required memory and disk space size. Add the

size (number of blocks) of CHIP to the size of the software required by the ENVOX system to see if your system has enough space.

Table 2-7. Fixed System Requirements for CHIP on AXP Systems

CHIP	Memory	Disk Space
CHIP Programs	400 Kbytes	11,000 blocks
CHIP Database Options: (select one)		
500 points	985 Kbytes	10,000 blocks
2500 points	2850 Kbytes	18,000 blocks
10,000 points	8100 Kbytes	23,000 blocks

Note ... If the disk drives used for ENVOX and SYBASE software contain any other software, be sure to include the size of that software when making your sizing estimates.

2.9 Installation Time on AXP Systems

Table 2-8 lists the approximate times required to do complete installations and upgrades of all software for an ENVOX system on an AXP system. The installation times depend on the system model and configuration. The values shown were derived from a DEC 3000 AXP workstation model 300x configured with 64 MB of system memory.

Table 2-8. Installation Time on AXP Systems

Software	Function	Minutes
VMS	Initialize system disk	10
	Initialize second disk	10
	Install VMS, register licenses, tailor VMS	60
CHIP	Install, tailor, tune	20
SYBASE	Install	20
ENVOX® software	Install and build	110
SYBASE_UPGRADE	Install	20
ENVOX_UPGRADE	Install and build	110

The total time required to install and build the ENVOX system on an AXP system is 4 to 6 hours. Once the system is installed and built, you need to do an image backup of all disks. See section 8 for backup information.

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3 Installing SYBASE Software

This section explains how to install SYBASE software on a MicroVAX 3100 computer, a VAXstation 3100, a VAXstation 4000 and the AlphaStation 200 series. This section also includes information about recovering from errors. See Appendix A for the meaning of error messages. See Appendix C for log files of a typical installation. In addition, section 8 provides instructions for backing up and restoring the system's disks, and de-installing the ENVOX and SYBASE software.

3.1 New System Installation Method

Before installing ENVOX software for the first time on an OpenVMS system, ensure that the hardware is properly installed and the system is operationally tested. Then, follow the installation procedure sequence as shown in Figure 3-1.

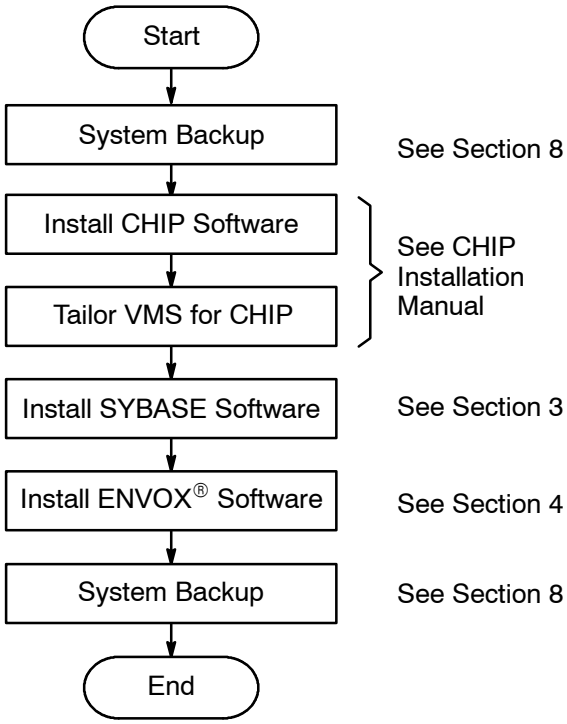

Figure 3-1. System Installation Flow

Note ... System backup before and after installation is extremely important. Always back up the system in case the system configuration needs to be restored. Store backup tapes in an environmentally and physically protected area.

3.2 Before Installing SYBASE Software

Several procedures and considerations need to be done before you perform the installation. They are explained in the following subsections.

3.2.1 Precautions

Before you attempt installation, read the precautions listed below. They can save you time and reduce the possibility of errors.

- On new systems which include a second disk, the SYBASE software will not install successfully unless you initialize and mount the second disk. See the instructions in subsection 3.2.3 to initialize and mount the second disk.
- Before installation of SYBASE software, the DECnet software must be running on the DEC system.
- Before installing SYBASE software, you must first install CHIP according to the instructions given in the CHIP installation manual.

3.2.2 Required ECO Kits

The following ECO kits must be applied *after* installing or upgrading to OpenVMS V7.1 and *before* you install Sybase software.

- A Motif ECO kit which enhances Motif operation on an AXP platform
- A Year 2000 ECO kit which makes the OpenVMS system Year 2000 compliant
- A SCSI ECO kit which corrects an error introduced by OpenVMS V7.1 on the AXP platform that can cause the tapedrive to become inoperable

The SCSI ECO kit is included on both the ENVOX tape and the Control Desktop CDROM. If you are unable to recover the kit from the tape, you can recover it from the CDROM as descibed in subsection 3.2.2.4. Then, follow the instructions in subsection 3.2.2.3 to complete the installation of the kit on your workstation.

3.2.2.1 Installing Motif ECO Kit (AXP Platform Only)

An ECO kit ALPMOTF03_U4012 for AXP systems must be applied, after installing Motif software and before attempting the SYBASE installation. The following steps let you determine whether or not the ECO kit has been installed and, if it has not, include instructions on how to install it.

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and your password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ dir sys$help:ALPMOTF03_U4012.release_notes
```

If this file exists, the ECO kit has been applied and no further action is required. If the file does not exist, proceed to Step 3.

Step 3: Insert and make ready the installation media and install the ECO kit by entering the following command at the DCL prompt:

```
$ @sys$update:vmsinstal ALPMOTF03_U4012 tapedrive:
```

...where *tapedrive* is the name of your tapedrive or directory location.

Step 4: Reboot the system after the ECO kit has been successfully installed. To reboot the system, enter the following commands at the DCL prompts:

```
$ @sys$login:login
$ reboot
```

3.2.2.2 Installing Year 2000 ECO Kits (VAX and AXP Platforms)

An ECO kit VAXY2K01_071 for VAX systems and an ECO kit ALPY2K01_071 for AXP systems must be applied, after installing Motif software and before attempting the SYBASE installation. The following steps let you determine whether or not the ECO kit has been installed and, if it has not, include instructions on how to install it.

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and your password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ dir sys$help:Y2K.release_notes
```

If the file exists, the ECO kit has been applied and no further action is required. If the file does not exist, proceed to Step 3.

Step 3: Insert and make ready the installation media and install the ECO kit by entering the following command at the DCL prompt:

- For a VAX system, enter:

```
$ @sys$update:vmsinstal VAXY2K01_071 tapedrive:
```

- For an AXP system, enter:

```
$ @sys$update:vmsinstal ALPY2K01_071 tapedrive:
```

...where *tapedrive* is the name of your tapedrive or directory location.

Step 4: Reboot the system after the ECO kit has been successfully installed. To reboot the system, enter the following commands at the DCL prompts:

```
$ @sys$login:login
$ reboot
```

3.2.2.3 Installing SCSI ECO Kit (AXP Platform Only)

An ECO kit ALPSCSI02_071 for AXP systems must be applied, after installing Motif software and before attempting the SYBASE installation. The following steps let you determine whether or not the ECO kit has been installed and, if it has not, include instructions on how to install it.

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and your password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ dir sys$help:ALPSCSI02_071.release_notes
```

If this file exists, the ECO kit has been applied and no further action is required. If the file does not exist, proceed to Step 3.

Step 3: Insert and make ready the installation media and install the ECO kit by entering the following command at the DCL prompt:

```
$ @sys$update:vmsinstal ALPSCSI02_071 tapedrive:
```

...where *tapedrive* is the name of your tapedrive or directory location.

If you do not have the kit available through your tapedrive or a directory, you can recover it from the Control Desktop CDROM. See subsection 3.2.2.4 below for instructions.

After you recover the kit, use the name of the directory where you put the kit in the command line above.

Step 4: Reboot the system after the ECO kit has been successfully installed. To reboot the system, enter the following commands at the DCL prompts:

```
$ @sys$login:login
$ reboot
```

3.2.2.4 *Recovering SCSI ECO Kit From the Control Desktop CDROM*

Recovering the SCSI ECO kit from the Control Desktop CDROM requires copying the kit to a directory on your PC hard drive, and then transferring the kit to your AXP workstation over your network using file transfer protocol (FTP).

You may recover the kit before or after Control Desktop installation, but do not recover the kit during Control Desktop installation.

From your PC, copy the ECO Kit file from the CDROM onto the PC disk, as follows:

Step 1: Using Windows Explorer, create a folder on the hard drive (for example, C:\Axpatch).

Step 2: Insert the Control Desktop CDROM in the PC CDROM drive.

Step 3: Using Windows Explorer, copy the ECO Kit file from the CRROM to the folder.

For example, copy it from E:\Axpatch\ALPSCSI02_071.A to C:\Axpatch\ALPSCSI02_071.A where E drive is the CD ROM drive and C is the local PC hard drive.

Step 4: Open an MS DOS window and enter:

`$ C:`	selects the C drive
`$ cd` ***`directory_name`***	changes directory to the one you named above
`$ ftp` ***`alpha_nodename`***	selects the AXP workstation node for the transfer

`...`where *directory_name* is the name of the directory where the ECO Kit file is located (for example, axpatch), and *alpha_nodename* is the name of the node for your AXP workstation.

When you enter the last command, you will be prompted for a username and password.

Step 5: Login in as SYSTEM and enter your password. When the system prompt appears, enter:

> binary	sets file mode to binary
> mkdir [*directory_name*]	creates a directory on your AXP workstation. (you may call it, axpatch)
> cd *directory_name*	changes directory to your new directory on your AXP workstation.
> put alpcsci02_71.a	copies the ECO Kit to your new directory on your AXP workstation.

Upon entering the “put” command, the transfer process starts. Wait until the system notifies you that the transfer is complete.

Step 6: When the transfer is complete, enter:

> bye	logs you out of ftp

Step 7: Close the MS DOS window

The SCSI ECO Kit has been copied to your AXP workstation.

Step 8: Proceed to subsection 3.2.2.3 to install the kit on your OpenVMS 7.1 operating system.

3.2.3 Initializing the Second Disk Drive

The following steps let you initialize the second (external) disk drive and should only be carried out on disks which have not been initialized. The second disk drive must be initialized as shown so that there is enough *contiguous* disk space on the disk to load the SYBASE database software.

To initialize the second disk drive:

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ initialize/index=beginning seconddisk: user$1
```

Step 3: Mount the disk by entering the following command at the DCL prompt:

```
$ mount/system seconddisk: user$1 user$1
```

This command mounts the disk and creates the logical USER$1 which can be used during the installation to refer to the disk.

Step 4: Edit the file SYS$MANAGER:SYSTARTUP_VMS.COM to add a line with the mount command shown in Step 3. This action makes sure that the disk is mounted when the system is rebooted. The line must be positioned before any lines which start any PROVOX® systems software and SYBASE software used in the ENVOX system.

3.2.4 Guidelines for Running the Installation Script

The following information provides guidelines for running the installation script: sybase_envox_install.

- When sybase_envox_install is run, a menu driven interface is displayed on the screen. It is a character based menu.
- Navigation through the menu items is accomplished by using the up and down arrow keys or by pressing **Return** on any of the menu item fields.
- Navigation through the menu item data fields is accomplished by using the **left** and **right** arrow keys.
- The menu item data fields are set for insert mode.
- If a menu item is incorrect, its data field is shown in reverse video.
- Most of the menu data is defaulted for you when the menu is displayed. The defaulted data can be modified.
- Moving the cursor to `ENTER` and pressing **Return** causes the data from the menu to be checked. If there are no errors or warnings, the installation proceeds normally.
- If there are error or warning messages, system errors are shown first, followed by menu errors, and then warnings. By repeatedly pressing **Return**, the system cycles through the messages and back to the main menu. Once in the main menu, you can quit if system errors need to be corrected. For menu errors, correct the menu data and press **Return** to check the corrected data.
- Menu item error messages appear with the menu item number and text.
- Pressing **Ctrl-w** refreshes the menu screen.
- Pressing **Ctrl-e** deletes the current data field.
- If there are no error messages the menu disappears from the screen and is replaced with information messages from the various stages of the installation.
- Once installation has started, do not try to interrupt it. Installation typically lasts about 20 minutes on an AXP system and 60 minutes on a VAX system.
- A log file, sybase_envox_inst.log, is produced in the sys$manager directory. If the installation does not proceed as expected, study the log file to help determine the cause.

3.3 Installing SYBASE Software on Client-Server Systems

The following section describes how to install SYBASE software in a client-server system.

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media, and read the installation script from the media by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

Step 3: Start the installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The screen clears and the following display appears:

```
         Checking system

            Please wait...
```

If there are no errors, the following display appears:

```
Choose whether to install or de-install SYBASE and
ENVOX
Move cursor to item and press <CR>.

INSTALL SYBASE

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

Step 4: Move the cursor to INSTALL SYBASE and press **Return.**

The following display appears:

```
Choose which type of installation.
Move cursor to item and press <CR>.

CLIENT-SERVER

CLIENT-ONLY

QUIT
```

Step 5: Move the cursor to CLIENT-SERVER and press **Return.**

The following display appears:

```
SYBASE Client-Server Installation

 1)SYBASE System Disk = USER$1
 2)SYBASE Automatic Startup = Y
 3)Configure SYBASE system parameters = Y
 4)SYBASE Account UIC code = 17,1010
 5)Number of concurrent users = 3
 6)SYBASE Printer device =
 7)SYBASE Query Object Number = 200
 8)SYBASE port number =
 9)SYBASE Dataserver name = SYBASE
10)Memory available for the Dataserver(Mb) =
11)SYBASE Master Database Disk = USER$1
12)SYBASE Master Device size(Mb) = 20
13)SYBASE Sysprocs Database Disk = USER$1
14)SYBASE Sysprocs Device size(Mb) = 20
15)Tape Device =

ENTER   QUIT
```

Step 6: For menu item 1), enter the name of the disk which will contain the main SYBASE directory structure.

Step 7: For menu item 2), enter **Y** to add the SYBASE startup commands to FISHER_STARTUP.COM, or if this file does not exist, the commands are added to SYSTARTUP_VMS.COM.

If the answer **N** is given, none of the required SYBASE logicals are included in the start-up file, and the SYBASE SQL server does not start automatically when the system is rebooted.

If the answer **N** is given, then after the installation, you need to review the following files and add any required commands to your startup procedure:

- sys$manager:sybase_disk_logicals.com
- sybase_device:[sybase.install]sybase_startup.com

Step 8: For menu item 3), answer **Y** to place the list of recommended sysgen parameters detailed in sys$manager:sybase_vms_resources.dat into sys$system:fisher_sybase_modparams.dat. When the sysgen parameters are located in this file, the system is set to the parameters whenever Autogen is executed by the system manager.

Step 9: For menu item 4), enter the UIC code for the SYBASE account. The UIC code must be unique and of the form, *group, member*, where group and member are OCTAL numeric numbers in the range: group = [0 to 3776] and member = [0 to177776]. A UIC default value of 17,1010 is recommended and places the SYBASE account in the same group as the CHIP account.

Step 10: For menu item 5), enter the number of users expected to be logged on through the ENVOX forms to the SYBASE SQL server. Additional users reduce system performance. Do not specify more users than are needed. Refer to section 10 for system tuning instructions.

Step 11: For menu item 6), enter a valid terminal device to define the logical name SYBASE_PRINTER which is used by SYBASE for screen dumps from character terminals. Leave this field blank if you do not require this feature. (An example name is TTA3).

Step 12: For menu item 7), enter the DECnet object number for the SYBASE Query Object used by the SQL server. The number entered must be in the range: [128 to 253]. A default value of 200 is recommended.

When the SQL server starts up, it expects to use two sequential object numbers, starting with the object number specified. The first number is used by front end products to request a connection to the SQL server and the second is used by the SYBASE console program to connect the SQL server to dump and load databases.

Step 13: For menu item 8), enter a TCP/IP port number between 1025 and 65535 for the SYBASE query object. Leave this field blank if you do not require SYBASE to use the TCP/IP transport.

CDOS requires TCP/IP software to be installed and the SYBASE server updated to allow TCP/IP entry. If you plan on installing CDOS and you have TCP/IP software installed, then enter a port number. If you plan on installing CDOS but have not yet installed TCP/IP software, then leave this field blank.

You can configure the SYBASE server to allow TCP/IP entry after installing CDOS.(see section 12).

Step 14: For menu item 9), enter the SYBASE SQL server name. The server name can contain only alphanumeric characters, dollar signs ($) and underscore (_) characters. It must be 10 characters or less. A default name of SYBASE is recommended.

Step 15: For menu item 10), enter the memory allocated to the SYBASE dataserver.

The minimum memory required by the SQL server is 16 megabytes on a VAX system and AXP system. The maximum memory usable by the SQL server is 64 megabytes.

Approximately 2 megabytes is pre-allocated with 80% of the remaining memory used for data buffers. Significant performance improvements may be gained if more memory is available for data buffers. Do not allocate more than half the available system memory. Refer to section 10 for system tuning instructions.

Step 16: For menu item 11), enter the name of the disk which will contain the SYBASE master directory and master device. Approximately 42000 blocks are required by the master device.

Step 17: For menu item 12), enter the size, in Mbytes, for the SYBASE master device. The default size (20 Mbyte) is sufficient to support as many as five concurrent ENVOX software users. For every additional user, the size of the master device should be increased by 0.5 Mbyte.

Step 18: For menu item 13), enter the name of the disk which will contain the SYBASE sysprocs directory and sysprocs device. Approximately 42000 blocks are required by the sysprocs device.

Step 19: For menu item 14), either leave the default value or enter another value for the size in Mbytes for the SYBASE sysprocs device. The default size of 20 Mb is sufficient for normal operation.

Step 20: For menu item 15), to install from tape, enter the tape device name where the ENVOX software media is located and ensure that the tape is inserted and mounted. To install from disk, enter the full directory pathname where the savesets are stored.

Step 21: Move the cursor to ENTER and press **Return** to continue the installation.

The following display appears:

```
         Checking menu options

            Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Any system parameters which require changing will be displayed. Please refer to subsection 14.4 in the ENVOX System Manager's Guide for changing system parameters.

Step 22: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the installation.

If there are no errors, the installation continues to completion. During installation, the following display appears:

```
start of inst_upg_sybase.com
Deleting existing sybase files...
Installing SYBASE files...

    creating default sybase databases.
    This will take about 1/2 hour to complete.

Sybase install completed successfully on 11-Dec-1997 14:40.45
```

This completes the SYBASE client-server installation. The SYBASE SQL server should be running. See subsection 4.3 to install ENVOX software on a client-server system.

3.4 tempdb Considerations for Client-Server Systems

During the installation of client-server SYBASE, a database called tempdb is created. This database holds temporary tables created when ENVOX software is running.

For large ENVOX databases or for an ENVOX database which will be used by many users at the same time, the database tempdb should be increased in size and directed to a logical device which you define. The device should be separate from the master, but in the same directory. The ENVOX administration forms can be used to create a logical device for tempdb. The default size of tempdb is 6 mbytes. Increasing it by three or four times, if there is enough disk space, is recommended.

To increase the size of tempdb, use the following procedure:

Step 1: Log into the SYBASE account.

Step 2: Run **`isql`** with the user being sa. The password will be database if you have just completed the SYBASE installation.

```
> isql/u="sa"/p="database"
```

Step 3: Type the following commands in the isql prompt:

```
> alter database tempdb on tempdevice=newsize
> go
```

This action increases tempdb on *tempdevice* (your device name) by the *newsize* (your entered size) in Mbytes.

3.5 Installing SYBASE Software on Client-Only Systems

The following section describes how to install SYBASE software for a client-only system.

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media, and read the installation script from the media by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

Step 3: Start the installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The screen clears and the following display appears:

```
         Checking system

            Please wait...
```

If there are no errors, the following display appears:

```
Choose whether to install or de-install SYBASE and
ENVOX
Move cursor to item and press <CR>.

INSTALL SYBASE

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

Step 4: Move the cursor to INSTALL SYBASE and press **Return.**

The following display appears:

```
Choose which type of installation.
Move cursor to item and press <CR>.

CLIENT-SERVER

CLIENT-ONLY

QUIT
```

Step 5: Move the cursor to CLIENT-ONLY and press **Return.**

The following display appears:

```
SYBASE Client-Only Installation

 1)SYBASE System Disk = USER$1
 2)SYBASE Automatic Startup = Y
 3)Configure SYBASE system parameters = Y
 4)SYBASE Account UIC code = 17,1010
 5)Number of concurrent users = 3
 6)SYBASE Printer device =
 7)SYBASE Query Object Number = 200
 8)SYBASE port number =
 9)Sybase Dataserver node =
 10)Tape device =

ENTER QUIT
```

Step 6: For menu item 1), enter the name of the disk which will contain the main SYBASE directory structure.

Step 7: For menu item 2), enter **Y** to add the SYBASE startup commands to FISHER_STARTUP.COM, or if this file does not exist, the commands are added to SYSTARTUP_VMS.COM.

If the answer **N** is given, none of the required SYBASE logicals are included in the start-up file, and the SYBASE SQL server does not start automatically when the system is rebooted.

If the answer **N** is given, then after the installation, you need to review the following files and add any required commands to your startup procedure:

- sys$manager:sybase_disk_logicals.com
- sybase_device:[sybase.install]sybase_startup.com

Step 8: For menu item 3), answer **Y** to place the list of recommended sysgen parameters detailed in sys$manager:sybase_vms_resources.dat into sys$system:fisher_sybase_modparams.dat. When the sysgen parameters are located in this file, the system is set to these parameters whenever Autogen is executed by the system manager.

Step 9: For menu item 4), enter the UIC code for the SYBASE account. The UIC code must be unique and of the form, *group, member*, where group and member are OCTAL numeric numbers in the range: group = [0 to 3776] and member = [0 to177776]. A UIC default value of 17,1010 is recommended and places the SYBASE account in the same group as the CHIP account.

Step 10: For menu item 5), enter the number of users expected to be logged on through the ENVOX forms to the SQL server. Additional users reduce system performance. Do not specify more users than are needed. Refer to section 10 for system tuning instructions.

Step 11: For menu item 6), enter a valid terminal device to define the logical name SYBASE_PRINTER which is used by SYBASE for screen dumps from character terminals. Leave this field blank if you do not require this feature. (An example name is TTA3).

Step 12: For menu item 7), enter the DECnet object number for the SYBASE Query Object used by the SQL server. The number entered must be in the range: [128 to 253]. A default value of 200 is recommended.

When the SYBASE SQL server starts up, it expects to use two sequential object numbers, starting with the object number specified. The first number is used by front end products to request a connection to the SQL server and the second is used by the SYBASE console program to connect the SQL server to dump and load databases. Use the same object numbers as were used when the SYBASE software was installed on the SYBASE server node.

Step 13: For menu item 8), enter a TCP/IP port number between 1025 and 65535 for the SYBASE query object. Leave this field blank if you do not require SYBASE to use the TCP/IP transport.

CDOS requires TCP/IP software to be installed and the SYBASE server updated to allow TCP/IP entry. If you plan on installing CDOS and you have TCP/IP software installed, then enter a port number. If you plan on installing CDOS but have

not yet installed TCP/IP software, then leave this field blank. You can configure the SYBASE server to allow TCP/IP entry after installing CDOS.(see section 12).

Step 14: For menu item 9), enter the name of the node where the SQL server resides. A valid entry for the node name and address must exist in the client's NCP database and be reachable. To verify that a valid node_name and node_address exist, enter the following:


```
$ mcr ncp loop node node_name
$ mcr ncp loop node node_address
```

where *node_name* and *node_address* are the ones in your system. If no errors are displayed, a valid node exists and is reachable.

To add a new node name and node address, enter the following:

```
$ mcr ncp define node node_address NAME node_name
$ mcr ncp set node node_address NAME node_name
```

where *node_name* and *node_address* are the ones you want to use. The node name must contain only alphanumeric characters, dollar ($) signs, or underscore (_) characters. It must be 12 characters or less.

Step 15: For menu item 10): To install from tape, enter the tape device name where the ENVOX software media is located. To install from disk, enter the full directory pathname where the savesets are stored.

Step 16: Move the cursor to ENTER and press **Return** to continue the installation.

The following display appears:

```
      Checking menu options

            Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 17: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the installation.

If there are no errors, the installation continues to completion. During installation, the following display appears:

```
start of inst_upg_sybase.com
Deleting existing sybase files...
Installing SYBASE files...

Sybase install completed successfully on 15-Dec-1997 11:46.40
```

This completes the SYBASE client-only installation. See Subsection 4.4 to install ENVOX software on a client-only system.

4 Installing ENVOX Software

This section explains how to install ENVOX® configuration software on a MicroVAX 3100 computer, a VAXstation 3100, a VAXstation 4000 and the AlphaStation 200 series. The section also includes information about recovering from errors and setting up user accounts. See Appendix A for the meaning of error messages. See Appendix C for log files of a typical installation. Section 8 provides instructions for backing up the current system's disks to tape and restoring the disks from tape.

4.1 New System Installation Method

Before installing ENVOX software for the first time on an OpenVMS system, ensure that the hardware is properly installed and the system is operationally tested. Then, follow the installation procedure sequence as shown in Figure 4-1.

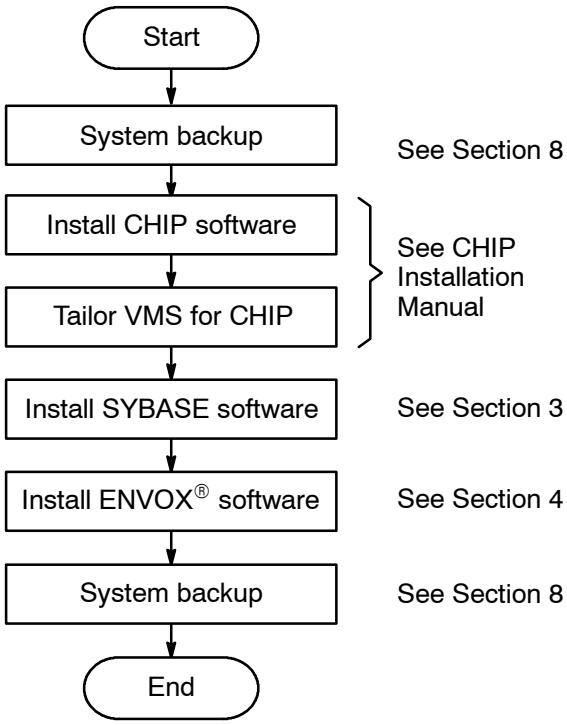

Figure 4-1. System Installation Flow

Note ... System backup before and after installation is extremely important. Always back up the system in case the system configuration needs to be restored. Store backup tapes in an environmentally and physically protected area.

4.2 Before Installing ENVOX Software

Several procedures and considerations need to be done before you perform an installation. They are explained in the following subsections.

4.2.1 Precautions

Before you attempt any operation, read the precautions listed below. They can save you time and reduce the possibility of errors.

1. SYBASE must be installed and running before you start installing the ENVOX software.
2. The CHIP software must be installed and running before you start installing the ENVOX software.
3. Rename Open databases that have one or more of these attributes:
   - names longer than 16 characters
   - names that begin with a number
   - names that contain characters other than numbers, letters, #, and _ (underscore).

4.2.2 Guidelines for Running the Installation Script

The following information provides guidelines for running the installation script: sybase_envox_install.

- When sybase_envox_install is run, a menu driven interface is displayed on the screen. It is a character based menu.
- Navigation through the menu items is accomplished by using the up and down arrow keys or by pressing **Return** on any of the menu item fields.

- Navigation through the menu item data fields is accomplished by using the left and right arrow keys.
- The menu item data fields are in insert mode.
- If any menu item is incorrect, its data field is shown in reverse video.
- Most of the menu data is defaulted for you when the menu is displayed. The defaulted data can be modified.
- Moving the cursor to ENTER and pressing **Return** causes the data from the menu to be checked. If there are no errors or warnings, the installation proceeds normally.
- If there are error or warning messages, the system errors are shown first, followed by the menu errors, and then the warnings. By repeatedly pressing **Return**, you cycle through these messages and then back to the main menu. Once in the main menu, you can quit if system errors need to be corrected. For menu errors, correct the menu data and press **Return** to check the corrected data.
- Menu item error messages appear with the menu item number and text.
- Pressing **Ctrl-w** refreshes the menu screen.
- Pressing **Ctrl-e** deletes the current data field.
- If there are no error messages, the menu disappears from the screen and is replaced with information messages from the various stages of the installation.
- Once installation has started, do not try to interrupt it.
- Installing the ENVOX software on an AXP system takes 2 to 3 hours. Installing the ENVOX software on a VAX system takes from 3 to 4 hours. These times are approximate; your installation may take less time to complete.
- A log file, sybase_envox_inst.log, is produced in the default directory. If there is a problem, study the log file to help determine the cause.

4.3 Installing ENVOX Software on Client-Server Systems

The following section describes how to install ENVOX software for a client-server system.

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: password
```

The DCL prompt appears.

Step 2: If you have not already read the installation script from the installation media as described in the SYBASE installation procedure (subsection 3.3), insert and make ready the media, and read the script by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

Step 3: Start the installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The screen clears and the following display appears:

```
         Checking system

            Please wait...
```

The following display appears:

```
Choose whether to install or de-install ENVOX
Move cursor to item and press <CR>.

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

Step 4: Move the cursor to INSTALL ENVOX and press **Return.**

The following display appears:

```
ENVOX Client-Server Installation

1)ENVOX System Disk = SYS$SYSDEVICE
2)ENVOX Log Disk = SYS$SYSDEVICE
3)ENVOX Database Disk = USER$1
4)ENVOX Account UIC code = 17,1011
5)ENVOXSUPPORT Account UIC code = 17,1012
6)Create ENVOXDB = Y
7)Tape device =

ENTER     QUIT
```

Step 5: For menu item 1), enter the name of the disk which will contain the main ENVOX directory structure.

Step 6: For menu item 2), enter the name of the disk which will contain the ENVOX transaction log. The transaction log requires 46,000 blocks of disk space.

Step 7: For menu item 3), enter the name of the disk which will contain the ENVOX database device. The ENVOX database device requires 250,000 blocks of disk space.

Step 8: For menu item 4), enter the UIC code for the ENVOX account. The UIC code must be unique and of the form, *group, member*, where group and member are OCTAL numeric numbers in the range: group=[0 to 3776] and member=[0 to177776]. A UIC default value of 17,1011 is recommended and places the ENVOX account in the same group as the CHIP account.

Step 9: For menu item 5), enter the UIC code for the ENVOXSUPPORT account. The UIC code must be unique and of the form, *group, member,* where group and member are OCTAL numeric numbers in the range: group=[0 to 3776] member=[0 to 177776]. A UIC default value of 17,1012 is recommended and places the ENVOXSUPPORT account in the same group as the CHIP account.

Step 10: For menu item 6), enter **Y** if you want to create ENVOXDB during installation.

If you enter **N**, the ENVOXDB will not be created and the installation time required to create the ENVOX databases will be reduced to about 30 minutes to 1 hour.

Step 11: For menu item 7): to install from tape, enter the tape device name where the ENVOX software media is located. To install from disk, enter the full directory pathname where the savesets are stored.

Step 12: Move the cursor to ENTER and press **Return** to continue the installation.

The following display appears:

```
Checking menu options

   Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 13: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the installation.

If there are no errors, the installation continues to completion. During installation, the following display appears:

```
start of inst_upg_envox.com
Deleting existing ENVOX files..
Installing ENVOX files...
upgrading master database
   upgrading database master to ENVOX P4.0    Dec 12 1997 5:37PM

master upgrade complete     Dec 12 1997  5:37PM

   CREATING ENVOX P4.0 DATABASES ...
   The installation process is about to enter a phase where the
   ENVOX configuration databases are created.
   This will take about 1 to 2 hours to complete.

   Installation of ENVOX software is complete.

   For new installations you will be prompted to change your
password when you first log into the ENVOX and ENVOXSUPPORT
   accounts. Please enter a valid password and keep it safe.

ENVOX install completed successfully on 12-Dec-1997  18:29:17.12
```

Note ... For new installations, the ENVOX forms password is set to password. We recommend that you change the password to one of your own and keep the new password safe.

This completes the ENVOX client-server installation.

4.4 Installing ENVOX Software on Client-Only Systems

The following section describes how to install ENVOX software for a client-only system.

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: If you have not already read the installation script from the installation media as described in the SYBASE installation procedure (subsection 3.5), insert and make ready the media, and read the script by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

Step 3: Start the installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The screen clears and the following display appears:

```
Checking system

   Please wait...
```

The following display appears:

```
Choose whether to install or de-install SYBASE and
ENVOX
Move cursor to item and press <CR>.

INSTALL SYBASE

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```


Step 4: Move the cursor to INSTALL ENVOX and press **Return.**

The following display appears:

```
ENVOX Client-Only Installation

1)ENVOX System Disk = SYS$SYSDEVICE
2)ENVOX Account UIC code = 17,1011
3)ENVOXSUPPORT Account UIC code = 17,1012
4)Tape device =

ENTER     QUIT
```

Step 5: For menu item 1), enter the name of the disk which will contain the main ENVOX directory structure.

Step 6: For menu item 2), enter the UIC code for the ENVOX account. The UIC code must be unique and of the form, *group, member,* where group and member are OCTAL numeric numbers in the range: group=[0 to 3776] and member=[0 to 177776]. A UIC default value of 17,1011 is recommended and places the ENVOX account in the same group as the CHIP account.

Step 7: For menu item 3), enter the UIC code for the ENVOXSUPPORT account. The UIC code must be unique and of the form, *group, member,* where group and member are OCTAL numeric numbers in the range: group=[0 to 3776] member=[0 to 177776]. A UIC default value of 17,1012 is recommended and places the ENVOXSUPPORT account in the same group as the CHIP account.

Step 8: For menu item 4), To install from tape, enter the tape device name where the ENVOX software media is located. To install from disk, enter the full directory pathname where the savesets are stored.

Step 9: Move the cursor to ENTER and press **Return** to continue the installation.

The following display appears:

```
Checking menu options

   Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 10: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the installation.

If there are no errors the installation continues to completion. During installation, the following display appears:

```
start of inst_upg_envox.com
Deleting existing ENVOX files...
Installing ENVOX files...

Installation of ENVOX Client software is complete.

   For new installations you will be prompted to change
   your password when you first log into the ENVOX and
   ENVOXSUPPORT accounts. Please enter a valid password
   and keep it safe.

ENVOX install completed successfully on 12-DEC-1997 09:03:25.56
```

Note ... For new installations, the ENVOX forms password is set to password. We recommend that you change the password to one of your own and keep the new password safe.

This completes the ENVOX client-only installation.

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5 Upgrading Software on Client-Server Systems

This section explains how to upgrade SYBASE and ENVOX® software for client-server systems. Since client-server upgrade methods differ depending on the ENVOX version on which are you are operating, this section divides software upgrade into two methods:

- A method for upgrading SYBASE and ENVOX software from ENVOX P2.x, P3.0, P3.2, and P3.3 to ENVOX P4.0
- A method for upgrading SYBASE and ENVOX software from ENVOX P3.4 to ENVOX P4.0

Caution ... Upgrading the server to SYBASE System 10.0 will delete *all* databases. If you have non-ENVOX databases which you wish to save, be sure to read section 11 before proceeding.

Note ... In ENVOX P4.0, the upgrade process does *not* automatically create databases for your PDX-dumped ENVOX configuration data. Follow the instructions in this section to dump the data, create ENVOX databases, and reload the data into these databases.

5.1 Before Upgrading SYBASE and ENVOX Software

Several procedures and considerations need to be done before you perform an installation. They are explained in the following subsections.

5.1.1 Precautions

Before you upgrade, you should understand the precautions listed below. They can save you time and can reduce the possibility of errors.

- Make adequate backups of the system and perform the dumps of your configuration data *prior* to upgrading. These actions ensure that the system software and databases can be recovered if the upgrade fails.
- For ENVOX P2.x, P3.0, P3.2, and P3.3, the SYBASE System 10.0 database will be larger than your present database by at least 26%. ENVOX P3.4 is already at SYBASE 10.0.
- Determine the database structure and statistics of your system. Subsections 5.2.1 and 5.3.1 contain instructions for obtaining this information.
- Save the printout of the show_dev_alloc.out file for future reference in case you need to return to the previous configuration.
- Make sure that no application software or user processes that access the SYBASE SQL server are running during the upgrade.
- Validate the integrity of all databases (except for tempdb) by running the database checks described in the *System Manager's Guide to ENVOX Configuration Software,* SM1.0:SW3151, for ENVOX release P4.0. See the list of ENVOX manuals in subsection 1.7. Any errors should be reported to your Fisher-Rosemount Systems' Representative or sales office so that the errors can be corrected before upgrading.
- Do *not* initialize the second disk; see the following:

Caution ... Do *not* initialize the second disk for an upgrade because initializing the disk erases all of the data on the disk.

5.1.2 Setting the Password Before Upgrading

Before you can upgrade SYBASE software, the SYBASE system administrator's password must be set to *database*. To change the password, perform the following steps:

Step 1: Log into the SYBASE account as follows:

```
Username: SYBASE
Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ isql/u="sa"/password="sa_password"
```

The command runs the ISQL utility. ISQL commands *are* case sensitive.

Step 3: In the utility, enter the following commands at the prompt exactly as shown:

```
1> sp_password "your_password", "database", sa
2> go
3> exit
```

where *your_password* is any password other than *database.*

5.1.3 Directory and File Operations During Upgrade

During the upgrade process, several directories are deleted and then recreated. The sybase_device:[sybase]*.*;* directory and all of its subdirectories are among these. Also, the main ENVOX directory and its subdirectories are deleted and recreated.

This ENVOX directory is the one which you normally use for your login account. If you have added personal files in this directory, they will be deleted, and you will need to restore them in the recreated directory. Therefore, it is suggested that you save your personal files to a tape or disk before starting the upgrade.

During the upgrade process, several temporary files are created in sys$manager directories. These files are normally deleted when the upgrade process is complete. However, you may wish to check these directories after completing the upgrade to make sure that all of the temporary files are deleted.

5.1.4 Considerations for Using the PDX Utility

The following items are important points to consider before proceeding with the client-server upgrade:

- SYBASE software already existing on your system and *all* of the database information will be completely deleted. The PDX dump method is the *only* way of saving your database information.
- The existing login.com will be saved away as *old_login.com* in the top level SYBASE directory. All other SYBASE files will be deleted.
- The data in your ENVOX and OPENDB databases can be dumped with the PDX utility. Data in other databases may or may not be dumped with the PDX utility. See section 11 for a description of using this utility for non-ENVOX databases.
- Make sure that you list the database statistics for the ENVOX databases before proceeding with the installation. The list will give the data and log distribution for the databases along with the estimated PDX file size.
- For the upgrades from P2.x,P3.0, P3.2 and P3.3, you must initiate the PDX utility from the command line. When the data from all databases has been PDX dumped, de-install SYBASE and ENVOX and proceed with the installation for the P2.x and P3.0 upgrades through the installation menu system.
- For the upgrade from P3.4, you normally can run the PDX utility from the ENVOX menu system to PDX dump data from ENVOX and OPENDB databases. However, if you have more than sixteen ENVOX and OPENDB databases, you must run the PDX utility from the command line.
- For PDX dump to a tape, make sure that a pre-initialized tape has been mounted. A tape can be initialized by inserting the tape in a tape drive and entering the following command at the DCL prompt:

  ```
  $ init tapedrive: tape/override=expiration
  ```

  where *tapedrive* is the name of your tapedrive.
- Only dump one database per tape to avoid exceeding the tape capacity. The tape capacity is the amount of data in Mbytes which will be written to tape before the PDX dump will stop and ask for the next tape. Mark the tapes and keep them safe; they will be needed later to load the dumped data to recreated databases.
- Before PDX dumping to disk, make sure that there is enough disk space for the PDX dump. The estimated PDX file size from the database statistics list can help you determine the required disk space.

- The menu system considers a PDX dump to be both a PDX dump *and* a PDX verification of that dump. The verification phase is transparent to the user, unless several tapes are used for one database.

Caution ... Do not PDX dump databases to any of the SYBASE or ENVOX directories because they are subsequently deleted during the installation and you will lose the data in the databases.

5.1.5 Guidelines for Running the Upgrade Script

The installation script, sybase_envox_install, is used in the upgrade process. the following information provides guidelines for running the script.

- When sybase_envox_install is run, a menu driven interface is displayed on the screen. It is a character based menu.
- Navigation through the menu items is accomplished by using the **up** and **down** arrow keys or by pressing **Return** on any of the menu item fields.
- Navigation through the menu item data fields is accomplished by using the **left** and **right** arrow keys.
- The menu item data fields are set for insert mode.
- If a menu item is incorrect, its data field is shown in reverse video.
- Most of the menu data is defaulted for you when the menu is displayed. The defaulted data can be modified.
- Moving the cursor to ENTER and pressing **Return** causes the data from the menu to be checked. If there are no errors or warnings, the upgrade proceeds normally.
- If there are error or warning messages, system errors are shown first, followed by menu errors, and then warnings. By repeatedly pressing **Return**, you cycle through the messages and back to the main menu. Once in the main menu, you can quit if system errors need to be corrected. For menu errors, correct the menu data and press **Return** to check the corrected data.
- Menu item error messages appear with the menu item number and text.
- Pressing **Ctrl-w** refreshes the menu screen.

- Pressing **Ctrl-e** deletes the current data field.
- If there are no error messages, the menu disappears from the screen and is replaced with informational messages from the various stages of the upgrade.
- Once upgrade has started, do not try to interrupt it. SYBASE software installation and upgrade typically lasts about 60 minutes on a VAX system and 20 minutes on an AXP system. ENVOX software installation and upgrade typically lasts 3 to 4 hours.
- A log file, sybase_envox_inst.log, is produced in the sys$manager directory. If the upgrade does not proceed as expected, study the log file to help determine the cause.

5.2 Upgrading ENVOX Versions P2.x, P3.0, P3.2, and P3.3 to P4.0

Figure 5-1 shows the procedure for upgrading a client-server system for ENVOX versions P2.x, P3.0, P3.2 and P3.3. The process of upgrading from these versions to SYBASE System 10.0.2.6 and ENVOX P4.0 consists of the following procedures:

- List database structure and statistics as described in subsection 5.2.1.
- Dump the data from the existing ENVOX and Open databases to disk or tape, using the PDX Utility as described in subsection 5.2.2.
- De-install SYBASE and ENVOX software as described in subsection 8.5.
- Upgrade to OpenVMS V7.1.
- Install SYBASE and ENVOX software.
  - ☐ For the SYBASE installation, follow the instructions for client-server systems as described in subsection 3.3
  - ☐ After the successful installation of SYBASE software, follow the instructions for the ENVOX installation for client-server systems as described in subsection 4.3.
- Create logical devices and ENVOX and Open databases as described in section 5.4
- With the PDX utility, re-load your configuration data into the newly created ENVOX and Open databases as described in subsection 5.4.
- Backup your upgraded system as described in Section 8.

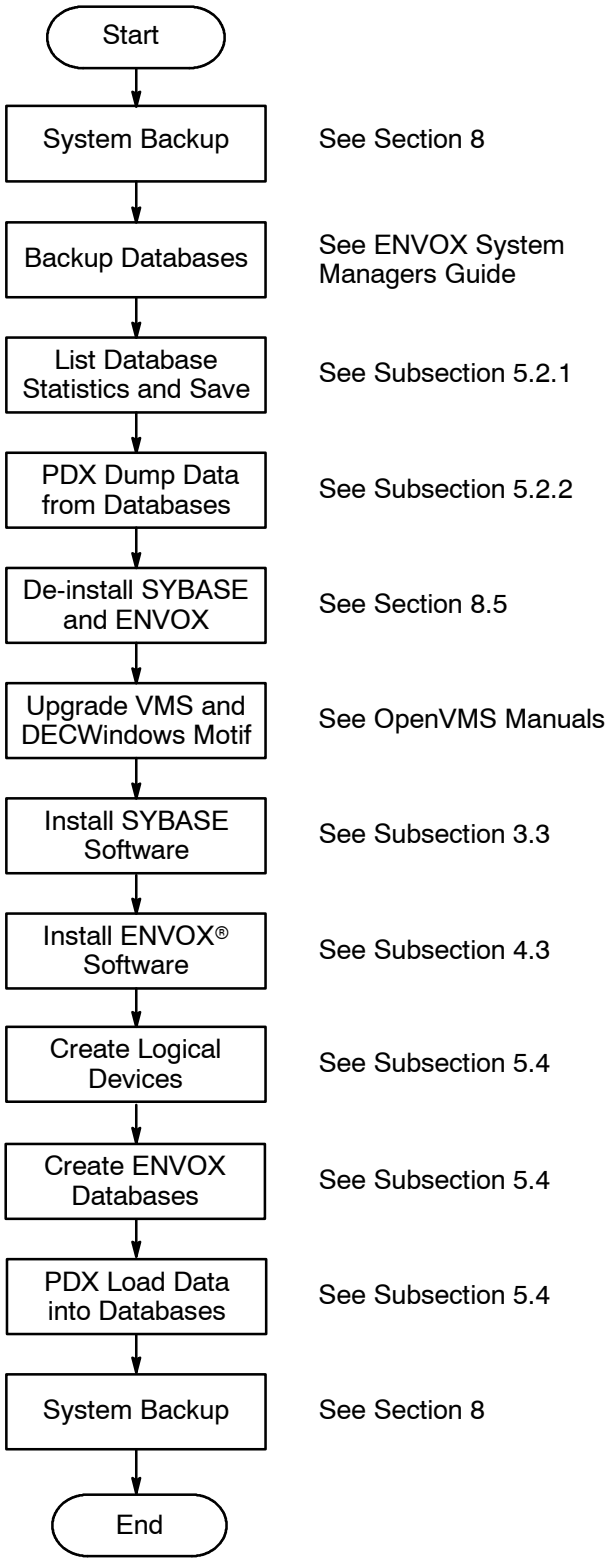

Figure 5-1. ENVOX P2.x, P3.0, P3.2, P3.3 and SYBASE Software Upgrade Process for a Client-Server System

5.2.1 Determining Database Structure and Statistics

Before upgrading ENVOX versions P2.x, P3.0, P3.2 and P3.3, you must determine the database structure and statistics of your system. This information is used to determine the size to make the new databases after the software upgrade.

Determine the database structure and statistics as described in the steps below.

Step 1: Log into the SYBASE account as follows:

```
Username: SYBASE
Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ isql/u="sa"/password="sa_password"/output=show_dev_alloc.out
```

Step 3: Enter the following command at the SYBASE prompts:

```
1> show_dev_alloc
2> go
1> exit
```

Step 4: Enter the following command at the DCL prompt:

```
$ print show_dev_alloc.out
```

Save the printout of the show_dev_alloc.out file for future reference in case you need to return to the previous configuration.

Step 5: If you are not logged into the SYSTEM account, log in by entering the user name SYSTEM and your password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 6: To obtain the PDX utility, insert and make ready the installation media, and read the PDX utility from the media by entering the following commands at the DCL prompts:

- For upgrades from P3.2 and P3.3, enter:

```
$ mount/for tapedrive:
$ backup tapedrive:ENVOX040.Z envox$application:pdx.exe
  /SELECT=pdx.exe/log/ignore=label/owner=ENVOX/replace
```

- For upgrades from P2.x (VAX platform only), enter:

```
$  mount/for tapedrive:
$  backup tapedrive:ENVOX040.Z envox$application:pdx.exe
   /SELECT=P20_pdx.exe/log/ignore=label/owner=ENVOX/replace
```

- For upgrades from P3.0 (VAX platform only), enter:

```
$  mount/for tapedrive:
$  backup tapedrive:ENVOX040.Z envox$application:pdx.exe
   /SELECT=P30_pdx.exe/log/ignore=label/owner=ENVOX/replace
```

Step 7: Run the PDX utility in information mode on each ENVOX and Open database listed in the file show_dev_alloc.out.

Enter the following commands at the DCL prompt:

```
$  define sys$output DB.out
$  mcr envox$application:pdx.exe -sv df "SERVER" "DB" "sa_password" nl:
$  deassign sys$output
$  print DB.out
```

where *SERVER* = the name of the server
DB = name of the database
sa_password = your sa password

To retain the database structure and statistics for each ENVOX and Open database in your system, save the file *DB*.OUT and its printout. There is a separate file for each database.

Example Command

The following example lists information on the ENVOX database ENVOXDB located on the SYBASE SQL server to the file ENVOXDB.OUT and uses the SA password, database.

```
$  define sys$output ENVOXDB.OUT
$  mcr envox$application:pdx.exe -sv df "SYBASE"
"ENVOXDB" "database" nl:
$  deassign sys$output
$  print ENVOXDB.out
```

Once you have run the PDX utility and printed *DB*.out, you may dump your ENVOX and Open databases. Proceed to subsection, 5.2.2.

5.2.2 Dumping Data from ENVOX and Open Databases — ENVOX P2.x, P3.0, P3.2 and P3.3

Dump the data from ENVOX and Open databases which are on ENVOX versions P2.x, P3.0, P3.2 and P3.3 as described in the steps below:

Step 1: Log into the ENVOX account as follows:

```
Username: ENVOX
Password: your_password
```

The DCL prompt appears.

Step 2: If you have not already done so, determine the structure of your databases and collect the statistics generated, as described in subsection 5.2.1.

Step 3: Dump the data to tape by entering the following command at the DCL prompt:

```
$ mcr envox$application:pdx.exe df "SERVER" "DB" "sa_password" tapedrive:
```

See *The System Manager's Guide to ENVOX® Configuration Software*, SM1.0:SW3151, for P4.0 for more details on the PDX utility.

Step 4: Repeat Step 3 for every ENVOX and Open database, using a separate tape for each database.

Once you have dumped all of your data from databases, you may complete the upgrade. Proceed to subsection 5.2.3.

5.2.3 Completing the Upgrade Process

Complete the upgrade process as described in the following steps:

Note ... Before completing the upgrade process, it is recommended that you review the information in subsections 5.1.5, 3.1 and 3.2.

Step 1: Follow the instructions given in section 8.5 to de-install SYBASE and ENVOX software.

Step 2: Upgrade your VAX or AXP system to OpenVMS V7.1 and DECwindows Motif version V1.2-3(VAX system) and version V1.2-4(AXP system).

Step 3: Follow the instructions in subsection 3.3 to install SYBASE on a client-server system.

Step 4: Follow the instructions in subsection 4.1 to install ENVOX P4.0 software on a client-server system.

Step 5: Create logical devices as described in subsection 5.4.

Step 6: Create ENVOX and OPEN databases as described in subsection 5.4.

Step 7: Load ENVOX and Open databases with the PDX utility as described in subsection 5.4

5.3 Upgrading ENVOX Version P3.4 to P4.0

Figure 5-2 shows the process for upgrading a client-server system from version P3.4 to SYBASE System 10.0.2.6 and ENVOX P4.0. The process consists of the following procedures:

Note ... It is suggested that you upgrade your VAX and AXP system to OpenVMS 7.1 and DECWindows Motif V1.2.3 (for VAX) or V1.2.4 (for AXP) before proceeding with the upgrade.

- List database structure and statistics as described in subsection 5.3.1.
- Dump data from existing ENVOX and Open databases to disk or tape through the ENVOX menu system as described in subsection 5.3.2.
- Upgrade SYBASE and ENVOX software as described in section
- Create ENVOX and Open databases as described in section 5.6
- With the PDX utility, re-load ENVOX and Open databases.
- Backup the upgraded system.

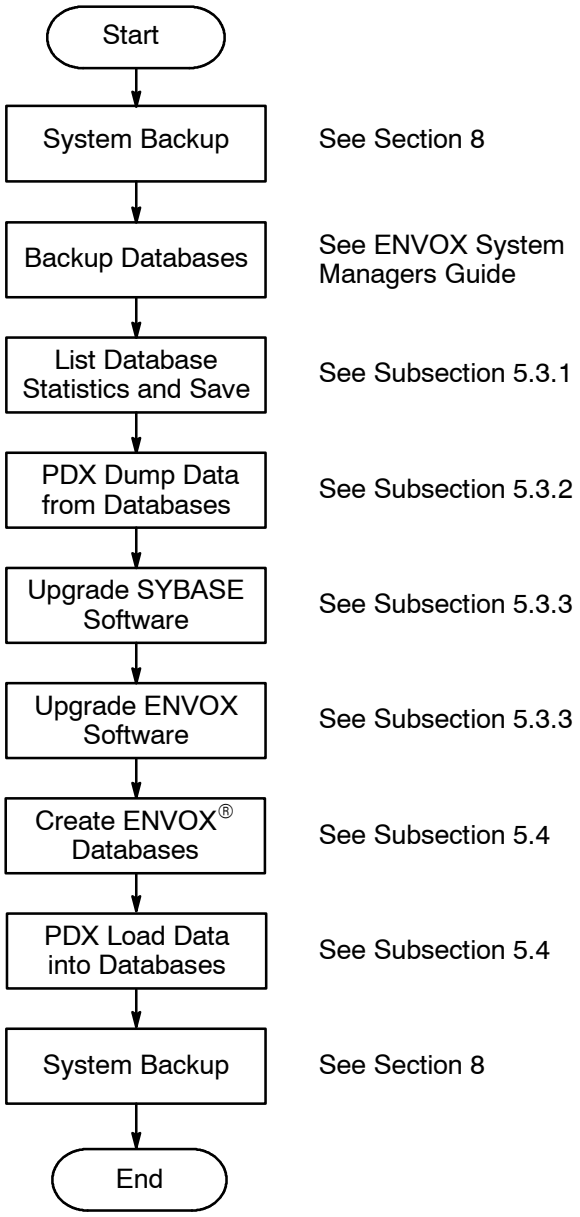

Figure 5-2. ENVOX P3.4 and SYBASE Software Upgrade Process for a Client-Server System

5.3.1 Determining Database Structure and Statistics

Before upgrading ENVOX version P3.4, determine the database structure and statistics of your system. This information is used to determine the size to make the new databases after the software upgrade.

Determine the database structure and statistics as described in the steps below.

Step 1: Log into the SYBASE account as follows:

```
Username:  SYBASE
Password:  your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$  isql/u="sa"/password="sa_password"/output=show_dev_alloc.out
```

Step 3: Enter the following command at the SYBASE prompts:

```
1> use sybsystemprocs
2> go
1> show_dev_alloc
2> go
1> exit
```

Step 4: Enter the following command at the DCL prompt:

```
$  print show_dev_alloc.out
```

Save the printout of the show_dev_alloc.out file for future reference in case you need to return to the previous configuration.

The DCL prompt appears.

Step 5: Run the PDX utility in information mode on each ENVOX and Open database listed in the file show_dev_alloc.out.

Enter the following commands at the DCL prompt:

```
$  define sys$output DB.out
$  mcr envox$application:pdx.exe -sv df "SERVER" "DB" "sa_passwd" nl:
$  deassign sys$output
$  print DB.out
```

where *SERVER* = the name of the server
DB = name of the database
sa_password = your sa password

To retain the database structure and statistics for each ENVOX and Open database in your system, save the file ENVOXDB.OUT and its printout. There is a separate file for each database.

Example Command

The following example lists information on the ENVOX database ENVOXDB located on the SYBASE SQL server to the file ENVOXDB.OUT and uses the SA password, database.

```
$  define sys$output ENVOXDB.OUT
$  mcr envox$application:pdx.exe -sv df "SYBASE"
"ENVOXDB" "database" nl:
$  deassign sys$output
$  print ENVOXDB.out
```

Once you have run the PDX utility and printed *DB*.out, you may dump your ENVOX and Open databases. Proceed to subsection 5.3.2.

5.3.2 Dumping Data from ENVOX and Open Databases — ENVOX P3.4

Dump the data from ENVOX and Open databases which are on ENVOX version P3.4 as described in the steps below:

Step 1: If your system is not already running OpenVMS V7.1 and DECwindows Motif version V1.2-3(VAX system) and version V1.2-4(AXP system), then upgrade your VAX or AXP systems to these software versions.

Step 2: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 3: Insert and make ready the installation media, and read the installation script from the media by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if upgrading from tape, or the full directory pathname where the savesets are stored if upgrading from disk.

Step 4: Start the installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The following display appears:

```
   Checking System

      Please wait...
```

If there are no errors, the following display appears:

```
Choose whether to install or de-install SYBASE and ENVOX
Move cursor to item and press <CR>.

INSTALL SYBASE

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

Step 5: Move the cursor to INSTALL SYBASE and press **Return.**

The following display appears:

```
PDX dump or list database statistics.
Move cursor to item and press <CR>

PDX DUMP DATABASES

LIST OUT DATABASE STATISTICS

QUIT
```

Step 6: Move the cursor to LIST OUT DATABASE STATISTICS and press **Return**.

The following display appears:

```
Database  Type  Data  Log  Space used(Mb)  PDX filesize(MB)

(Several lines of database statistics listed in this area of
display

Press <CR> to continue, Ctrl-Z to exit.
```

where *Database* = the name of the database
Type = ENVOX or OPENDB
Data = Size of data part of database in Mbytes
Log = Size of log part of database in Mbytes
Space used = Space used by database in Mbytes
PDX filesize = Estimated size of PDX dump in Mbytes

The statistics of every ENVOX and OPEN database in the system are displayed. The data is also logged to the file, *db_details.log*, in the current directory. Be sure to save this file for later use.

Step 7: Press **Return.**

The following display appears (same menu as in Step 5):

```
PDX dump or list database statistics.
Move cursor to item and press <CR>

PDX DUMP DATABASES

LIST OUT DATABASE STATISTICS

QUIT
```

Step 8: Move the cursor to PDX DUMP DATABASES, and press **Return.**

The following display appears:

```
PDX dump a database or install.
Move cursor to item and press <CR>

PDX dump <TYPE> database <DBNAME>
PDX dump <TYPE> database <DBNAME>
PDX dump <TYPE> database <DBNAME>
            .
            .
            .

INSTALL

QUIT
```

There is a PDX dump selection for every database which was listed in Step 6.

Step 9: Move the cursor to the PDX dump line of the database you want to PDX dump, and press **Return**. (If you do not wish to dump data from any of the databases, you may choose INSTALL).

The following display appears:

```
PDX dump to tape or to disk.
Move cursor to item and press <CR>

PDX DUMP DATABASE TO TAPE

PDX DUMP DATABASE TO DISK

QUIT
```

Step 10: If you intend to use a tape dump device, proceed to Step 11; if you intend to use a disk dump device, proceed to Step 16.

Step 11: To dump to tape, insert a pre-initialized tape into the tape drive. If you intend to use the tape drive used by the installation, then first remove the installation tape before inserting a pre-initialized tape. Move the cursor to PDX DUMP DATABASE TO TAPE, and press **Return**.

The following display appears:

```
Tape Characteristics
--------------------

1)Tape device filename =

2)Tape Capacity(Mb) =

ENTER    QUIT
```

Step 12: Enter the tape device filename (for example, MKA100:ENVOXDB.PDX) and the tape capacity. Then, move the cursor to ENTER and press **Return**.

The following display appears if you are dumping to tape:

```
        Checking tape characteristics

             Please wait...
```

Followed by the next display:

```
   PDX dump of database dbname in progress

          Please wait...
```

If a small tape capacity was set, the following display appears:

```
Tape capacity has been reached.
Put next tape into drive.
.
.
.
Press <CR> to continue, Ctrl-Z to exit.
```

Step 13: Put the next tape into the drive, and press **Return**. The PDX dump process will continue. If another tape is needed, the prompt is repeated.

When the verification phase is reached, the following display appears:

```
PDX entering verification phase.
Please insert first tape for this database.
.
.
.
Press <CR> to continue, Ctrl-Z to exit.
```

Step 14: Put the first tape that was used for this PDX dump into the tapedrive, and press **Return.** The PDX dump process will continue. If another tape is needed, the prompt is repeated.

When the PDX dump has completed successfully, the following display appears:

```
PDX dump of database dbname COMPLETE.
.
.
.
Press <CR> to continue, Ctrl-Z to exit.
```

See Appendix A for list of error conditions and corrective actions.

Step 15: Proceed to Step 18.

Step 16: If you want to PDX dump your databases to disk, move the cursor to PDX DUMP DATABASE TO DISK, and press **Return**.

The following display appears:

```
File Characteristics
--------------------

1)PDX filename =

ENTER    QUIT
```

Step 17: Enter a filename which you want the PDX dump file to be called. Include the *full* pathname including the directories (e.g. dka100:[dumps]envoxdb.pdx).

Move the cursor to ENTER and press **Return.**

The following display appears if you are dumping to disk:

```
        Checking PDX file

           Please wait...
```

Followed by the next display:

```
   PDX dump of database dbname in progress

           Please wait...
```

Step 18: Repeat the dump process, beginning with Step 8, for each ENVOX and Open database, using a separate tape for each database.

When you have completed the dump process for all of your databases, complete the upgrade process as described in subsection 5.3.3.

5.3.3 Completing the Upgrade Process

Complete the upgrade process as described in the following steps:

Note ... Before completing the upgrade process, it is recommended that you review the information in subsections 5.1.5, 3.1 and 3.2.

Step 1: When all ENVOX and Open databases have been dumped successfully, make sure that the installation media is inserted in the tape drive if installing from tape.

The system should be displaying the following:

```
PDX dump a database or install.
Move cursor to item and press <CR>

PDX dump <TYPE> database <DBNAME>
PDX dump <TYPE> database <DBNAME>
PDX dump <TYPE> database <DBNAME>
            .
            .
            .

INSTALL

QUIT
```

Step 2: To upgrade SYBASE, move the cursor to INSTALL, and press **Return**.

The following display appears:

```
SYBASE Client-Server Upgrade
----------------------------

1)Tape device =
ENTER     QUIT
```

Step 3: After entering the tape device name (or full disk directory path), select ENTER from the above menu.

The following display appears:

```
        Checking menu options

            Please wait...
```

If there are no errors, the system displays the following:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 4: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the sybase upgrade.

The following display appears:

```
start of inst_upg_sybase.com
----------------------------
Installing SYBASE files...


sybase install completed successfully on
12-FEB-1998 16:24:43.62

$
==========================================
```

Step 5: After completing the sybase upgrade, restart the installation program to upgrade ENVOX, by entering:

```
$ run sybase_envox_install
```

The following display appears:

```
       Checking system

           Please wait...
```

If there are no errors, the following display appears:

```
Choose whether to install or de-install
ENVOX. Move cursor to item and press <CR>

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

Step 6: Move the cursor to INSTALL ENVOX, and press **Return** to continue the SYBASE upgrade.

The following display appears:

```
ENVOX Client-Server Upgrade
---------------------------

1)Tape device =

ENTER     QUIT
```

Step 7: Enter the tape device (or full disk directory path) name.

The following display appears:

```
      Checking menu options

          Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 8: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the sybase upgrade.

The following display appears:

```
start of  inst_upg_envox.com
----------------------------
Deleting existing ENVOX files...
Installing ENVOX files...
upgrading master database
upgrading database master to envox P4.0 Feb 12 1998
5:48PM

master upgrade complete Feb 12 1998 5:48PM

upgrading envox_readonly database
upgrading database envox_readonly to envox P4.0
Feb 12 1998 5:48PM

dropping dbo's procedures...
upgrading tables to 12-Dec-1996...
upgrading tables to 06-Jun-1997...
upgrading tables to 05-Dec-1997...
loading readonly data and stored procedures...
envox_readonly upgrade complete Feb 12 1998 5:58PM

Installation of ENVOX software is complete.

For new installations you will be prompted to change
your password when you first log into the ENVOX and
ENVOXSUPPORT accounts.
Please enter a valid password and keep it safe.


ENVOX install completed successfully on 12-FEB-1998
17:58:26.08
```

Step 9: Create ENVOX and OPEN databases as described in subsection 5.4.

Step 10: Load the dumped data into the newly created ENVOX and Open databases with the PDX utility as described in subsection 5.4.

5.4 Creating and Loading ENVOX and Open Databases After the Upgrade

Note ... Upgrades from ENVOX P3.4 preserve logical devices. Upgrades from P2.x, P3.0, P3.2, and P3.3 systems delete logical devices, they must be re-created.

The upgrade process does *not* create an empty ENVOX database. ENVOX databases must be created before loading ENVOX and OPEN databases using the PDX utility.

You use the PDX utility embedded in ENVOX software to load databases from a PDX dump. This utility is described in the *The System Manager's Guide for ENVOX Configuration Software*, SM1.0:SW3151.

The following steps describe the process for loading ENVOX and Open databases from a PDX dump.

Step 1: After the successful installation of ENVOX software, run the standalone ADMIN utility to create logical devices and databases to receive the PDX dumps which were created before the SYBASE and ENVOX upgrade.

See sections 5 and 9 of the *The System Manager's Guide to ENVOX Configuration Software*, SM1.0:SW3151, for details on how to create these databases. Use the list of database statistics produced during the SYBASE upgrade to help determine the size to make the databases.

Step 2: To load the PDX dumps into the databases, use either the ENVOX administration forms system or the command line version of the PDX utility (pdx.exe).

The PDX utility can load PDX dumps from either disk or tape. See section 9 of the *The System Manager's Guide to ENVOX Configuration Software*, SM1.0:SW3151, for details on how to run the utility.

To run the PDX utility to load from tape, log into the ENVOX account and type the following at the command line:

```
$ mcr envox$application:pdx fd tape:filename "SERVERNAME" "DBNAME"
"sapasswd"
```

Example Command

Fill in your tape:filename (for example, MKA100:envoxdb.pdx), server name, database name, and SA password.

The following example transfers the file contents of tran1.pdx held on the tape device mka500: to the database ENVOXDB held on the SYBASE SQL server. The sa password is database.


```
$  mcr envox$application:pdx fd mka500:tran1.pdx "SYBASE" "ENVOXDB"
"database"
```

Note ... If the original database has a NULL password, it is changed by the system to *password* after the PDX dump and load process is complete.

Also, all users are cleared from the target database before loading. So, if a user is not recorded in the PDX files, the user will not exist in the target database after the PDX load. However, users are logged into the master database when they log into ENVOX forms.

5.5 Reloading P4.0 ENVOX Software

This subsection describes how you reload P4.0 ENVOX software. Two reasons you might need to reload ENVOX P4.0 software on a system already running P4.0 are:

- You are a customer who has an agreement with Fisher-Rosemount Systems to implement pre-release software products in controlled environments called Beta sites. These sites must then reload P4.0 when the final software version is released.
- In some circumstances, existing ENVOX P4.0 files have become corrupted or have been inadvertently deleted and, as a result, you must re-load version P4.0.

Note ... It is suggested that you read the subsection 5.1.1 to understand the upgrade precautions.

To reload ENVOX P4.0, perform the following steps:

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and your password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media, and read the installation script from the media by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if upgrading from tape, or the full directory pathname where the savesets are stored if upgrading from disk.

Step 3: Start the installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The screen clears and the following display appears:

```
Checking system

   Please wait...
```

If there are no errors, the following display appears:

```
Choose whether to install or de-install ENVOX.
Move cursor to item and press <CR>.


INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```


Step 4: Move the cursor to INSTALL ENVOX and press **Return.**

The following display appears:

```
ENVOX Client-Server Upgrade

1)Tape device =

ENTER   QUIT
```

Step 5: To upgrade from tape, enter the tape device name where the ENVOX software is located. To upgrade from disk, enter the full directory pathname where the savesets are stored.

Step 6: Move the cursor to ENTER and press **Return** to continue the upgrade.

The following display appears:

```
Checking menu options

   Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 7: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the upgrade.

If there are no errors, the upgrade continues to completion. During upgrade, the following display appears:

```
start of inst_upg_envox.com
----------------------------
Deleting existing ENVOX files...
Installing ENVOX files...
upgrading master database
   upgrading database master to envox P4.0    DEC 12
1997 12:46PM

master upgrade complete    DEC 12 1997 12:47PM

    UPDATING ENVOX DATABASES TO P4.0 ...

The installation process is about to enter a phase
where all ENVOX configuration databases will be
upgraded to P4.0 databases. This will take about 1 to
2 hours to complete FOR EACH DATABASE.

upgrading envox_readonly database
upgrading database envox_readonly to envox P4.0 DEC
12 1997 12:47PM

dropping dbo's procedures...
loading readonly data and stored procedures...
envox_readonly upgrade complete    DEC 12 1997
12:47PM

The following databases will be upgraded...
   ENVOXDB upgrading database ENVOXDB to envox P4.0
 Dec 12 1997 12:47PM

dropping dbo's views, triggers and procedures...
reloading procedures, triggers and views...
ENVOXDB upgrade complete    Dec 12 1997 12:47PM
   upgrading database OPENDB to envox P4.0 Dec 12
1997 12:47PM

   Installation of ENVOX software is complete.

For new installations you will be prompted to change
your password when you first log into the ENVOX and
ENVOXSUPPORT accounts.

   Please enter a valid password and keep it safe.

ENVOX install completed successfully on 12-DEC-1997
12:47:10.70
```

Step 8: Log out of the ENVOX account. This completes the ENVOX P4.0 reload.

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6 Upgrading Software on Client-Only Systems

This section describes how to upgrade SYBASE and ENVOX® software for client-only systems. Unlike client-server systems, the client-only upgrade process is the same for any any ENVOX version which you are currently using.

Figure 6-1 shows the procedure for upgrading a client-only system. You must upgrade your ENVOX and SYBASE software in the sequence shown in the figure. Optionally, you may also want to upgrade your OpenVMS operating system at this time.

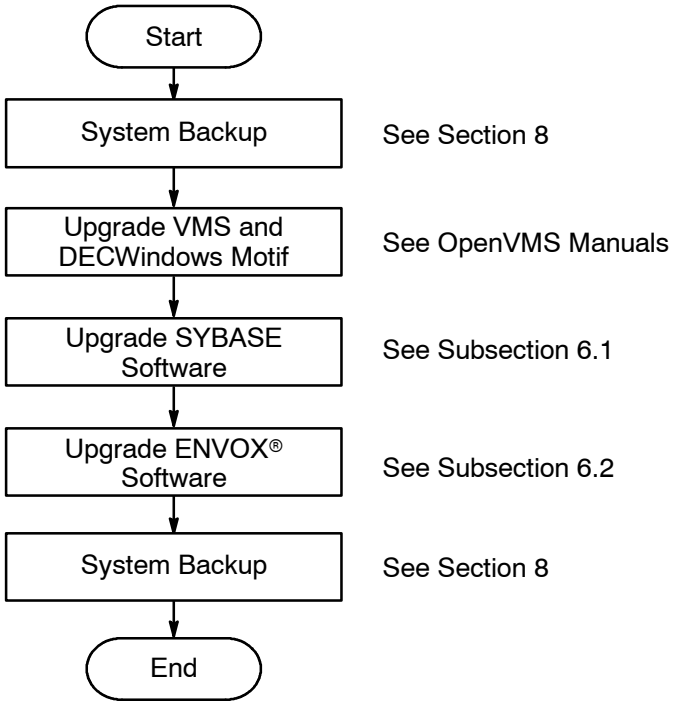

Figure 6-1. ENVOX and SYBASE Software Upgrade for a Client-Only System

Note ... System backup is extremely important before and after an upgrade. Always back up all disks on the system which contain ENVOX software, SYBASE software, databases, or transaction logs. A backup will ensure that all data can be recovered in case of an upgrade failure. Store backup tapes in an environmentally and physically protected area.

6.1 Upgrading SYBASE Software on Client-Only Systems

To upgrade SYBASE software:

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media, and read the installation script from the media by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if upgrading from tape, or the full directory pathname where the savesets are stored if upgrading from disk.

Step 3: Start eh installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The screen clears and the following display appears:

```
Checking system

   Please wait...
```

The following display appears:

```
Choose whether to install or de-install SYBASE and
ENVOX
Move cursor to item and press <CR>.

INSTALL SYBASE

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

Step 4: Move the cursor to INSTALL SYBASE and press **Return.**

The following display appears:

```
SYBASE Client-Only Upgrade

1)Tape device =

ENTER   QUIT
```

Step 5: To upgrade from tape, enter the tape device name where the ENVOX software media is located. To upgrade from disk, enter the full directory pathname where the savesets are stored.

Step 6: Move the cursor to ENTER and press **Return** to continue the upgrade.

The following display appears:

```
         Checking menu options

            Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 7: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the upgrade.

If there are no errors, the upgrade continues to completion. During upgrade, the following display appears:

```
start of inst_upg_sybase.com

Deleting existing sybase files...

Installing SYBASE files...

Sybase install completed successfully on 12-DEC-1997 17:43.45
```

This completes the SYBASE Upgrade. See subsection 6.2 to upgrade ENVOX software on a client-only system.

6.2 Upgrading ENVOX Software on Client-Only Systems

To upgrade ENVOX software:

Step 1: If you are not logged into the system manager's account, log in by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: If you have not already read the installation script from the installation media as described in the SYBASE installation procedure (subsection 3.5), insert and make ready the media, and read the script by entering the following command at the DCL prompt:

```
$ backup tapedrive:syb_envox_inst.a/sav *.*/new
```

where *tapedrive* is the name of your tapedrive if upgrading from tape, or the full directory pathname where the savesets are stored if upgrading from disk.

Step 3: Start the installation script by entering the following command at the DCL prompt:

```
$ run sybase_envox_install
```

The screen clears and the following display appears:

```
Checking system

   Please wait...
```

The following display appears:

```
Choose whether to install or de-install SYBASE and
ENVOX
Move cursor to item and press <CR>.

INSTALL SYBASE

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

Step 4: Move the cursor to INSTALL ENVOX and press **Return.**

The following display appears:

```
ENVOX Client-Only Upgrade

1)Tape device =

ENTER     QUIT
```

Step 5: To upgrade from tape, enter the tape device name where the ENVOX software media is located. To upgrade from disk, enter the full directory pathname where the savesets are stored.

Step 6: Move the cursor to ENTER and press **Return** to continue the upgrade.

The following display appears:

```
         Checking menu options

            Please wait...
```

If there are no errors, the following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 7: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the upgrade.

```
start of inst_upg_envox.com
Deleting existing envox files...
Installing ENVOX files...

ENVOX install completed successfully on 21-DEC-1997 17:43.45
```

This completes the ENVOX client-only upgrade.

7 Creating ENVOX User Accounts

An ENVOX® user account on OpenVMS is created during ENVOX software installation. Additional accounts may be added by the system administrator. Three steps are required:

- Set up the OpenVMS user account.
- Set up the ENVOX user directory.
- Copy the file ENVOX$DISK:[ENVOX]LOGIN.COM to the user directory.

Note ... Each ENVOX user requires an OpenVMS system account.

7.1 Setting Up the Account

Perform the following procedure to set up the ENVOX OpenVMS user account.

Note ... You must ensure that the ENVOX_USER account is in the same group as ENVOX software (group 17) and has a unique UIC value.

Step 1: Log in to the system manager's account by entering the user name SYSTEM and the password at the prompts:

```
Username:  SYSTEM
Password:  your_password
```

The DCL prompt appears.

Step 2: Set the definition by entering the following command at the DCL prompt:

```
$ set def sys$system
```

Step 3: Run the Authorize utility by entering the following command at the DCL prompt:

```
$ run authorize
```

Step 4: Enter the parameters shown below at the UAF prompts.

The dash (-) at the end of the line is the OpenVMS indicator for a continuation of the input line.

If you enter incorrect data in a field, the system indicates the error. You can correct the problem using the modify command.

The command shown uses UIC codes of 17, 1021 as an example. Put in your codes, if different, in the command.

```
UAF> copy envox envox_user /uic=[17,1021]/password=envox_user-
UAF> /owner=envox_user/device=envox$disk/directory=[envox.envox_user]
```

The following message verifies that the user records are added.

```
%UAF-I-COPMSG, user record copied
%UAF-I-RDBADDMSGU, identifier ENVOX_USER value: [000017,001021] added to
   rights data base
```

Step 5: To display your ENVOX account screen, enter the following command at the prompt:

```
UAF> show ENVOX
```

Figure 7-1 is an example of the ENVOX account screen setup by the system during SYBASE and ENVOX installation.

Step 6: To display the ENVOX_USER account screen, enter the following command at the prompt:

```
UAF> show ENVOX_USER
```

Figure 7-2 is an example of an account generated using the copy command. This account allows a user named ENVOX_USER to log into the OpenVMS system and run the MAIN command to start up ENVOX forms.

```
Username: ENVOX              Owner:
Account:                   UIC:  [17,1011] ([ENVOX])
CLI:   DCL                Tables: DCLTABLES
Default: ENVOX$DISK:[ENVOX]
LGICMD:  LOGIN
Login Flags:
Primary days:  Mon Tue Wed Thu Fri
Secondary days:       Sat Sun
No access restrictions
Expiration:      (none)  Pwdminimum: 6  Login Fails: 0
Pwdlifetime:      (none)  Pwdchange: 11-JUL-1990 11:02
Last Login: (none)      (interactive), (none) (non-interactive)
Maxjobs:      0   Fillm:     300(1) Bytlm:    65536(1)
Maxacctjobs:  0   Shrfillm: 0      Pbytlm:    0
Maxdetach:    0   BIOlm:     200    JTquota:   4096
Prclm:        20  DIOlm:     200    WSdef:     512(1)
Prio:         4   ASTlm:     200    WSquo:     2048
Queprio:      0   TQElm:     50     WSextent:  8192
CPU0:   (none)    Enqlm:     256(1) Pgflquo:   50000(1)
Authorized Privileges:
 TMPMBX NETMBX
Default Privileges:
 GRPNAM PSWAPM TMPMBX OPER NETMBX SYSPRV
UAF>
1.These values are for a VAX platform. For an AXP platform increase the values
to: Bytlm=100000, Wsdef=1024, Pgflquo=75000, Enqlm=2000, fillm=100, astlm=250
```

Figure 7-1. System-Generated ENVOX® User's Account

```
Username: ENVOX_USER             Owner: ENVOX_USER
Account:                  UIC: [17,1021] ([ENVOX_USER])
CLI:   DCL                 Tables: DCLTABLES
Default: ENVOX$DISK:[ENVOX.ENVOX_USER]
LGICMD:  LOGIN
Login Flags:
Primary days:  Mon Tue Wed Thu Fri
Secondary days:       Sat Sun
No access restrictions
Expiration:      (none)  Pwdminimum: 6  Login Fails: 0
Pwdlifetime:      (none)  Pwdchange: 11-JUL-1990 14:19
Last Login: (none)      (interactive), (none) (non-interactive)
Maxjobs:      0   Fillm:     300(1) Bytlm:    65536(1)
Maxacctjobs:  0   Shrfillm: 0      Pbytlm:    0
Maxdetach:    0   BIOlm:     200    JTquota:   4096
Prclm:        20  DIOlm:     200    WSdef:     512(1)
Prio:         4   ASTlm:     200    WSquo:     2048
Queprio:      0   TQElm:     50     WSextent:  8192
CPU:     (none)   Enqlm:     256(1) Pgflquo:   50000(1)
Authorized Privileges:
 TMPMBX NETMBX
Default Privileges:
 GRPNAM PSWAPM TMPMBX OPER NETMBX
UAF>
1. These values are for a VAX platform. For an AXP platform increase the values
to: Bytlm=100000, Wsdef=1024, Pgflquo=75000, Enqlm=2000, fillm=100, astlm=250
```

Figure 7-2. Customized ENVOX® User's Account

Step 7: Exit the authorize program by entering the following command at the prompt:

```
UAF> EXIT
```

The following messages are displayed:

```
%UAF-I-DONEMSG, system authorization file modified
%UAF-I-RDBDONEMSG, rights data base modified
```

7.2 Setting Up an ENVOX Users Directory

Set up an ENVOX users directory as follows:

Step 1: Enter the following commands at the DCL prompts:

```
$ SET DEF ENVOX$DISK:[ENVOX]
$ SHOW DEF
```


Step 2: Whether you are performing an installation or an upgrade, you must create the ENVOX user directory and set the file owner by entering the following command at the DCL prompt:

```
$ CREATE/DIR/OWNER_UIC=envox_user [.ENVOX_USER]
```

where, *envox_user* is the new ENVOX user's name exactly as it appears in the User Authorization File (UAF)

7.3 Copying the Login.Com File to the User Directory

Copy the file ENVOX$DISK:[ENVOX]LOGIN.COM to the user directory, by entering the following command at the DCL prompt:

```
$ COPY LOGIN.COM [.ENVOX_USER]*.*
```

8 Backing Up, Restoring, and De-Installing Software

This section describes the backup, restore, and de-installation procedures for ENVOX® and SYBASE software.

Note ... All databases, including the master database, should be backed up periodically, especially after any change to the database. Instructions for backing up the master database are given in the *The System Manager's Guide to ENVOX Configuration Software*, SM1.0:SW3151.

8.1 Booting the Standalone Backup on VAX Systems

You can boot the standalone backup from the VMS installation media or you can create the backup on your system disk and thereafter boot from it. Having the utility on the system disk saves considerable time each time you do an image backup. For additional information about standalone backups, see the *Open VMS, Version 7.1, Upgrade and Installation Procedure Manua*l.

8.1.1 Creating the Standalone Backup on Disk

Perform the following to create the disk-resident standalone backup routine.

Step 1: Log into VMS by entering the user name SYSTEM and the password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ @sys$update:stabackit.com
```

Step 3: At the prompt for the device name, enter the name of the system disk.

This action creates the standalone backup on disk.

8.1.2 Booting the Standalone Backup from Disk

After creating the standalone backup on disk, perform the following to boot the standalone backup routine from disk:

Step 1: Enter the following command at the DCL prompt to shut down your system:

```
$ @sys$system:shutdown
```

Step 2: After the system has shut down, press the halt button on the rear of the unit. When the >>> prompt is displayed, enter the following command to boot the backup routine:

```
>>> B/E0000000
```


Step 3: Enter the date and time as indicated:

```
PLEASE ENTER DATE AND TIME (DD-MMM-YYYY
HH:MM)  dd-mmm-yyyy hh:mm
```

Enter the date and time in the requested format. For example, for 2:30 pm, April 8, 1996, enter **08-APR-1996 14:30**.

A confirmation message appears, followed by the DCL prompt.

8.1.3 Booting the Standalone Backup from Tape

Perform the following to boot the standalone backup routine from tape:

Step 1: Insert and load the VMS installation media containing the standalone backup utility. Refer to the OpenVMS Version 7.1, Installation and Upgrade Manual.

Step 2: Enter the following command to shut down your system at the DCL prompt:

```
$ @sys$system:shutdown
```

Step 3: After the system has shut down, press the halt button on the rear of the unit.

Step 4: Enter the following command at the console-mode prompt (>>>) to display the list of device names:

```
>>> SHOW DEVICE
```

Step 5: Enter the following command to boot the backup routine:

```
>>> B tapedrive
```

where *tapedrive* is the name of the tape drive as listed in the SHOW DEVICE display.

Step 6: Enter the date and time as indicated.

```
PLEASE ENTER DATE AND TIME (DD-MMM-YYYY
HH:MM)  dd-mmm-yyyy hh:mm
```

Enter the date and time in the requested format. For example, for 2:30 pm, April 8, 1996, enter **08-APR-1996 14:30**.

A confirmation message appears, followed by the DCL prompt.

8.2 Booting Standalone Backup on AXP Systems

Perform the following to boot the standalone backup routine:

Step 1: Enter the following command at the DCL prompt to shut down your system:

```
$ @SYS$SYSTEM:SHUTDOWN
```

Step 2: After the system has shut down, press the halt button on the rear of the unit.

Step 3: Insert the distribution compact disc into the drive.

Step 4: Enter the following command at the console-mode prompt (>>>) to display the list of device names:

```
>>> SHOW DEVICE
```

Step 5: Enter the following command to boot the backup routine:

```
>>> BOOT -flags 0,0 source_drive
```

where *source_drive* is the name of the compact disc drive as listed in the SHOW DEVICE display.

Step 6: After the source drive is booted, the system displays a menu from which you can select various tasks. Choose the menu item which lets you execute DCL prompts and procedures.

8.3 Backing Up the System

Caution ... Always backup and restore together all disks which contain ENVOX logical devices; do not reboot the system or allow the SYBASE SQL Server to restart during a backup or restore period. The logical device files contain information which must always be kept in step. If they are not, the ENVOX database can lose data. When you perform a backup or restore, always make sure that you have a tape or tapes for each disk, and keep the tapes together as a matched set.

Once your computer system is ready for use, you should make a backup copy of the software. This backup allows you to restore the software quickly, in case of any unplanned change.

Perform the following to back up the system:

Step 1: Boot standalone backup as described in subsection 8.1 for VAX systems or subsection 8.2 for AXP systems.

Step 2: Insert and load the tape on which you want to save the software and data from the hard disk. This tape must not be write protected. When the tape is ready, enter the following command (leave single spaces after *noassist* and *systemdisk:*):

```
$ BACKUP/IMAGE/VERIFY/NOASSIST systemdisk: tapedrive:saveset.BCK/SAVE/REWIND/IGNORE=LABEL
```

where *systemdisk* is the name of the drive holding the system disk and *tapedrive* is the name of the drive which will hold the backup files. For *saveset*, substitute a valid (13 characters maximum) name for the saved data.

Step 3: A message saying that volume labels do not match may appear along with options for overwriting. If they do, select overwrite to continue the backup process.

The process can take from 20 minutes to 2 hours, depending on the amount of data on the disk. If the data requires more than one tape (multi-volume), the system rewinds the current tape and asks you to install another tape.

Step 4: When the backup is completed, the DCL prompt reappears and the tape automatically unloads. Remove and label the tape.

Step 5: A prompt asks if you want to back up another disk. During the installation of SYBASE, data is placed on the second disk, so you should back up that disk also.

Insert a new tape for backing up the second disk. Enter **Y** and press **Return**. Then, repeat Step 2 and Step 4, using the appropriate names for the *systemdisk* and *saveset*.

Step 6: When you have backed up both disks, press the halt button (at the rear of the computer). When the console mode prompt (>>>) appears, reboot the system by entering:

```
>>> BOOT systemdisk
```

where *systemdisk* is the name of your system disk.

Backup of the system is complete.

8.4 Restoring the System

Caution ... Always backup and restore together all disks which contain ENVOX logical devices; do not reboot the system or allow the SYBASE SQL Server to restart during a backup or restore period. The logical device files contain information which must always be kept in step. If they are not, the ENVOX database can lose data. When you perform a backup or restore, always make sure that you have a tape or tapes for each disk, and keep the tapes together as a matched set.

For many reasons, you may need to restore your software system. You should make backup copies of your system any time you make a change to the database or a change to any other system software parameters. Refer to subsection 8.3 for backup procedures.

Perform the following to restore the system:

Step 1: Boot standalone backup as described in subsection 8.1 for VAX systems or subsection 8.2 for AXP systems.

Step 2: Insert and load the first tape that holds your system backup. When the tape is ready, enter the following command, substituting the appropriate system device name for *tapedrive* and the appropriate disk drive name for *diskdrive* (leave single spaces after *verify* and *rewind*):

```
$ BACKUP/IMAGE/VERIFY tapedrive:saveset.BCK/REWIND diskdrive:
```

The following message is displayed:

```
%BACKUP-I-STARTVERIFY, starting verification pass
```

If you have only one tape to restore, go to Step 4; otherwise continue with Step 3.

Step 3: When the tape that is being read reaches its end (except for the last tape in a set of tapes), several end-of-tape messages are displayed.

```
%BACKUP-I-RESUME, Resuming operation on
volume n
%BACKUP-I-READWRITE, Mount column n on
tapedrive:
for reading
```

Load the next tape. Make sure that you insert the backup tapes in the correct order. When the tape is ready, enter **Y** at the prompt:

```
Enter YES when ready: Y
```

Step 4: When the restoration is complete, the following messages are displayed:

```
%BACKUP-I-PROCDONE, Operation completed. Processing
finished at dd-mmm-yyyy hh:mm:ss.xx
If you do not want to perform another standalone
backup operation, use the console to halt the system.

If you do want to perform another standalone BACKUP
operation, ensure the standalone application volume
is on line and ready.
```

To continue, enter **Y** at the prompt:

```
Enter YES when ready: Y
```

Step 5: To restore your second disk drive, repeat Step 2 through Step 4, using the name of your second disk drive in place of *diskdrive* in the commands.

The messages are displayed a second time when the tape or tapes for the second disk have been restored.

Step 6: When all tapes have been restored, press the halt button on the back of your computer. When the console mode prompt (>>>) appears, reboot the system by entering:

```
>>> BOOT systemdisk
```

where *systemdisk* is the name of your system disk.

Restoration of the system is complete.

8.5 De-installing ENVOX and SYBASE Software

The de-install process completely removes ENVOX and SYBASE software from your system. All SYBASE databases, files, and directories are deleted, all ENVOX files and directories are deleted, and all SYBASE and ENVOX accounts are deleted. You cannot choose to de-install SYBASE or ENVOX software separately.

To de-install, you must first retrieve the installation scripts from tape using the instructions in subsection 3.3 step 2. Then, log into the computer as *System* and enter the following commands at the prompts:

```
$ @DEINSTALL_SYBASE_ENVOX.COM
```

When you enter this command, the system responds with:

```
This utility will completely de-install SYBASE and
ENVOX. All SYBASE databases, SYBASE files and
directories will be deleted. All ENVOX files and
directories will be deleted. All SYBASE and ENVOX
accounts will be the deleted.

Do you wish to continue [N] ?
```

Enter **N** if you wish to save any files or wish to first backup the system. Enter **Y** only if you are absolutely sure that you wish to continue.

Alternatively, de-install may be carried out using the install utility. Log into the computer as *System* and enter the following commands at the prompts:

Step 1: This step assumes that you have obtained the installation scripts from tape as described in subsection 3.3 step 2. At the prompt, type the following:

```
$ run sybase_envox_install
```

One of the following displays appear:

```
Choose which product to install or de-install
SYBASE and ENVOX
Move cursor to item and press <CR>.

INSTALL SYBASE

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```

If SYBASE and ENVOX have been installed, the following display appears:

```
Choose whether to install or de-install ENVOX
Move cursor to item and press <CR>.

INSTALL ENVOX

DE-INSTALL SYBASE and ENVOX

QUIT
```


Step 2: Move the cursor to DE-INSTALL SYBASE and ENVOX and press **return.**

The following display appears:

```
Move the cursor to item and press <CR>

PROCEED WITH DE-INSTALLATION

QUIT

WARNING: Proceeding will cause a total
de-installation of all SYBASE. ENVOX and all
logical devices. Are you sure you want to
proceed?
```

Step 3: Move the cursor to PROCEED WITH DE-INSTALLATION and press **return.**

The de-installation process takes up to 1 hour depending on how many files have to be deleted.

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9 Retrieving Files from the Installation Tape

If you have inadvertently deleted certain files from your ENVOX and SYBASE directories, you *do not* have to perform a re-installation to get these files. You can retrieve the files as described below.

Table 9-1 lists the savesets which are stored on the installation media. They are stored in the order listed.

Table 9-1. Files Stored on the Installation Tape

Saveset Name	Description
SYB_ENVOX_INST.A	Installation files
system10_server.C	SYBASE server related files
system10_client.B	SYBASE client related files
system10_apt.D	SYBASE apt related files
ENVOX_B.BCK	envox$disk:[envox] decw$xdefaults.dat, login.com
ENVOX_C.BCK	envox$disk:[envox.dbscripts] files
ENVOX_D.BCK	envox$disk:[envox.executables] files
ENVOX_E.BCK	envox$disk:[envox.aptobject] files
ENVOX_F.BCK	envox$disk:[envox.help] files
ENVOX_G.BCK	envox$disk:[envox.diagdisps] files
ENVOX_H.BCK	envox$disk:[envox.formdefs] files
ENVOX_I.BCK	envox$disk:[envox.unsupported_utilities] files
ENVOX_J.BCK	envox$disk:[envox.utilities] files
ENVOX_K.BCK	envox$disk:[envox.termdef] files
ENVOX_L.BCK	sybase_device:[sybase]trunc_option.exe
ENVOX_M.BCK	envox$disk:[envox.opendb] files
ENVOX040.Z	p20_pdx.exe, p30_pdx.exe (VAX platform only)

9.1 Procedure for Retrieving Files

To retrieve files from the installation tape, perform the following steps:

Step 1: If you are not logged into the system account, log in by entering the user name SYSTEM and your password at the prompts:

```
Username: SYSTEM
Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media.

Step 3: Set your default directory to the directory where you want the recovered files to reside. (For example, set default to envox$disk:[envox.executables].)

Step 4: Recover the required file by entering the following commands at the DCL prompt:

```
$ mount/for tapedrive:
$ backup tapedrive:saveset_name *.*/select=
required_filename/log/ignore=label/owner=owner_name
/new
$ dismount tapedrive:
$ set file/prot=(S:RWED,O:RWED,G:RE,W:RE)
required_filename
```

where:

tapedrive: is the name of your tapedrive
saveset_name is the name of the saveset file containing the file or files to be recovered.
owner_name is the file owner. This name is usually ENVOX for envox files, SYBASE for sybase files, and SYSTEM for system files.

9.2 Examples of Retrieving Files

Several examples are given below which describe how to retrieve various files. The first example recovers the ENVOX file, envox_main.exe, from the installation media which is inserted into tapedrive mka400:, places the file in envox$disk:[envox.executables], and sets the file ownership to ENVOX.

```
$ set def envox$disk:[envox.executables]
$ mount/for mka400:
$ backup mka400:envox_d.bck *.*/select=
envox_main.exe/log/ignore=label/owner=ENVOX/new
$ dismount mka400:
$ set file/prot=(S:RWED,O:RWED,G:RE,W:RE)
envox_main.exe
```

The following example recovers the ENVOX directory ENVOX$DISK:[ENVOX.DBSCRIPTS] from the installation media inserted into tapedrive mka400:, and sets the file ownership to ENVOX.

```
$ set def envox$disk:[envox.dbscripts]
$ mount/for mka400:
$ backup mka400:envox_c.bck *.*/log/ignore=label
/owner=ENVOX/new
$ dismount mka400:
$ set file/prot=(S:RWED,O:RWED,G:RE,W:RE) *.*
```

The following example recovers the SYBASE file syb_dbshr.exe from the installation media inserted into tapedrive mka400:, and places the file in SYBASE_DEVICE:[SYBASE.LIB], and sets the file ownership to SYBASE.

```
$ set def SYBASE_DEVICE:[SYBASE.LIB]
$ mount/for mka400:
$ backup mka400:SYSTEM10_CLIENT.B
*.*/select=syb_dbshr.exe/log/ignore=label
/owner=SYBASE/new
$ dismount mka400:
$ set file/prot=(S:RWED,O:RWED,G:RE,W:RE)
syb_dbshr.exe
```

The following example recovers all files with a file extension of EXE from the [sybase.bin] directory contained within the SYBASE saveset SYSTEM10_SERVER.C located on the installation media inserted into tapedrive mka400:, and sets the file ownership to SYBASE.

```
$ set def SYBASE_DEVICE:[SYBASE.BIN]
$ mount/for mka400:
$ backup mka400:system10_server.C *.*/select=
[sybase.bin]*.exe/log/ignore=label/owner=SYBASE/new
$ dismount mka400:
$ set file/prot=(S:RWED,O:RWED,G:RE,W:RE) *.exe
```

The following example lists all savesets stored on the installation media inserted into tapedrive mka400:

```
$ mount/over=id mka400:
$ dir mka400:*.*
$ dismount mka400:
```

The following example lists all the files stored in saveset ENVOX_B.BCK held on the installation media and inserted into tapedrive mka400:

```
$ mount/for mka400:
$ backup/list mka400:ENVOX_B.BCK
$ dismount mka400:
```

10 System Tuning

You can change the number of concurrent ENVOX software, Control Desktop and Control Designer users. and the amount of memory allocated to the SYBASE SQL Server. However, you must leave enough memory for proper operation of SYBASE and ENVOX software. Refer to subsections 2.6 and 2.8 for memory requirements.

You are prompted for the number of concurrent ENVOX software, Control Desktop, and Control Designer users. From these values, the Sybase server is reconfigured to support the necessary number of connections. You are also prompted for the amount of memory to allocate to the Sybase server and the number of open objects.

Step 1: If you are not logged into the sybase account, log in by entering the user name **SYBASE** and your password at the prompts:

Username: **SYBASE**
Password: ***your_password***

The DCL prompt appears.

Step 2: Enter the following at the DCL prompt:

```
$ SET DEF [SYBASE.INSTALL]
$ @SYBASE_TUNE.COM
```

The system displays the following:

```
How many concurrent ENVOX users are to be
supported? [3]:
```

Step 3: Enter the number of users expected to be logged in through the ENVOX forms to the SYBASE SQL server.

Use Table 10-3 to help determine the number of ENVOX users. Additional users reduce system performance. Do not specify more users than are needed.

The following display appears:

```
How many concurrent Control Desktop users are
to be supported? [0]:
```

Step 4: Enter a value determined as follows:

- If you do *not* have Control Desktop installed, enter **0**.
- If you *have* Control Desktop installed, use Table 10-3 to help determine the number of Control Desktop users you may enter.

If you enter a value greater than **0** for the number of Control Desktop users, the following appears:

```
How many of the Control Desktop users will use
Control Designer? [0]:
```

Step 5: Enter a value for the number of Control Desktop users that will use Control Designer.

The following display appears:

```
How many of the Control Desktop users will use
Display Designer? [0]:
```

Step 6: Enter a value for the number of Control Desktop users that will use Display Designer.

The following display appears:

```
Specify, in megabytes, the memory available
for the SYBASE server [16]:
```

Step 7: Enter the memory allocated to the SYBASE dataserver.

When deciding how much memory to allocate to the SQLserver, note that the minimum memory required by the server is 16 Mbytes and the maximum memory is 64 Mbytes. However, no more than half of the system memory can be allocated to the SQL server. Also take into account that additional memory is required by the applications listed in Table 10-1.

The following display appears:

```
Do you wish to see the list of VMS system
resources required by the SYBASE server? [Y]
```

Step 8: Enter **Y** if you wish to see the list of VMS system resources required by the SYBASE server. The VMS system resources are dependant on the number of users, SYBASE server memory and type of system and will vary from the values listed below.

The following display appears:

```
      VAX/VMS Resources required for SYBASE.
-----------------------------------------------
    Area          Parameter/Item       Suggested
                                     Minimum Value
-----------------------------------------------
    SYSGEN           WSMAX                39888
                  CHANNELCNT                602
                  NPAGEDYN              1559568
                  PAGEDYN               1169676
                  GBLPAGES               233626
                  GBLPAGFIL               14601
                 GBLSECTIONS                600
                  CLISYMTBL                 500
                  SWPOUTPGCNT               512
                PQL_MPGFLQUOTA            32768
                 GH_RES_CODE               1024
                 GH_RSRVPGCNT               512
                 IMGREG_PAGES              2000
                  PQL_DASTLM                200
                  PQL_DBIOLM                200
                  PQL_DDIOLM                200
                  PQL_DBYTLM              81920
                  PQL_MASTLM                200
                  PQL_MBIOLM                200
                  PQL_MDIOLM                200
                  PQL_MPRCLM                 10
                  PQL_MFILLM                200
                  PQL_MBYTLM             100000
                  PQL_MENQLM                300
                PQL_DWSDEFAULT             1024
                PQL_MWSDEFAULT             1024
                PQL_MWSQUOTA               2048
                PQL_MWSEXTENT              8192
                    MAXBUF                 8192
                PAGEFILE.SYS       311264 blocks
          (includes 131072 blocks for CDOS server)

DECNET :   TRANSPORT CONNECTIONS             116
-----------------------------------------------
The above table is in
[SYBASE.INSTALL]SYBASE_VMS_RESOURCES.DAT.

Do you wish to continue [N]: Y
```

Step 9: Enter **Y** if you wish to continue.

The following display appears:

```
checking system parameters...

initializing the SYBASE server with the new parameters...
sybase_tune completed successfully on 12-JAN-1998 08:12
```

If sybase_tune does not proceed as expected, there is a log file which you can review to help you determine the cause. The file, sybase_tune.log, is produced in the sybase_device:[sybase.install] directory.

Table 10-1 provides approximate memory requirements for the applications listed in the table.

Note ... Do not specify more users than are required. A higher number of users affects system performance.

Table 10-1. Non-Standard Installation Memory Requirements

Application	Memory Requirements (Mbytes)
OpenVMS	3.0
Motif	5.0
DECwindows Motif	3.5
Each Envox® + Display Editor session (Motif)	4.5
CHIP	0.5

Table 10-2 gives the *minimum* computer configuration needed to support both the Sybase SQL server and the CDOS server.

Table 10-2. Minimum Computer RAM Needed to Support Server RAM

Computer Type	Computer RAM	Sybase Server RAM	CDOS Server RAM(1)
VAX	64Mb	16Mb	4Mb
AXP	64Mb	16Mb	4Mb

3. The values in this column are initial ones. They will grow as necessary if the physical memory is available. The values are pre-configured, and are not prompted-for by sybase_tune.

The amount of physical memory allocated to the Sybase server impacts the number of concurrent ENVOX software, Control Desktop, and Control Designer users that can be supported. sybase_tune indicates the

minimum amount of physical memory that must be allocated to the Sybase server to support a specific mix of concurrent ENVOX software, Control Desktop, and Control Designer users which you specify.

Table 10-3 gives an approximate *minimum* amount of physical memory that must be allocated to the Sybase server to support a given total number of concurrent ENVOX software, Control Desktop, and Control Designer users.

Table 10-3. Minimum Physical Memory Required

Number of Concurrent Users	Minimum Sybase Server RAM Required
3	16Mb
6	17Mb
10	19Mb
15	21Mb
20	23Mb
30	27Mb

Table 10-3 shows that sybase_tune requires a minimum of 16Mb RAM on VAX and AXP, allocated to the Sybase server for a mix of one ENVOX user, one Control Desktop user, and one Control Designer user (three concurrent users). Similarly, three ENVOX users, two Control Desktop users, and one Control Designer user (6 concurrent users) require a minimum of 17Mb of RAM allocated to the Sybase server.

Allocating more than the minimum amount of memory to the Sybase server normally improves system performance. A maximum of 50% of the machine's physical memory may be allocated to the Sybase server.

Note ... On a DEC VAX machine, the number of concurrent Control Desktop and Control Designer users is limited by the load imposed on the server machine. In practice, more than 7 Control Desktop and 7 Control Designer users will give unacceptable performance.

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11 Transferring Non-ENVOX Databases

Section 5 of this installation manual shows how to use the installation menu system to upgrade databases to P4.0. The upgrade process will only work with ENVOX® databases. Any non-ENVOX databases will be completely deleted from the system.

If you have Instrument Information System (IIS)™ databases, you should refer to the IIS backup and restore procedures for information.

If the non-ENVOX application is compatible with SYBASE 10.0, then the option that should be considered first is to use the backup and restore facilities of the application used to create the non-ENVOX databases.

As a last resort, the ENVOX supplied utility PDX can be used to transfer the contents of non-ENVOX databases to text files. PDX can then be used to re-populate the database, following its creation with the non-ENVOX application.

Note ... The PDX utility has been tested with ENVOX databases only. Therefore its use on non-ENVOX databases cannot be guaranteed by Fisher-Rosemount Systems. Hence, the use of PDX on a non-ENVOX database is entirely at the users risk.

Caution ... A dump made from a 4.9.x server will *not* load into the 10.0.x server which is the server version used in ENVOX P4.0.

11.1 Using the PDX Utility

The following steps describe how to use the PDX utility to save the data in non-ENVOX databases. The same utility is used to reload the data into newly created databases on the server.

More details on the PDX utility are given in the System Manager's Guide, Section 9.

Step 1: Run the PDX utility to write a file containing the non-ENVOX database data out to a disk or to tape:

```
$ mcr envox$application:pdx.exe -U df "SERVER" "DB"
"sa_passwd" filename
```

where *SERVER* = name of server
DB = name of the database
sapasswd = your sa password
filename = PDX file to be created

If PDX fails, it will display a message on the screen. See the next section for the explanation for these messages. You may be able to correct the problem and try again.

Step 2: Install SYBASE and ENVOX software as described in section 3 and section 4 of this manual and upgrade to P3.4. The upgrade process deletes the databases.

Step 3: Run the PDX utility on the PDX file in information mode. This will give data and log sizes of the database:

```
$ mcr envox$application:pdx.exe -sv ff filename nl:
```

Step 4: Create the database using the facilities of your utility. Use the reserved size and log size obtained in Step 3 to allocate sufficient size, as follows:

- minimum database size = Reserved size times 1.26, or greater.
- minimum database log size = Log size, or greater.
- The data and log fragments do not have to correspond to those in the original database.

Step 5: Load the PDX data into the newly created database:

```
$ mcr envox$application:pdx.exe -U fd filename
"SERVER" "DB" "sa_passwd"
```

11.2 PDX Failure and Reasons

PDX was designed to be used with ENVOX type databases. It can fail with non-ENVOX databases. The following are validation checks that PDX will perform before creating a file of the database data.

A Fatal error means that PDX has failed. A Warning message means that PDX will proceed but some data may be missing. The text of the warning message gives an indication of that data.

The following messages may be displayed:

Check Users have corresponding logins

Message `Fatal - References to non-existent users`

Reason All users and aliases in the database must have corresponding logins (enforced in SYBASE 10.0, and possibly earlier releases)

Check Check that all user ids can be resolved

Message `Fatal - References to non-existent users`

Reason All objects, types, and protections must belong to users who appear in the sysusers table

Check No tables/indexes exist on non-standard segments

Message `Warning - User defined segments encountered - default will be used`

Check Do sysusermessages exist

Message `Warning - User messages will not be transferred`

Check Constraints (sysconstraints & sysreferences)

Message `Fatal - Constraints are not supported`

Check Unsupported types in syscolumns

Message `Fatal - Unsupported datatypes in syscolumns`

Reason Supported types are: int, smallint, tinyint, binary, varbinary, char, varchar, datetime, float

Check Unsupported types in systypes

Message `Fatal - Unsupported datatypes in systypes`

Reason Supported types are: int, smallint, tinyint, binary, varbinary, char, varchar, datetime, float. (same as for syscolumns)

Check Check that columns using system datatypes use only legal ones

Message `Fatal - Unsupported system defined datatypes in syscolumns`

Reason Legal ones are: binary, char, datetime, float, int, smallint, tinyint, varbinary, varchar

Check Command permissions

Message `Warning - Non public command GRANTS/REVOKES will not be transferred`

Check Foreign and common keys.

Message `Warning - Foreign and common keys will not be transferred`

Check Keys on views

Message `Warning - Keys on views will not be transferred`

Check Numbered stored procedures

Message `Warning - Numbered stored procedures will not be transferred`

Check Tables with null column names

Message `Warning - Tables with NULL column names will not be transferred`

Check Tables with undefined datatypes

Message `Warning - Tables with columns of undefined type will not be transferred`

Check Grant with Grant

Message `Warning - GRANT with GRANT permissions will not be transferred`

Check Columns with internal-only usertypes

Message `Fatal - User tables with columns of internal datatype exist`

Check Column datatype versus usertype datatype incompatibility

Message `Fatal - Incompatible column types and usertype types exist`

Blank page.

12 Installing and Upgrading CDOS for Control Desktop

Control Desktop Open Server (CDOS) software interfaces ENVOX® Configuration Software to Type SW3311 Control Desktop client software. This section describes how to install and upgrade the CDOS software on DEC VAX and DEC AXP platforms. These platforms require that ENVOX software already be installed in client-server or client-only mode.

12.1 Intended Audience

CDOS Installation requires system administrator privileges. This section is intended for administrators familiar with DEC Open VMS systems for installation on a DEC VAX or AXP platforms. A knowledge of ENVOX configuration software and its interfaces to a PROVOX® system is helpful.

12.2 System Requirements

The OpenVMS software and the DEC platforms must meet the requirements listed below for successful installation of CDOS software.

12.2.1 Hardware Requirements

CDOS P2.0 software requires at least a VAX 4000 model 90 workstation, a DEC AXP Workstation, a DEC AXP server, or similar system. The number of concurrent Control Desktop and Control Designer clients which can be connected to CDOS is physically limited according to the following equation:

[3 x (number of Control Desktop users)] + [number of Control Designer users] < 53

For example, if there are seven Control Desktop users and three Control Designer users, the equation yields:

[3 X 7} + [3] = 24, which is well below 53.

However, in practice the limit may be lower depending on CPU size, memory size, and the load imposed by other applications running on the system.

Note ... CDOS can be installed on a workstation which has ENVOX software installed in Client-Server or Client-Only mode. If ENVOX software is installed in client-server mode with the SYBASE server running, it will need more resources for CDOS and a given number of Control Desktop clients than if ENVOX software is installed in client-only mode.

12.2.2 Software Requirements

The following software is required:

- ENVOX P4.0 software installed in client-server or client-only mode. CDOS P2.0 is only compatible with ENVOX P4.0.
- Software which allows the DEC machine to communicate with PC clients via TCP/IP. The third party software can be either MULTINET or UCX. The package must be installed and running before a Control Desktop client will communicate with CDOS.

12.2.3 Disk Space Requirements

Installation requires the following free disk space:

- 1000 free blocks for DEC VAX and DEC AXP on the SYBASE application disk. This space is required to hold additional sybase files.
- 22000 free blocks for DEC VAX and 32000 free blocks for DEC AXP on the CDOS application disk. This space is required to hold the CDOS software.
- 5000 free blocks on the system disk. This space is required to hold temporary files during the installation. The files will be deleted at the end of installation.

12.2.4 Installation Time

Installation time on a VAX machine takes about 15 minutes. On an AXP machine, it takes about 10 minutes.

12.3 Preparing for the Installation or Upgrade

Several actions are required *before* you make any attempt to install or upgrade CDOS software.

12.3.1 Precautions

Before you install or upgrade, you should understand the precautions listed below. They can save you time and can reduce the possibility of errors.

- If you have previously installed a pre-release version of the CDOS P1.0 software, it must be de-installed before installing the current release of CDOS software.
- Control Desktop and CDOS, versions P2.0, will only operate with ENVOX software, version P4.0. Be sure your ENVOX system has been upgraded to version P4.0.
- The CDOS software will *only* install or upgrade if ENVOX P4.0 *has been* installed in client-server or client-only mode. If you need to install ENVOX software in one of these modes, refer Section 4.
- ENVOX databases added which are to be used with Control Desktop must be upgraded to contain certain additional database tables and procedures. ENVOX databases on ENVOX P3.4 systems running CDOS P1.0 are automatically upgraded by the ENVOX P3.4 to P4.0 upgrade. Any ENVOX databases added after the upgrade must be manually upgraded. Once Control Desktop and CDOS are installed, be sure to upgrade these ENVOX databases. See “Upgrading ENVOX Databases” in the Control Desktop user manual.
- The installation produces a log file called *cdos_inst.log* in the default directory. Keep this log for reference to help you determine probable causes if the installation fails.
- Once installation or upgrade has started, do not try to interrupt it.
- Before attempting the CDOS installation or upgrade, make sure that there are no ENVOX users using the system and that no application software or user processes that access the SYBASE server are running.
- Appropriate TCP/IP software must be installed on the host system. The TCP/IP software must also be running; otherwise, the installation cannot resolve TCP/IP addresses and port numbers.
- The interfaces file must contain a TCP/IP entry for each SYBASE server to be accessed by Control Desktop, and the SYBASE server must be restarted.

12.3.2 Using the CDOS installation and Upgrade Menu

The CDOS installation menu system is similar to that used for the installation of SYBASE and ENVOX software. The following information will help you navigate in the menu system:

- When you install CDOS, a menu-driven, character-based interface is displayed on the screen.
- You can navigate through the menu items by using the up and down keys and by pressing **Return** on any of the menu item fields.
- You can navigate through the menu item data fields by using the left and right arrow keys.
- The menu item data fields are set up for insert mode.
- If a menu item is incorrect, the data field is shown in reverse video.
- Most of the menu data is defaulted for you when the menu is displayed. The default values may be modified.
- Pressing **Ctrl-w** refreshes the screen.
- Pressing **Ctrl-e** deletes the current data field.
- Moving the cursor to Enter and pressing **Return** causes the data from the menu to be checked.
- If there are no errors or warnings, the installation proceeds normally. When the installation starts, the menu disappears from the screen and is replaced with information messages during the various stages of installation.
- If there are errors or warnings, they are shown by messages: first the system errors, then the menu errors, and finally the warnings. The error messages appear with the menu item number and the text.
- By repeatedly pressing **Return**, you can cycle through these messages, and then back to the main menu. Once in the main menu, you can quit if the system errors need to be corrected. For menu errors, you can correct the menu data and press **Return** to check the corrected data.

12.3.3 Verifying TCP/IP Installation

The TCP/IP software should always be installed and configured, following the instructions in the vendor-supplied Installation and configuration manuals. The *Troubleshooting* subsection, 12.9, provides a guide to installing Multinet and UCX on OpenVMS system.

Caution ... Do *not* omit the following verification procedures. You must be sure that TCP/IP software is installed and running, and the INET driver is configured. Unless they are, CDOS will *not* successfully install.

To verify that the TCP/IP software is installed and running on the host system, enter the appropriate command at the prompt:

- If Multinet is installed, enter:

```
$ Multinet ping/number_of_packets=1 hostname
```

- If UCX is installed, enter:

```
$ UCX ping/number_of_packets=1 hostname
```

where *hostname* is the name of your host system.

If TCP/IP software is installed and running, the TCP/IP address of the host is displayed. If the address is not displayed, TCP/IP software installation is required. See the installation manuals which are supplied with the software.

To verify that the INET driver has been configured, enter the following command at the prompt:

```
$ show device INET0
```

If the INET driver has been configured, the following display appears:

```
INET0:Online
```

Note ... If TCP/IP is installed, but not running or the INET driver is not configured, refer to the Troubleshooting information in subsection 12.9.

12.3.4 TCP/IP Entries for the Servers

The CDOS installation automatically creates an entry in the interfaces file for the CDOS server and configures a TCP/IP entry for it. The entry for the SYBASE server can be optionally added during the ENVOX P4.0 installation. If the entry does not exist, it must be manually updated to add a TCP/IP entry. The update must be done *after* TCP/IP has been successfully installed and configured.

Updating the Sybase server entry is achieved by editing the file, sybase_system:[sybase]interfaces, and adding a TCP/IP entry for each Sybase server to be accessed by Control Desktop. The Sybase server should be restarted each time changes to the interfaces file are completed.

Figure 12-1 is an example of the interfaces file after CDOS has been installed and the appropriate lines added for the Sybase server. The highlighted 2nd and 4th lines are the lines which must be manually added if they are missing.

The example shows an entry for a Sybase server called SYBASE on node PAINTD with a TCP/IP address of 129.76.21.146 and port number of 2025. You should substitute the server name and TCP/IP address of your host machine. If the port number is already in use, choose another one.

```
SYBASE  1     5
query decnet dec-ether PAINTD 200
query tcp ether 129.76.21.146 2025
master decnet dec-ether PAINTD 200
master tcp ether 129.76.21.146 2025
debug decnet dec-ether PAINTD 200
SYB_BACKUP    1     5
query decnet dec-ether PAINTD 200
master decnet dec-ether PAINTD 200
CDOS    1     5
query tcp ether 129.76.21.146 7010
master tcp ether 129.76.21.146 7010
```

Figure 12-1. Example of a TCP/IP Entry

On the PC running Control Desktop, the ServerSetup program should be run and the two server names defined. Assuming the names used in the example above, they would be entered in the list box at the top section of the program screen as:

CDOS 129.76.21.146, 7010
SYBASE 129.76.21.146, 2025

In the bottom section of the screen, the CDOS Open Server name would be CDOS and the Default Sybase Server name would be SYBASE. The Default Database would be your ENVOX database name (for example, ENVOXDB).

Note ... Notice in the example that the CDOS server and Sybase server port numbers are *not* the same. A separate port number is required for each server. The numbers 7010 and 2025 are the default numbers.

Once the Sybase server entry in the interfaces file has been updated with the TCP/IP address, and the Sybase server has been restarted, lines similar to the following should exist in the file start_*servername*.out in the directory, sybase_system:[sybase.install].

```
Initializing Additional Master Network 129.76.21.146.
Object 2025, Listener 1
```

If your Sybase server is named SYBASE, the file name is sybase_system:[sybase.install]start_sybase.out.

12.4 Licensing CDOS After Installation

After installation, you must obtain license keys. The CDOS installation program creates a license file, cdos_system:[cdos]license.dat. This file lists the purchased Control Desktop licenses. The list is used by CDOS to identify when the number of licenses has been exceeded.

The CDOS installation program also creates a license expiration file, cdos_system:[cdos]expiry.dat. This file provides CDOS with a license expiration date one month from the date CDOS is installed. The file also contains an encryption code which allows CDOS to identify if the expiration date has been modified or if the file has been copied from another machine.

Note ... Do not attempt to copy an expiration or license file from another machine, nor modify it, because it will not be useable.

The installed version of the license file in combination with the license expiration file allows a 29-day grace period (from the date of installation) during which time CDOS accepts a pre-defined number of Control Desktop and Control Designer users. Once the grace period has expired, Control Desktop will not operate unless new license keys have been obtained from Fisher-Rosemount Systems. The license keys are specific to the licenses that have been purchased and the machine on which CDOS has been installed.

You should not wait until the grace period has expired before obtaining your own license keys. As soon as possible after installation, use the Control Desktop application to obtain license keys. Also, if CDOS is moved to another machine, and in some other circumstances, new license keys need to be requested from FRSI. Full details of how and when to obtain new license keys are given in the Control Desktop, *Getting Started* manual.

Control Desktop and CDOS software are licensed simultaneously. To obtain the license keys, perform the procedures described in *Software Licensing Procedure* of the Control Desktop getting started manual.

12.5 Installing CDOS

Installation is a stepped procedure, requiring several keyboard entries and selections during the process. Be sure to follow the procedure carefully.

Note ... If your system is already installed with CDOS version P1.0 and you wish to upgrade CDOS to version P2.0, then proceed to subsection 12.6.

To install CDOS, proceed as follows:

Step 1: If you are not logged into the system manager's account, log in by entering the user name *SYSTEM* and your password at the prompt.

```
Username: System

Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media. Then, read the installation script from the installation media by entering the following command at the DCL prompt:

```
$ backup tapedrive:cdos_inst.a/sav *.*/new
```

... where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

Step 3: Invoke the installation script by entering the following command at the DCL prompt:

```
$ run cdos_install
```

The screen clears and the following display appears:

```
      Checking system

         Please Wait....
```

Then, the following display appears:

```
Choose whether to install or de-install CDOS.
Move cursor to item and press <CR>.

INSTALL CDOS

DE-INSTALL CDOS

QUIT
```

Step 4: Move the cursor to INSTALL CDOS and press Return.

The following display appears:

```
CDOS Installation
-----------------

1) CDOS System Disk = USER$1
2) CDOS Automatic Startup = Y
3) CDOS account UIC code = 17,2010
4) CDOS server name = CDOS
5) TCP/IP Software = M
6) CDOS port number =7010
7) Tape Device =

ENTER QUIT
```

Step 5: For menu item 1), enter the name of the disk which will contain the main CDOS directory structure.

Step 6: For menu item 2), enter **Y** to add the CDOS startup commands to the FISHER_STARTUP.COM file, or if this file does not exist, the commands are added to the SYSTARTUP_VIS.COM file.

If the answer **N** is given, none of the required CDOS logicals are included in the startup file, and the CDOS server does not start automatically when the system is rebooted.

Note ... When the CDOS Automatic Startup option is set to **Y**, there will be a time following a reboot when the logicals required for SYBASE, ENVOX and CDOS are not yet defined. For this reason, a delay of two minutes is recommended before attempting to log onto VMS following a reboot.

Step 7: For menu item 3), enter the UIC code for the CDOS account. The UIC code must be unique and of the form, *group, member,* where group and member are OCTAL numeric numbers in the range: group = [0 to 3776] and member = [0 to 177776]. A default of 17, 2010 is recommended and places the CDOS account in the same group as the CHIP account.

Step 8: For menu item 4), enter the CDOS server name. The server name can contain only alphanumeric characters, and _ (underscore) characters. It must be 11 characters or less. A default name of CDOS is recommended.

Step 9: For menu item 5), enter M or U for the type of TCP/IP software that has been installed, where M = MULTINET and U = UCX.

Step 10: For menu item 6), enter the CDOS port number.

The port number must be between 1025 and 65535, and is used by Control Desktop clients to connect to the CDOS open server. The port number must be unique to the TCP/IP node which is running the CDOS open server. The default value of 7010 is recommended.

Step 11: For menu item 7), enter the tape device name where the CDOS software media is located if you are installing from tape, or enter the *full* directory pathname where the savesets are stored if you are installing from disk.

Step 12: Move the cursor to ENTER and press Return to continue the installation.

The following display appears:

```
Checking menu options

   Please wait....
```

If there are no errors, the next display allows you to identify the Sybase servers that are to be accessed from Control Desktop through CDOS. The display consists of two lists: the left hand list which gives candidate server names from the interfaces file, and the right hand list which gives the list of Sybase servers that will be accessible via CDOS.

On a new installation where there is only one Sybase server named SYBASE, the display will appear as follows:

```
Identify Sybase Servers to be accessed via CDOS

Servers from interfaces file     Servers to be
accessed via CDOS

1) SYBASE




        ENTER    QUIT

Use <CR> to move server to/from CDOS server list
Use left & right arrows to move between lists
Use up & down arrows to move within lists
```

Note ... The Sybase servers displayed in the two lists will be dependent on the contents of your interfaces file and whether or not this installation is a re-installation of CDOS.

Step 13: Select the Sybase server or servers to be accessed through CDOS by using the arrow keys to highlight the server in the left hand list and pressing Return. The server is moved to the right hand list so that is accessible via CDOS. The lists will scroll if there are more servers than can be displayed on the screen at the same time.

Step 14: Move the cursor to ENTER using the left or right arrow key and press Return to continue the installation.

The following display appears:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 15: Move the cursor to PROCEED WITH INSTALLATION and press Return to continue with the installation.

If there are no errors, the installation continues to completion. During installation, the following display appears:

```
start of inst_cdos.com
----------------------

Deleting existing cdos files...
Installing CDOS files...
initialising server files.
installing cdos Images.
start cdos server
Job CDOS_STARTUP(queue SYS$BATCH, entry 2) Started on
SYS$BATCH
checking for errors
add servers
CDOS installation completed successfully on date,
time.
Now login as user Sybase and re-tune the Sybase
dataserver by issuing the commands:

$ set def [Sybase.install]
$ @sybase_tune.com
```

The CDOS open server and task daemon should now be running.

Step 16: Tune the Sybase server to support the number of connections which you have added to the server. For tuning instructions, see subsection NO TAG.

When you have finished tuning the server, CDOS software is ready for normal operation.

Note ... If a TCP/IP entry for the SYBASE server does not exist in the interfaces file, the following warning is displayed:

```
The interfaces file does not contain a TCP/IP
entry for the SYBASE server.
```

On completion of the installation, refer to the subsection 12.3.4 for details on how to add a TCP/IP entry to the interfaces file.

12.6 Upgrading CDOS P1.0 to P2.0

Before you can use ENVOX P4.0 with Control Desktop P2.0, you must upgrade CDOS to P2.0. The following procedure describes how.

Note ... The following procedure applies to the released version of CDOS P1.0. If you are running a pre-released version, perhaps remaining from having been a beta test site, you must de-install the pre-released version and then install CDOS P2.0 as a new installation; not an upgrade. For de-installation instructions, see subsection 12.8.2

The upgrade process deletes the existing CDOS P1.0 files and installs CDOS P2.0 in their place. To upgrade to CDOS P2.0, proceed as follows:

Step 1: If you are not logged into the system manager's account, log in by entering the user name *SYSTEM* and your password at the prompt.

```
Username: System

Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media. Then, read the installation script from the installation media by entering the following command at the DCL prompt:

```
$ backup tapedrive:cdos_inst.a/sav *.*/new
```

... where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

Step 3: Invoke the installation script by entering the following command at the DCL prompt:

```
$ run cdos_install
```

The screen clears and the following display appears:

```
Checking system

   Please Wait....
```

Then, the following display appears:

```
Choose whether to install or de-install CDOS.
Move cursor to item and press <CR>.

INSTALL CDOS

DE-INSTALL CDOS

QUIT
```

Step 4: Move the cursor to INSTALL CDOS press **Return** to continue the sybase upgrade.

The following display appears:

```
CDOS Upgrade
------------

1)Tape device =

ENTER     QUIT
```

Step 5: Enter the tape device (or full disk directory path) name.

The following display appears:

```
      Checking menu options

          Please wait...
```

If there are no errors, the following selection is displayed:

```
Options validated OK
Move cursor to item and press <CR>

PROCEED WITH INSTALLATION

MODIFY OPTIONS

QUIT
```

Step 6: Move the cursor to PROCEED WITH INSTALLATION and press **Return** to continue the sybase upgrade.

The following display appears:

```
start of inst_cdos.com
----------------------
Deleting existing cdos files...
Installing CDOS files...
Installing cdos images
start cdos server
Job CDOS_STARTUP (queue SYS$BATCH), entry 3) started
on SYS$BATCH
checking for errors

cdos install completed successfully on 26-FEB-1998
14:39:02.34
```

Step 7: Login as user Sybase and re-tune the Sybase dataserver by entering the commands:

```
$ set def [sybase.install]
$ @sybase_tune.com
```

12.7 Upgrading ENVOX Databases

ENVOX P4.0 databases must be upgraded to add certain tables and procedures before they can be used with Control Desktop P2.0. However, you may or may not have to use the procedure below to upgrade the databases, depending on:

- If you have been using Control Desktop P1.0 with ENVOX P3.4 databases, the databases are automatically upgraded for Control Desktop P2.0 when you upgrade to ENVOX P4.0. You do *not* have to perform the procedure.
- If you have never used Control Desktop with your ENVOX databases, the databases must be upgraded. They are not upgraded as part of a CDOS installation. You must perform the procedure.
- If you added ENVOX databases after Installing or upgrading to CDOS P2.0 and you wish to use these databases with Control Desktop, you must upgrade these databases by performing the procedure.

During CDOS P2.0 installation, you selected the Sybase server or servers to be accessible through CDOS. The ENVOX databases on these servers are the ones which you can upgrade. You may upgrade all or some of the databases.

To upgrade an ENVOX database for use with Control Desktop, log into your Control Desktop on your PC, using the ENVOX username and password that you normally use to log into ENVOX forms, and:

Step 1: Select the database from the System Navigator window.

A message is displayed stating that the database has not been upgraded and asking if it should be upgraded now.

Step 2: Select Yes or No

If “Yes” is selected, you are prompted to enter the password for the envoxutility Sybase server account.

Step 3: Enter your password for the envoxutility account.

On a newly installed system, the password is set to: envoxutility.

If you do not know the password for the envoxutility account, you can change the password from isql, as follows:

Log into ISQL by entering:

```
$ define DSQUERY sybase_server_name
$ ISQL/u="sa"/p="sa_password"
```

...where *sybase_server_name* is the name of your Sybase server (for example, SYBASE) and *sa_password* is your current password for the Sybase server sa account.

The quotation marks (“”) are required.

The system responds with the ISQL prompt.

Step 4: At the ISQL prompt, enter in order:

```
1> sp_password "sa_password","new_password",
envoxutility
```

... where *sa_password* is your current password for the sa user and *new_password* is the password you wish to use for the envoxutility account.

The quotation marks (“”) are required.

```
2> go
```

After **go** is entered, the following display should appear:

```
Password correctly set,
(return status = 0)
```

```
1> exit
```

When you enter **exit**, upgrade of an ENVOX database begins. Enter your new envoxutility password when prompted during the upgrade.

The process takes a few minutes — typically less than 10 minutes and often less than 5 minutes, depending on the performance of the server machine and the load upon it.

Caution ... Never add an envoxutility user from the ENVOX admin forms in an attempt to perform a database upgrade. Not only will the attempt fail, but database operation can be adversely affected.

12.8 Backup, Restore, and De-Install

12.8.1 Backup and Restore

To back-up and restore CDOS, follow the backup and restore procedures which are described in Section 8.

12.8.2 De-installation

The de-install process completely removes CDOS software from your system. All CDOS files, directories and accounts are deleted. SYBASE and ENVOX software are *not* affected.

You may de-install on one of two ways:

- De-install using the installation media as follows:

Step 1: Insert and make ready the installation media. Then, read the installation script from the installation media by entering the following command at the DCL prompt:

```
$ backup tapedrive:cdos_inst.a/sav *.*/new
```

... where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

Step 2: Log into the computer as *System* and enter the following commands at the prompts:

```
$ @DEINSTALL_CDOS.COM
```

When you enter this command, the system responds with:

```
CDOS De-installation Utility
----------------------------

0 -- De-install CDOS

1 -- Help

2 -- Quit

SELECT OPTION [0]

This utility will completely de-install CDOS. All CDOS
files, directories and accounts will be deleted.

Do you wish to continue [N] ?
```

Enter **N** if you wish to save any files or wish to first backup the system. Enter **Y** only if you are absolutely sure that you wish to continue.

- Alternatively, de-install may be carried out using the install utility. Log into the computer as *System* and enter the following commands at the prompts:

Step 1: This step assumes that you have obtained the installation scripts from tape as described in subsection 12.4.2 step 2. At the prompt, type the following:

```
$ run cdos_install
```

The screen clears and the following display appears:

```
     Checking System

        Please wait...
```

Then, the following display appears:

```
Choose whether to install or de-install CDOS.
Move cursor to item and press <CR>.

INSTALL CDOS

DE-INSTALL CDOS

QUIT
```

Step 2: Move the cursor to DE-INSTALL CDOS and press Return.

The following display appears:

```
Checking menu options

Please wait....
```

If there are no errors, the following display appears:

```
Move cursor to item and press <CR>

PROCEED WITH DE-INSTALLATION

QUIT

WARNING: Proceeding will cause a total
de-installation of CDOS. Are you sure you want
to proceed.
```

Step 3: Move the cursor to PROCEED WITH DE-INSTALLATION and press Return to continue with de-installation.

If there are no errors, the installation continues to completion. During the de-installation, the following display appears:

```
start of inst_cdos.com
Deleting existing cdos files...
cdos de-installation completed successfully on date, time
The CDOS software has now been removed from the DEC VAX or
DEC AXP platform.
```

Step 4: Re-tune the Sybase server to support the new number of connections to the server. For tuning instructions, see subsection, *Tuning the Sybase Server*, in subsection NO TAG.

When you have finished re-tuning the server, the de-installation process is complete.

12.9 Troubleshooting

This subsection provides information about installing TCP/IP and specifying servers in the interface file.

12.9.1 TCP/IP Installation Guide

The steps described below to install Multinet and UCX on DEC VAX and DEC AXP platforms are provided as a guide only. Multinet and UCX should always be installed and configured using the vendor-supplied installation and configuration manuals.

12.9.2 Multinet Installation

The following guidelines use the example of installing Multinet Version 4.0 on AXP node, **ORANGE,** and a TCP/IP address of **129.36.21.146.** Substitute the nodename, TCP/IP address, routing information, and multinet product name of your system in the applicable places below.

Step 1: If you are not logged into the system manager's account, log in by entering the user name *SYSTEM* and your password at the prompt.

```
Username: System

Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media, and invoke the installation, by entering the following command at the DCL prompt:

```
$ @sys$update:vmsinstal MULTINET040 tapedrive:
```

... where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

When the following display appears, fill in the applicable entries for your system:

```
* Do you want to install the TCP/IP application [YES]
YES

* Do you want to install the online documentation
[YES] YES

* Do you want to install the library files [YES] YES

* Do you want to install the user commands in
DCLTABLES [YES] YES

* Configure Multinet TCP/IP after installation [NO]

        "

        "

VMSINSTAL procedure done at 14:02
```

Step 3: Configure the IP transport by entering:

```
$ set default sys$sysdevice:[multinet.axp_common.multinet]
$ @configure
```

When the following display appears, fill in the applicable entries for your system:

```
* System specific directory name:
[dka200:[multinet.orange]]: <CR>

* Enter your Internet host name:
orange.pit.leicester.fisher.com

* Enter the Internet(IP) Address for interface ESA0:
129.36.21.146

* Enter the subnet mask for interface ESA0:
255.255.255.0

* Enter the Internet(IP) Address of your default
route: 129.36.21.1

* Use Domain Nameservice instead of host tables [YES]
YES

* Enter your local timezone: BST
```

Step 4: Specify the local computers host name, by entering:

```
$ multinet configure/interface
```

When the following display appears, fill in the applicable entries for your system

```
NET-CONFIG>sethost-nameorange.pit.leicester.fisher.com

NET-CONFIG> set domain-nameserver 129.36.21.20

NET-CONFIG> show

NET-CONFIG> exit
```

Step 5: Update systartup_vms.com to allow multinet to start at boot time by editing sys$manager:systartup_vms.com to include the following line:

```
$ @sys$sysdevice:[multinet.orange.multinet]
start_multinet.com
```

Step 6: Reboot your system by entering:

```
$ reboot
```

Step 7: Verify that Multinet is running and TCP/IP is operational by entering:

```
$ show system
```

The process MULTINET_SERVER should be displayed.

```
$ Multinet ping/number_of_packets = 1 orange
```

...or whatever is the correct parameter for your system.

If TCP/IP software is installed and running, the TCP/IP address of the host will be displayed.

Step 8: Verify that the INET driver has been configured. At the prompt, enter:

```
$ show dev INET0
```

If the INET driver has been configured, the following will be displayed:

```
INET0:      Online
```

12.9.3 UCX Installation

The following guidelines use an example of installing UCX Version 4.0 on AXP node, **ORANGE,** and tcp/ip address of **129.36.21.146.** Substitute the nodename, tcp/ip address, routing information, and UCX product name of your system in the appropriate places below.

Step 1: Step 1. If you are not logged into the system manager's account, log in by entering the user name *SYSTEM* and your password at the prompt.

```
Username: System
```

```
Password: your_password
```

The DCL prompt appears.

Step 2: Insert and make ready the installation media, and invoke the installation, by entering the following command at the DCL prompt:

```
$ @sys$update:vmsinstal ALPHA_UCX040 tapedrive:
```

... where *tapedrive* is the name of your tapedrive if installing from tape, or the full directory pathname where the savesets are stored if installing from disk.

When the following display appears, fill in the applicable entries for your system:

```
*Do you want to purge files replaced by this
installation [YES] YES

PRODUCT: UCX

PRODUCER: Digital Equipment Corporation

VERSION: 4.0

Release Date: Oct-1995

* Does this product have an authorization key
registered and loaded? YES

No further questions will be asked during this
installation.

     "

     "

VMSINSTAL procedure done.
```

Step 3: Automatically Start up and Shut down UCX by editing sys$manager:systartup_vms.com to include the following line:

```
$ @sys$manager:ucx$startup.com
```

Then, edit sys$manager:syshutdown.com to include the following line:

```
$ @sys$manager:ucx$shutdwn
```

Step 4: Reboot your system by entering:

```
$ reboot
```

Step 5: Configure UCX by entering:

```
$ @sys$manager:ucx$config
```

When the following display appears, fill in the applicable entries for your system:

```
Do you want to grant world read access to
non-privileged uses: NO

o Configure Interfaces

Core environment ==>Interfaces

*Do you want to configure SE0 YES

Enter unqualified host name: ORANGE

Enter Internet address for ORANGE: 129.36.21.146

Enter Internet network mask for ORANGE: 255.255.255.0

Enter broadcast mask for ORANGE[129.36.21.255] <CR>

o Configure Time Zone

Core environment ==> Time Zone

Enter your choice: g (Greenwich)

o Configure Portmapper

Server components ==>portmapper

Enter configuration option: 8

o Configure Optional components ==>Configure SRI QIO
Interface

Enter configuration option: 1 (Enable service on this
node)

Exit configuration procedure
```

Step 6: Reboot your system to pick up the UCX parameters by entering:

```
$ reboot
```

Step 7: Verify that UCX is running and TCP/IP is operational by entering:

```
$ show system
```

The process UCX$inet_ACP should be displayed.

```
$ UCX ping/number_of_packets = 1 orange
```

...or whatever is the correct parameter for your system.

If TCP/IP software is installed and running, the TCP/IP address of the host will be displayed.

Step 8: Verify that the INET driver has been configured. At the prompt, enter:

```
$ show dev INET0
```

If the INET driver has been configured then the following will be displayed:

```
INET0:      Online
```

12.9.4 Specifying Servers in the Interface File

The logical DSQUERY is used to specify which of the servers listed in the interfaces file is used when you use ISQL or the ENVOX forms to access a server. The interfaces file is located in, sybase_system:[sybase]interfaces

DSQUERY is defined at login and is set to *cdos_servername* (for example, CDOS) if logged into the cdos account or otherwise *sybase_servername* (for example, SYBASE).

To determine the value of DSQUERY, enter the following at the DCL prompt:

```
$ show logical DSQUERY
```


If the logical is defined, the system displays:

```
   "DSQUERY" = "servername"   (LNM$PROCESS_TABLE)
```

If the logical is undefined, the following display appears:

```
$ %SHOW-S-NOTRAN, no translation for logical name
DSQUERY
```

To change the value of DSQUERY, enter the following:

12.10 Network Routing

If you need to communicate with a host on a different IP network, then a default gateway should be set up. The following steps describe how to verify and configure a default gateway on a system installed with UCX and MULTINET.

12.10.1 Routing using UCX

To determine whether a default gateway has been configured on a system installed with UCX, enter the following:

Step 1: If you are not logged into the systems manager's account, log in by entering the user name SYSTEM and your password, at the prompt.

```
Username: System

Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ ucx show route */full/perm
```

The following is displayed:

```
Type     Destination   Gateway

PN *   0.0.0.0       * gateway ip address
```

If an entry does not exist in the Gateway column, then a default gateway has not been configured. Perform the next step to configure a default gateway:

Step 3: Enter the following at the DCL prompt:

```
$ UCX

UCX> set router/default/gateway=your_gateway_ip_
address/perm

UCX> set router/default/gateway=your_gateway_ip_
address
```

12.10.2 Routing using MULTINET

To determine whether a default gateway has been configured on a system installed with MULTINET, enter the following:

Step 1: If you are not logged into the systems manager's account, log in by entering the user name SYSTEM and your password, at the prompt.

```
Username: System

Password: your_password
```

The DCL prompt appears.

Step 2: Enter the following command at the DCL prompt:

```
$ multinet configure/menu
```

A menu is displayed.

Step 3: Choose **Configure Global Parameters** from the menu.

Another menu is displayed.

Step 4: Choose **Modify Global Parameters** from the menu.

The system provides a display similar to the following:

```
Host Name                 janus.leicstc.eur.frco.com
NetWare Host Name
Default Route             gateway ip address
Domain Nameservers        127.0.0.1
Nameserver Retrans
Nameserver Retry
IP Cluster Aliases
Cluster Service Names
Cluster Service Address
Timezone                  GMT
Timezone Rules            BRITAIN
Local Domain
```

If an entry does not exist in the **Default Route** row, then a default gateway has not been configured. Perform the next steps to configure a default gateway:

Step 5: Enter your ***gateway ip address*** into the above menu and enter Control Z to return to the top level menu.

Step 6: Select the menu item **Save Changes and Return to Previous Menu.**

Step 7: Enter **Exit Menu** to return to the DCL prompt.

12.11 CDOS Administration

The administration functions for the CDOS open server and the task daemon are described below. The first two subsections are platform specific and the third is applicable to all supported platforms.

12.11.1 CDOS Directory and File Structure

The CDOS directory and the file structure can be described by Figure 12-2.

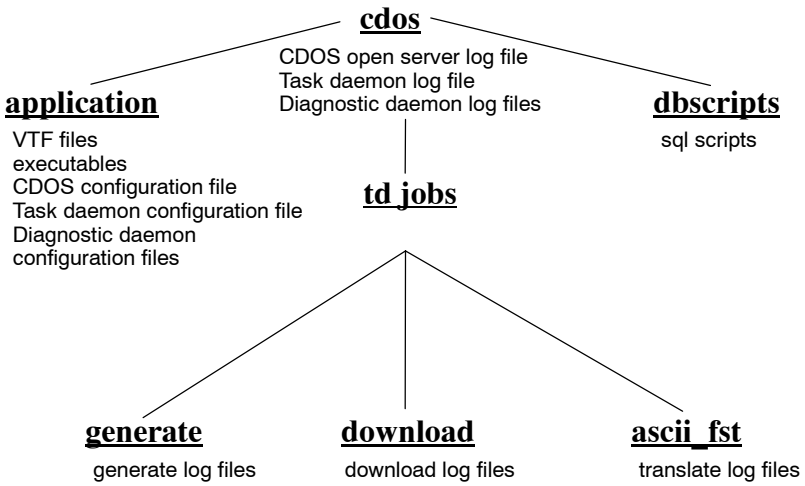

Figure 12-2. Pictorial of the CDOS Directory Structure

12.11.2 Starting the CDOS Server

To start the CDOS server, log into the cdos account and type the following at the prompt:

```
$ startcdos_server_name
```

For example, to start the CDOS server named, CDOS, the command would be:

```
$ startcdos
```

This command produces output to two files:

- The CDOS log file. The name of the CDOS log file is given in the CDOS configuration file (described in subsection 12.11.10). The CDOS log file is appended to each time the CDOS server is started.

- cdos_system:[cdos]*start_cdos_servername*.out file. This file is re-created each time the CDOS server is started and so contains the log from the current run of the CDOS server only.

If the CDOS server has started successfully, the following line is seen at the end of both files:

```
date, time CDOS startup complete - going
multi-threaded
```

12.11.3 Stopping the CDOS Server

To stop the CDOS server, log into the cdos account and type the following at the prompt:

$ stop*cdos_server_name*

For example, to stop the CDOS server named, CDOS, the command would be:

$ stopcdos

12.11.4 Starting the Task Daemon

To start the task daemon, log into the cdos account and enter the following at the prompt:

$ starttd

This command produces output to the task daemon log file. The file name is given in the task daemon configuration file (described in subsection 12.11.10). The default name is cdos_system:[cdos]td.log. If the task daemon has started successfully, the following line is seen at the end of the task daemon log file.

```
date, time Initialisation complete
```

12.11.5 Stopping the Task Daemon

To stop the task daemon, log into the cdos account and enter the following at the prompt:

$ stoptd

12.11.6 Starting the Diagnostic Daemon

To start the diagnostic daemon, log into the cdos account and enter the following at the prompt:

```
$ startdd
```

This command produces output to the diagnostic daemon log file. The file name is given in the diagnostic daemon configuration file (described in subsection 12.11.10). The default name is cdos_system:[cdos]dd.log. If the diagnostic daemon has started successfully, the following line is seen at the end of the diagnostic daemon log file.

date, time Initialisation complete

12.11.7 Stopping the Diagnostic Daemon

To stop the diagnostic daemon, log into the cdos account and enter the following at the prompt:

```
$ stopdd
```

12.11.8 Starting the Devrev Daemon

To start the Devrev daemon, log into the cdos account and enter the following at the prompt:

```
$ startdr
```

This command produces output to the devrev daemon log file. The file name is given in the devrev daemon configuration file (described in subsection 12.11.10). The default name is cdos_system:[cdos]dr.log. If the devrev daemon has started successfully, the following line is seen at the end of the devrev daemon log file.

date, time Initialisation complete

12.11.9 Stopping the Devrev Daemon

To stop the task daemon, log into the cdos account and enter the following at the prompt:

```
$ stopdr
```

12.11.10 CDOS Configuration File

The CDOS server needs a configuration file for startup. The installation creates a configuration file called *cdos_server_name*.cfg in the application directory. Therefore, for the CDOS server named, CDOS, the file is named cdos_system:[cdos.application]cdos.cfg. The file has the following format:

```
!
! cdos_server_name.cfg
! This is the configuration file for CDOS
!
servername cdos_server_name
vtf_directory cdos_system:[cdos.application]
logfile cdos_system:[cdos]cdos_server_name.log
!
```

12.11.11 Task Daemon Configuration File

The task daemon needs a configuration file for startup. The installation creates a configuration file called td.cfg in the application directory, with the following format:

```
!
! td.cfg
!
! This is the configuration file for the task daemon
process
!
openserver cdos_server_name
logfile cdos_system:[cdos]td.log
all_functions
!
```

12.11.12 Task Daemon Configuration File Options

Several options are available in the task daemon configuration file which allow you to modify the file for your specific application.

- all_functions

  Specifies that this task daemon is to perform all task daemon functions for all of the SYBASE servers known to CDOS. If this keyword is specified no other keywords can be used.

  The installation creates the file with the ”all_functions” option.

- generate_all

  Specifies that this task daemon is to perform the generate function for all of the SYBASE servers known to CDOS. If this keyword is specified the **generate** keyword cannot be used.

- generate

  Specifies that this task_daemon is to perform the generate function for the SYBASE server specified as the parameter. The name of the server is case sensitive.

- download_all

  Specifies that this task daemon is to perform the download function for all of the SYBASE servers known to CDOS. If this keyword is specified the **download** keyword cannot be used.

- download

  Specifies that this task daemon is to perform the download function for the SYBASE server specified as the parameter. The name of the server is case sensitive.

- afst_import_all

  Specifies that this task daemon is to perform the ASCII FST Import task (which is part of the Translate process used by Control Designer) for all the SYBASE servers known to CDOS.

12.11.13 Diag Daemon Configuration File

The diag(nostics) daemon needs a configuration file for startup. The installation creates a configuration file called dd.cfg in the application directory, with the following format:

```
!
! dd.cfg
!
! This is the configuration file for the diag daemon
process
!
openserver cdos_server_name
logfile cdos_system:[cdos]dd.log
machine_name nodename
!
```


12.11.14 Devrev Daemon Configuration File

The Devrev daemon needs a configuration file for startup. The installation creates a configuration file called dr.cfg in the application directory, with the following format:

```
!
! dr.cfg
!
! This is the configuration file for the devrev daemon
process
```

```
!
openserver cdos_server_name
logfile cdos_system:[cdos]dr.log
machine_name nodename
!
```

12.11.15 CDOS Quota File

The CDOS quota file, cdos_system:[cdos.application]cdos_quota.dat, contains settings of VMS quotas required to run the CDOS server. This file has the same format as quota files used with the startserver command used by ENVOX software. You normally do not need to modify this file except under supervision from the FRSI technical support group.

12.11.16 CDOS Log Files

CDOS maintains two log files in the same way that the SQL server does. The location of the CDOS log file is specified in the CDOS configuration file. This file is appended to each time the CDOS server is started.

The file, *start_cdos_servername*.out, in the top level cdos directory is re-created each time the CDOS server is started and so contains the log from the current run of the CDOS server only.

12.11.17 Task Daemon Log File

The task daemon maintains a log file. The installation creates this log file in the top level cdos directory and is called td.log.

12.11.18 Diag Daemon Log File

The Diag(nostics) daemon maintains a log file. The installation creates this log file in the top level cdos directory and is called dd.log.

12.11.19 Devrev Daemon Log File

The Devrev daemon maintains a log file. The installation creates this log file in the top level cdos directory and is called dr.log.

12.11.20 SYBASE Interfaces File

If the installation can resolve the TCP/IP address of the host machine and the port number, a TCP/IP entry for CDOS is added to the SYBASE interfaces file. The Control Desktop clients communicates with CDOS through this port.

Appendix A

Error Messages

This appendix lists messages that can occur during various stages of the installation process. This section is organized as follows:

- Pre SYBASE/ENVOX Error Messages — Subsection A.1
- SYBASE Error Messages — Subsection A.2
- ENVOX Error Messages — Subsection A.3
- PDX Dump Error Messages — Subsection A.4
- CDOS Error and Warning Messages — Subsection A.5

A.1 SYBASE and ENVOX Pre-Installation Error Messages

This subsection contains error messages that can occur before you select whether to install or upgrade SYBASE or ENVOX® software.

Message `You must run the installation from the system account.`

Description You must log into the system account to carry out the installation.

Message `You must run the installation from the sys$manager directory.`

Description Ensure that the current directory is SYS$MANAGER by issuing the command: show default

Message `SYBASE and ENVOX must be installed on OpenVMS 7.1 or later.`

Description Upgrade your OpenVMS software to the latest version of OpenVMS and try again.

Message `Please ensure MOTIF is installed`

Description One or more of the DECwindows Motif application files is missing. Ensure that DECwindows Motif V1.2-3 is correctly installed.

Message `DECnet must be installed and running before SYBASE.`

Description Ensure DECnet is installed and running before attempting the installation.

Message `The system time is wrong`

Description A common problem exists with the OpenVMS upgrade which causes the system time to be incorrectly set. Verify that the system time is correct by issuing the command: show time

Message `Invalid system`

Message `A SYBASE server is still running.`

Description An installation has been attempted on a system that has been partially installed. If it is a new installation, make sure that any previous SYBASE and ENVOX installation is fully de-installed before attempting the installation. If its an upgrade, ensure that sys$manager:sybase_disk_logicals.com exists and that the ENVOX software is fully operational.

Message `sybase server not running`

Description For a client-server upgrade, ensure that the SYBASE SQL server is running.

Message `An error has occurred within db_details.log`

Description An error has occurred during the examination of the current SYBASE databases. Determine the cause of the failure by examining sys$manager:db_details.log and sybase_device:[sybase.install]start_sybase.log before repeating the upgrade.

A.2 SYBASE Error Messages

This subsection contains error messages that can occur during the installation or upgrade of SYBASE software.

Message `sys$manager:inst_file.out does not exist`

Description sys$manager:inst_file.out is a temporary file created by the installation process. Check to see if this file can be created manually.

Message `SYBASE install failed on xxxx`

Description Determine the installation failure by examining sys$manager:sybase_envox_inst.log

Message `Unable to determine the installation disk`

Description Verify that sys$common:[sysmgr]inst_file.out exists

Message `The sybase_disk_logicals.com file is missing`

Description sybase_disk_logicals.com must exist for a SYBASE upgrade. Verify that either sys$sysroot:[sysmgr]sybase_disk_logicals.com exists or sys$common:[sysmgr]sybase_disk_logicals.com exists.

A

Message `The sybase logical, SYBASE_DEVICE is not defined`

Description Verify that either sys$sysroot:[sysmgr]sybase_disk_logicals.com exists or sys$common:[sysmgr]sybase_disk_logicals.com exists.

Message `The sybase logical, SYBASE_MASTER_DEVICE is not defined`

Description Verify that either sys$sysroot:[sysmgr]sybase_disk_logicals.com exists or sys$common:[sysmgr]sybase_disk_logicals.com exists.

Message `SYBASE requires xxx free blocks on xxx disk`

Description Verify that sufficient free blocks are available on the corresponding disk. Refer to Table 2-3 and Table 2-6 for disk sizing requirements.

Message `SYLOGIN.COM can not be found`

Description Ensure that SYLOGIN.COM exists and that the logical SYS$SYLOGIN is defined and points to the sylogin.com file.

Message `invalid input`

Message `invalid response`

Description A syntactical error has occurred during data entry. Ensure data entered is correct.

Message `diskname is not a disk`

Description An invalid or non-existent diskname was entered. Enter a valid or existing diskname.

Message `The disk defined by diskname is not mounted(correctly)`

Description Ensure that the chosen disk is mounted correctly.

A

Message `The disk defined by diskname is write locked.`

Description Ensure that the chosen disk is write enabled.

Message `UIC is already in use`

Description Enter a valid unique UIC.

Message `UIC is not a valid UIC`

Description The UIC must be in the form, *group,member*, where group and member are OCTAL numeric values in the range; group = [0 to 37776] and member = [0 to 177776].

Message `value is not a valid number`

Description An illegal value has been entered for the number of ENVOX users. Enter a value within the range [1 to 32].

Message `server memory of xx Mb can only support xx users`

Description Enter a lower value for the number of ENVOX users.

Message `This device does not exist`

Description An illegal value was entered for the SYBASE printer device. Enter a legal device value.

Message `The definition for printer must be a device`

Description The device class of *printer* must be a terminal.

Message `The query object number specfied is outside the valid range`

Description The value entered for the query object number must be in the range [128 to 252].

Message `The Dataserver name length must be in the range 1-10 characters`

Description An illegal SQL server name was entered. Enter a valid SQL server name in the range [1 to10] ASCII characters.

Message `The Dataerver name specified contains illegal characters`

Description The SQl server name must only contain alphanumeric characters, dollar ($) signs, and _ (underscore) characters.

Message `You cannot allocate less than xxx mb to the Dataserver`

Description The minimum memory that can be allocated to the SQL server is 16 Mbytes on a VAX system and 20 Mbytes on an AXP system.

Message `You cannot allocate more than xxx mb to the Dataserver`

Description The maximum memory that can be allocated to the SQL server is half the available system memory.

Message `Unable to determine size of master device`

Description Ensure that a valid master database size has been entered.

Message `The size of the master device must be in the range 20 - xx mb`

Description A value for master device size was entered that is less than 20 Mbytes or greater than the maximum number free disk blocks.

Message `Unable to determine size of sybprocs device`

Description Ensure that a valid sybprocs database size has been entered.

Message `The size of the sybprocs device must be in the range 20 - xx mb`

Description A value for master device size was entered that is less than 20 Mbytes or greater than the maximum number free disk blocks.

Message `Device tape_device does not exist`

Description The entered tape device does not exist.

Message `tape_device is not a valid tape device`

Description The device class of the tape device must be a tape or a disk.

Message `tape_device is an invalid pathname`

Description An invalid directory pathname has been entered for the tape device.

Message `tape_device must be terminated with a :`

Description The entered tape device must be terminated with a colon.

Message `The sybase logical, SYBASE_DEVICE is not defined`

Description Verify that either sys$sysroot:[sysmgr]sybase_disk_logicals.com exists or sys$common:[sysmgr]sybase_disk_logicals.com exists.

Message `The sybase logical, SYBASE_MASTER_DEVICE is not defined.`

Description Verify that either sys$sysroot:[sysmgr]sybase_disk_logicals.com exists or sys$common:[sysmgr]sybase_disk_logicals.com exists.

Message `sys$manager:sybase_vms_resources.dat file is missing`

Description The installation process was unable to locate the above temporary file which is created by the installation process and is used to validate the system parameters.

Message `Please increase sysgen param to xxx`

Message `Please increase pagefile to xxx`

Message `Please increase ncp logical links to xxx`

Description The installation process determined that the above system parameter needs to be increased. Refer to section 10 for help on changing system parameters.

Message `The parameters in sys$common:[sysmgr]inst_file.out are incorrect`

Description The installation process has determined that the parameters in the above file are incorrect. Please keep this file.

Message `The node name length must be in the range 1-6 characters.`

Description An illegal node name was specified during a SYBASE client installation. Specify a valid nodename where the SYBASE SQL server resides.

Message `Can't find sys$manager:xxxxx`

Message `sys$manager:xxxx file is missing`

Description The installation process was unable to locate the above file which is unloaded from **syb_envox_inst.a** saveset at the start of the installation.

Message `Installation aborted.`

Description The installation was aborted by pressing **ctrl Y.**

Message `DB-LIBRARY has failed`

Description Please ensure the sa password is set to database.

Message `Warning cannot find sylogin.com`

Description sys$manager:sylogin.com is provided by OpenVMS. Determine why this file is missing.

Message `Warning cannot find sys$system:modparams.dat`

Description The above file is provided by OpenVMS. Determine why this file is missing.

Message `Cannot read savesets`

Description The installation process has been unable to read the software from the installation media. If installing from a tapedrive, ensure the correct tape is inserted and correctly mounted. If installing from disk, ensure the selected directory pathname contains the correct savesets.

Message `Unknown installation error encountered.`

Description An internal error has occurred. Examine sys$manager:sybase_envox_inst.log and sys$manager:inst_file.in to determine the error.

A.3 ENVOX Error Messages

This subsection contains error messages that can occur during the installation or upgrade of ENVOX software.

Message `SYBASE must be successfully installed before attempting ENVOX.`

Description The ENVOX software installation process requires the SYBASE system to be available and running for the process to successfully complete. If you have followed the SYBASE installation instructions provided by in this manual, SYBASE software should be present. If it is not, you must repeat the SYBASE installation before retrying the ENVOX installation.

Message `sys$manager:inst_file.out does not exist`

Description sys$manager:inst_file.out is a temporary file created by the installation process. Check to see if this file can be created manually.

Message `envox install failed on xxxx`

Description Determine the installation failure by examining sys$manager:sybase_envox_inst.log

Message `error creating envox_dev1, envox_dev2`

Description Ensure the sa password is set to *database*. Examine sybase_system:[sybase.install]start_sybase.out for errors.

Message `Unable to restore files from saveset L into sybase_system:[sybase]`

Description These files can be manually recovered once the installation has completed.

Message `envox & envoxsupport UICs are the same`

Description The UIC values for the *envox* and *envoxsupport* accounts must be different.

Message `Unable to determine the installation disk`

Description The installation disk is determined from the location of the file: sys$common:[sysmgr]inst_file.out. Verify that this files exists.

Message `The envox_disk_logicals.com file is missing`

Description envox_disk_logicals.com must exist for an ENVOX upgrade. Verify that either sys$sysroot:[sysmgr]envox_disk_logicals.com exists or sys$common:[sysmgr]envox_disk_logicals.com exists.

Message `The envox logical, ENVOX$DISK is not defined`

Description Verify that either sys$sysroot:[sysmgr]envox_disk_logicals.com exists or sys$common:[sysmgr]envox_disk_logicals.com exists.

Message `The envox logical, ENVOX$DB_DISK is not defined`

Description Verify that either sys$sysroot:[sysmgr]envox_disk_logicals.com exists or sys$common:[sysmgr]envox_disk_logicals.com exists.

Message `The envox logical, ENVOX$LOG_DISK is not defined`

Description Verify that either sys$sysroot:[sysmgr]envox_disk_logicals.com exists or sys$common:[sysmgr]envox_disk_logicals.com exists.

Message `envox requires xxx blks free blocks on install disk = xxx`

Message `envox requires xxx blks free blocks on envox$disk = xxx`

Message `envox requires xxx blks free blocks on envox$log_disk = xxx`

Message `envox requires xxx blks free blocks on envox$db_disk = xxx`

Description Install disk refers to the disk used for installation and is normally the system disk. ENVOX$DISK refers to the disk used for the ENVOX software. ENVOX$LOG_DISK refers to the disk used for the logical device for the ENVOX database log segment. ENVOX$DB_DISK refers to the disk used for the logical device for the Envox database data segment. Ensure that sufficient free disk space exists on the relevant disk. Refer to Table 2-3 and Table 2-6 for disk sizing requirements.

Message `The sybase_manager.com file is missing`

Description This file is created during the SYBASE installation process. Ensure that sybase_device:[sybase.install]sybase_manager.com exists.

Message `sys$library:decw$transport_common.exe file is missing`

Message `The sys$library:decw$terminalshr.exe file is missing`

Message `sybase_device:[sybase.install]sylogicals.com is missing`

Description The above files are checked by the installation process. Ensure that the above files exist.

Message `WARNING - CHIP should be installed before ENVOX`

Description Ensure CHIP is installed before installing ENVOX software.

Message `UIC is already in use`

Description Enter a valid unique UIC.

Message `UIC is not a valid UIC`

Description The UIC must be in the form, *group,member*, where group and member are OCTAL numeric values in the range; group = [0 to 37776] and member = [0 to 177776].

Message `envox & envoxsupport UICs are the same`

Description Enter unique UICs for envox and envoxsupport users.

Message `The sybase stopserver symbol is undefined`

Description Verify that the stopserver symbol is defined in sybase_system:[sybase.install]sybase_manager.com.

Message `The sybase server is not running.`

Description Determine whether the server is running by examining the output from the DCL command **show system.** If no sybase server process exists, then restart the server by issuing the DCL command **startserver.** If the server fails to start, determine the cause of the failure by examining **sybase_system:[sybase.install]start_sybase.out**

Message `Device tape_device does not exist`

Description The entered tape device does not exist.

Message `tape_device is not a valid tape device`

Description The device class of the tape device must be a tape or a disk.

Message `tape_device is an invalid pathname`

Description An invalid directory pathname has been entered for the tape device.

Message `tape_device must be terminated with a :`

Description The entered tape device name must be terminated with a colon.

Message `Cannot read savesets`

Description The installation process has been unable to read the software from the installation media. If installing from a tapedrive, ensure the correct tape is inserted and correctly mounted. If installing from disk, ensure the selected directory pathname contains the correct savesets.

Message `Upgrade of the master database has failed`

Description Determine the cause of the failure by examining sybase_system:{sybase.install]start_sybase.out.

Message `Creation of xxxxx database has failed`

Description Determine the cause of the failure by examining sybase_system:{sybase.install]start_sybase.out.

Message `envox$application:xxx file is missing`

Description The above file is provided by the ENVOX installation. Determine why the file is missing.

Message `The parameters in sys$common:[sysmgr]inst_file.out are incorrect`

Description The installation process has determined that the parameters in the above file are incorrect. Please keep this file.

Message `Installation aborted.`

Description The installation was aborted by pressing **Ctrl Y.**

Message `Unknown installation error encountered`

Description An internal error has occurred. Examine sys$manager:sybase_envox_inst.log and sys$manager:inst_file.in to determine the error.

A.4 PDX Dump Error Messages

This subsection contains error messages that can occur during dumps by the PDX utility.

Message `Tape device is not defined`

Description An empty string has been entered. Please enter a valid tape device.

Message `xxx is not a valid tape device`

Description The entered tape device contains illegal characters or the wrong device type.

Message `Device xxx is illegal`

Description The entered device contains ::.

Message `Device xxx does not exist`

Description The entered device does not exist.

Message `Filename is missing`

Description Please re-enter the tape device and specify a valid filename.

Message `xxx is not valid`

Description Please re-enter the tape device and specify a valid filename.

Message `Disk device is not defined`

Description An empty string has been entered. Please enter a valid filename including the full directory pathname.

Message `Size is not defined`

Description Please enter a valid pdx file size.

Message `Size is invalid`

Description The entered size contains non-numeric characters.

Message `WARNING – There may not be enough disk space for PDX file`

Description Increase the free disk space or choose a different disk.

A.5 CDOS Error and Warning Messages

This subsection lists the CDOS specific messages that can occur during the various stages of the CDOS installation process.

Message `ENVOX P4.0 must be installed before CDOS installation.`

Description Install ENVOX P4.0 in client-server or client-only mode first.

Message `ENVOX version must be P4.0 for CDOS installation.`

Description CDOS will not install if the existing ENVOX version is pre-ENVOX P4.0.

Message `CDOS requires xxx free blocks on xxx-disk.`

Description Free up disk space and re-try installation.

Message `CDOS sybase system disk is undefined.`

Description The logical sybase_device must be defined.

Message `Invalid response.`

Description A syntactical error has occurred during data entry. Ensure that the data entered is correct.

Message `UIC is not a valid UIC.`

Description The UIC must be in the form: *group*, *member*, where they are OCTAL numeric values in the range:
group = [0 to 37776] and member = [0 to 177776].

Message `Value is not a valid number.`

Description An illegal value has been entered for the number of CDOS users. Enter a value within the range [1 to 32].

Message *`server_name`* `already in use.`

Description The server name is being used by a SYBASE server and is entered in the interfaces file.

Message
```
Warning - not possible to validate the port
number

Please update the interfaces file after
installation.
```

Description There is no TCP/IP software or the software is not running, so the port number cannot be validated. The installation will proceed but no entry will be made in the SYBASE interfaces file. You will have to edit this file manually.

Message
```
Warning - Unable to determine host tcp/ip
address

Please update the interfaces file after
installation.
```

Description There is no TCP/IP software or the software is not running, so the TCP/IP address of host machine cannot be resolved. The installation will proceed but no entry will be made in the SYBASE interfaces file. You will have to edit this file manually.

Message `There is not a cdos account on this machine.`

Description Use the HP System Administrator Manager's (SAM) to create a CDOS account.

Message `The chip group does not contain the cdos account.`

Description Use the HP System Administrator Manager's (SAM) to add the CDOS account into the CHIP group.

Appendix B

Transact-ISQL Reserved Words

The following words are reserved by Interactive Structured Query Language (ISQL) as keywords (command verbs) and cannot be used for the names of database objects such as databases, tables, rules, defaults, and so forth. Reserved words are used for the names of local variables and for stored procedure parameters.

ADD
ALL
ALTER
AND
ANY
ARITH_OVERFLOW
AS
ASC
AT
AUTHORIZATION
AVG

BEGIN
BETWEEN
BREAK
BROWSE
BULK
BY

CASCADE
CHAR_CONVERT
CHECK
CHECKPOINT
CLOSE
CLUSTERED
COMMIT
COMPUTE
CONFIRM
CONSTRAINT
CONTINUE
CONTROLROW
CONVERT
COUNT
CREATE
CURRENT
CURSOR

DATABASE
DATA_PGS
DBCC
DEALLOCATE
DECLARE
DEFAULT
DELETE
DISTINCT
DESC
DISK
DOUBLE
DROP
DUMMY
DUMP

ELSE
END
ENDTRAN
ERRLVL
ERROREXIT
ESCAPE
EXCEPT
EXEC
EXECUTE
EXISTS
EXIT

FETCH
FILLFACTOR
FOR
FOREIGN
FORM

GOTO
GRANT
GROUP

HAVING
HOLDLOCK

IDENTITY

IDENTITY_INSERT
IF
IN
INDEX
INSERT
INTERSECT
INTO
IS
ISOLATION

KEY
KILL

LEVEL
LIKE
LINENO
LOAD

MAX
MIN
MIRROR
MIRROREXIT

NATIONAL
NOHOLDLOCK
NOT
NOTCLUSTERED
NULL
NUMERIC_TRUNCATION

OF
OFF
OFFSETS
ON
ONCE
ONLY
OPEN
OPTION
OR
ORDER
OVER

PERM
PERMANENT
PLAN
PRECISION
PREPARE
PRIMARY
PRINT
PRIVILEGES
PROC
PROCEDURE
PROCESSEXIT
PUBLIC

RAISERROR
READ
READTEXT
RECONFIGURE
REFERENCES
REPLACE
RESERVED_PGS
RETURN
REVOKE
ROLE
ROLLBACK
ROWCNT
ROWCOUNT
ROWS
RULE

SAVE
SCHEMA
SELECT
SET
SETUSER
SHARED
SHUTDOWN
SOME
STATISTICS
STRIPE
SUM
SYB_IDENTITY
SYB_RESTREE
SYB_TERMINATE

TABLE
TAPE
TEMP
TEMPORARY
TEXTSIZE
TO
TRAN
TRANSACTION
TRIGGER
TRUNCATE
TSEQUAL

UNION
UNIQUE
UPDATE
USE
USED_PGS
USER
USER_OPTION
USING

VALUES
VARYING
VIEW

WAITFOR
WHERE
WHILE
WITH
WORK
WRITETEXT

Appendix C

Installation and Upgrade Logs

This appendix lists log files for the following installation and upgrade procedures:

- SYBASE Client-Only Installation Log — Subsection C.1
- SYBASE Client-Server Installation Log — Subsection C.2
- SYBASE Client-Only Upgrade Log — Subsection C.3
- SYBASE Client-Server Upgrade Log — Subsection C.4
- ENVOX® Client-Only Installation Log — Subsection C.5
- ENVOX Client-Server Installation Log — Subsection C.6
- ENVOX Client-only Upgrade Log — Subsection C.7
- ENVOX Client–Server Upgrade Log — Subsection C.8
- ENVOX P4.0 To P4.0 Upgrade Log — Subsection C.9
- SYBASE Tune Log — Subsection C.10
- CDOS Installation Log — Subsection C.11
- CDOS Upgrade Log — Subsection C.12
- CDOS De-installation Log — Subsection C.13

Your logs may be slightly different depending on your computer type.

C.1 SYBASE Client-Only Installation Log

```
************************************************************
************************************************************
ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 6-NOV-1997 14:53:53.97 PAINTD
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG 6-NOV-1997 14:54:35.31 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
------------------------------
Checking sylogin
Checking disk
Checking Y/N
Checking Y/N
Checking uic
Checking Number of users
Checking print device
Checking query object number
Checking port_number
Checking nodename
Checking tape device
Checking current sybase disks
Checking sybase diskspace
Checking disk
Checking client parameters
SYBASE_ENVOX_INST.LOG 6-NOV-1997 14:54:44.47 PAINTD DEC 3000 - M300X
start of inst_upg_sybase.com
----------------------------
sybase client installation
removing sybase images
stopping envox processes
deleting sybase files
removing sybase from startup files
form_syb_disk_logicals
creating/updating accounts
creating sybase directories
modifying modparams.dat
modifying files
modifying sylogin
copying sybase files
unloading savesets
creating interface file
creating sybase_manager & sylogical files
setting permissions
installing sybase images
checking for errors
sybase install completed successfully on 6-NOV-1997 14:58:07.30
```

C.2 SYBASE Client-Server Installation Log

```
************************************************************
************************************************************
 ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log  4-NOV-1997 15:40:40.98 PAINTD
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG  4-NOV-1997 15:41:07.40 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
-----------------------------
Checking sylogin
Checking disk
Checking Y/N
Checking Y/N
Checking uic
Checking server memory
Checking Number of users
Checking print device
Checking query object number
Checking port_number
Checking server name
Checking disk
Checking disk
Checking current sybase disks
Checking sybase diskspace
Checking disk
Checking sybprocs size
Checking master size
Checking tape device
starting to write vms resources file
Checking system parameters
Checking VMS parameters...
The current value of WSMAX is 77776
The required value of WSMAX is 39328
The current value of CHANNELCNT is 998
The required value of CHANNELCNT is 588
The current value of PROCSECTCNT is 128
The required value of PROCSECTCNT is 128
The current value of NPAGEDYN is 2375680
The required value of NPAGEDYN is 1530896
The current value of PAGEDYN is 1777664
The required value of PAGEDYN is 1148172
The current value of GBLPAGES is 341110
The required value of GBLPAGES is 173946
The current value of GBLPAGFIL is 18000
The required value of GBLPAGFIL is 10871
The current value of GBLSECTIONS is 600
The required value of GBLSECTIONS is 600
The current value of CLISYMTBL is 750
The required value of CLISYMTBL is 500
The current value of SWPOUTPGCNT is 512
```

```
The required value of SWPOUTPGCNT is 512
The current value of PQL_MPGFLQUOTA is 32768
The required value of PQL_MPGFLQUOTA is 32768
The current value of PQL_MASTLM is 200
The required value of PQL_MASTLM is 200
The current value of PQL_DASTLM is 200
The required value of PQL_DASTLM is 200
The current value of PQL_DBIOLM is 200
The required value of PQL_DBIOLM is 200
The current value of PQL_DDIOLM is 200
The required value of PQL_DDIOLM is 200
The current value of PQL_DBYTLM is 81920
The required value of PQL_DBYTLM is 81920
The current value of PQL_MBIOLM is 200
The required value of PQL_MBIOLM is 200
The current value of PQL_MDIOLM is 200
The required value of PQL_MDIOLM is 200
The current value of PQL_MPRCLM is 10
The required value of PQL_MPRCLM is 10
The current value of PQL_MFILLM is 259
The required value of PQL_MFILLM is 200
The current value of PQL_MBYTLM is 100000
The required value of PQL_MBYTLM is 100000
The current value of PQL_MENQLM is 300
The required value of PQL_MENQLM is 300
The current value of PQL_MWSDEFAULT is 1136
The required value of PQL_MWSDEFAULT is 1024
The current value of PQL_DWSDEFAULT is 1136
The required value of PQL_DWSDEFAULT is 1024
The current value of PQL_MWSQUOTA is 2304
The required value of PQL_MWSQUOTA is 2048
The current value of MAXBUF is 8192
The required value of MAXBUF is 8192
The current value of GH_RES_CODE is 1024
The required value of GH_RES_CODE is 1024
The current value of GH_RSRVPGCNT is 512
The required value of GH_RSRVPGCNT is 512
The current value of IMGREG_PAGES is 10000
The required value of IMGREG_PAGES is 2000
The current value of PQL_MWSEXTENT is 8192
The required value of PQL_MWSEXTENT is 8192
The current value of PQL_DWSEXTENT is 8192
The required value of PQL_DWSEXTENT is 8192
The current value of PAGEFILE is 420096
The required value of PAGEFILE is 245704
The current value of  TRANSPORT CONNECTIONS is 400
The required value of TRANSPORT CONNECTIONS is 102
SYBASE_ENVOX_INST.LOG  4-NOV-1997 15:42:23.95 PAINTD DEC 3000 - M300X
start of inst_upg_sybase.com
----------------------------
sybase client-server installation
removing sybase images
stopping envox processes
deleting sybase files
```

```
removing sybase from startup files
form_syb_disk_logicals
creating/updating accounts
creating sybase directories
modifying modparams.dat
modifying files
modifying sylogin
copying sybase files
unloading savesets
creating interface file
creating sybase_manager & sylogical files
modifying resource files
creating default sybase databases
tuning server
running ebfs
setting tds packet size and extent io buffer
stop server
disabling packet batching
setting permissions
setting cschedspins = 2
installing sybase images
start server
checking for errors
creating default backup server
sybase install completed successfully on  4-NOV-1997 16:06:04.41
```

C.3 SYBASE Client Upgrade Log

```
************************************************************
************************************************************
ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 7-NOV-1997 16:47:31.72 PAINTD
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG 7-NOV-1997 16:47:47.22 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
------------------------------
Checking sylogin
Checking tape device
Checking current sybase disks
Checking current sybase disks
Checking sybase diskspace
Checking disk
Checking client parameters
SYBASE_ENVOX_INST.LOG 7-NOV-1997 16:48:03.35 PAINTD DEC 3000 - M300X
start of inst_upg_sybase.com
----------------------------
sybase client upgrade
setting up sybase symbols and logicals
removing sybase images
stopping envox processes
preserving files
deleting sybase files
creating/updating accounts
creating sybase directories
copying sybase files
unloading savesets
restoring files
setting permissions
installing sybase images
checking for errors
sybase install completed successfully on 7-NOV-1997 16:51:54.87
```

C.4 SYBASE Client-Server Upgrade Log

```
************************************************************
************************************************************
 ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 25-FEB-1998 14:31:57.34 JANUS
Start of pre_menu_checks.com
----------------------------

SYBASE_ENVOX_INST.LOG 25-FEB-1998 14:36:57.95 JANUS AlphaStation 255/300
Start of inter_menu_checks.com
------------------------------
Checking sylogin
Checking tape device
Checking current sybase disks
Checking sybase diskspace
Checking disk
Checking envox files
Checking server running
Checking server node
SYBASE_ENVOX_INST.LOG 25-FEB-1998 14:37:20.45 JANUS AlphaStation 255/300
start of inst_upg_sybase.com
----------------------------
sybase client-server upgrade
setting up sybase symbols and logicals
stop server
removing sybase images
stopping envox processes
preserving files
deleting sybase application files
unloading savesets
restoring files
start server
setting tempdb size
running ebfs
setting tds packet size and extent io buffer
stop server
disabling packet batching
setting permissions
setting cschedspins = 2
installing sybase images
start server in single user mode
dropping all envox databases
Dropping database, BPDB
Dropping database, ELFDB
Dropping database, GKDB
Dropping database, PERFDB
stop server
start server
checking for errors
sybase install completed successfully on 25-FEB-1998 14:59:10.47
```

C.5 ENVOX Client-Only Installation Log

```
************************************************************
************************************************************
ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 6-NOV-1997 15:00:48.31 PAINTD
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG 6-NOV-1997 15:01:02.48 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
------------------------------
Checking sybase installed
Checking disk
Checking tape device
Checking uic
Checking uic
Checking envox & envoxsupport uics are different
Checking decw files
Checking envox files
Checking chip
Checking current envox disks
Checking envox diskspace
Checking disk
SYBASE_ENVOX_INST.LOG 6-NOV-1997 15:01:35.44 PAINTD DEC 3000 - M300X
start of inst_upg_envox.com
---------------------------
start of envox client installation
form_envox_disk_logicals
removing sharables and stopping envox processes
creating/updating accounts
deleting envox files
creating envox directories
setting sybase symbols
unloading savesets
setting permissions
copying files
set up envox logicals
Installation of ENVOX client software is complete.
envox install completed successfully on 6-NOV-1997 15:29:03.91
```

C.6 ENVOX Client-Server Installation Log

```
************************************************************
************************************************************
ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 4-NOV-1997 10:09:34.82 PAINTD
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG 4-NOV-1997 10:10:04.35 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
------------------------------
Checking sybase installed
Checking disk
Checking disk
Checking disk
Checking Y/N
Checking tape device
Checking uic
Checking uic
Checking envox & envoxsupport uics are different
Checking decw files
Checking envox files
Checking server running
Checking chip
Checking current envox disks
Checking envox diskspace
Checking disk
SYBASE_ENVOX_INST.LOG 4-NOV-1997 10:10:14.46 PAINTD DEC 3000 - M300X
start of inst_upg_envox.com
---------------------------
start of ENVOX client-server installation
form_envox_disk_logicals
removing sharables and stopping envox processes
creating/updating accounts
deleting ENVOX files
creating envox directories
setting sybase symbols
creating logical devices
unloading savesets
setting permissions
copying files
set up ENVOX logicals
setup admin sybase account
replace images
updating master database
creating ENVOX databases
starting envox daemon
Installation of ENVOX software is complete.
envox install completed successfully on 4-NOV-1997 11:43:19.48
```

C.7 ENVOX Client Upgrade Log

```
************************************************************
************************************************************
ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 7-NOV-1997 17:36:28.77 PAINTD
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG 7-NOV-1997 17:36:44.33 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
------------------------------
Checking sybase installed
Checking tape device
Checking decw files
Checking envox files
Checking chip
Checking current envox disks
Checking envox diskspace
Checking disk
SYBASE_ENVOX_INST.LOG 7-NOV-1997 17:37:42.77 PAINTD DEC 3000 - M300X
start of inst_upg_envox.com
---------------------------
start of envox client upgrade
run_envox_disk_logicals
removing sharables and stopping envox processes
deleting envox files
creating/updating accounts
creating envox directories
setting sybase symbols
unloading savesets
setting permissions
copying files
set up envox logicals
Installation of ENVOX client software is complete.
envox install completed successfully on 7-NOV-1997 18:21:11.74
```

C.8 ENVOX Client-Server Upgrade Log

```
************************************************************
************************************************************
 ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 25-FEB-1998 18:06:18.72 JANUS
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG 25-FEB-1998 18:08:21.34 JANUS AlphaStation 255/300
Start of inter_menu_checks.com
------------------------------
Checking sybase installed
Checking tape device
Checking decw files
Checking envox files
Checking server running
Checking chip
Checking current envox disks
Checking envox diskspace
Checking disk
SYBASE_ENVOX_INST.LOG 25-FEB-1998 18:08:28.05 JANUS AlphaStation 255/300
start of inst_upg_envox.com
----------------------------
start of ENVOX client-server upgrade
install decw$transport_common
run_envox_disk_logicals
removing sharables and stopping ENVOX processes
deleting ENVOX files
creating/updating accounts
creating ENVOX directories
setting sybase symbols
unloading savesets
setting permissions
copying files
set up ENVOX logicals
setup admin sybase account
replace images
updating master database
updating ENVOX databases
starting ENVOX daemon
Installation of ENVOX software is complete.
ENVOX install completed successfully on 25-FEB-1998 18:46:45.47
```

C.9 ENVOX P4.0 Reload Log

```
************************************************************
************************************************************
ENVOX version P4.0 INSTALLATION/UPGRADE STARTED
************************************************************
sybase_envox_inst.log 7-NOV-1997 12:02:28.77 PAINTD
Start of pre_menu_checks.com
----------------------------
SYBASE_ENVOX_INST.LOG 7-NOV-1997 12:04:10.88 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
------------------------------
Checking sybase installed
Checking tape device
Checking decw files
Checking envox files
Checking server running
Checking chip
Checking current envox disks
Checking envox diskspace
Checking disk
SYBASE_ENVOX_INST.LOG 7-NOV-1997 12:05:13.38 PAINTD DEC 3000 - M300X
start of inst_upg_envox.com
----------------------------
start of ENVOX client-server upgrade
install decw$transport_common
run_envox_disk_logicals
removing sharables and stopping ENVOX processes
deleting ENVOX files
creating/updating accounts
creating ENVOX directories
setting sybase symbols
unloading savesets
setting permissions
copying files
set up ENVOX logicals
setup admin sybase account
replace images
updating master database
updating ENVOX databases
starting ENVOX daemon
Installation of ENVOX software is complete.
ENVOX install completed successfully on 7-NOV-1997 12:47:10.78
```

C.10 SYBASE Tune Log

```
SYBASE_TUNE.LOG 12-JAN-1998 08:04:15.79 PAINTD DEC 3000 - M300X
start of sybase_tune.com
----------------------------
tidying up files
checking client server
checking server running
checking server node
checking for server errors
number_of_users_memory
show_vms_sys_requirements
form_quota_file
check_sys_params
The current value of WSMAX is 77776
The required value of WSMAX is 39888
The current value of CHANNELCNT is 998
The required value of CHANNELCNT is 602
The current value of PROCSECTCNT is 128
The required value of PROCSECTCNT is 128
The current value of NPAGEDYN is 2375680
The required value of NPAGEDYN is 1559568
The current value of PAGEDYN is 1777664
The required value of PAGEDYN is 1169676
The current value of GBLPAGES is 341110
The required value of GBLPAGES is 233626
The current value of GBLPAGFIL is 18000
The required value of GBLPAGFIL is 14601
The current value of GBLSECTIONS is 600
The required value of GBLSECTIONS is 600
The current value of CLISYMTBL is 750
The required value of CLISYMTBL is 500
The current value of SWPOUTPGCNT is 512
The required value of SWPOUTPGCNT is 512
The current value of PQL_MPGFLQUOTA is 32768
The required value of PQL_MPGFLQUOTA is 32768
The current value of PQL_MASTLM is 200
The required value of PQL_MASTLM is 200
The current value of PQL_DASTLM is 200
The required value of PQL_DASTLM is 200
The current value of PQL_DBIOLM is 200
The required value of PQL_DBIOLM is 200
The current value of PQL_DDIOLM is 200
The required value of PQL_DDIOLM is 200
The current value of PQL_DBYTLM is 81920
The required value of PQL_DBYTLM is 81920
The current value of PQL_MBIOLM is 200
The required value of PQL_MBIOLM is 200
The current value of PQL_MDIOLM is 200
The required value of PQL_MDIOLM is 200
The current value of PQL_MPRCLM is 10
The required value of PQL_MPRCLM is 10
The current value of PQL_MFILLM is 259
```

```
The required value of PQL_MFILLM is 200
The current value of PQL_MBYTLM is 100000
The required value of PQL_MBYTLM is 100000
The current value of PQL_MENQLM is 300
The required value of PQL_MENQLM is 300
The current value of PQL_MWSDEFAULT is 1136
The required value of PQL_MWSDEFAULT is 1024
The current value of PQL_DWSDEFAULT is 1136
The required value of PQL_DWSDEFAULT is 1024
The current value of PQL_MWSQUOTA is 2304
The required value of PQL_MWSQUOTA is 2048
The current value of MAXBUF is 8192
The required value of MAXBUF is 8192
The current value of GH_RES_CODE is 1024
The required value of GH_RES_CODE is 1024
The current value of GH_RSRVPGCNT is 512
The required value of GH_RSRVPGCNT is 512
The current value of IMGREG_PAGES is 10000
The required value of IMGREG_PAGES is 2000
The current value of PQL_MWSEXTENT is 8192
The required value of PQL_MWSEXTENT is 8192
The current value of  TRANSPORT CONNECTIONS is 400
The required value of TRANSPORT CONNECTIONS is 116
The current value of PAGEFILE is 420096
The recommended value of PAGEFILE is 311264
tune_server
checking for server errors
inst_complete
sybase tune completed successfully on 12-JAN-1998 08:08:16.39
```

C.11 CDOS Installation Log

```
************************************************************
************************************************************
CDOS version P1.0 INSTALLATION/UPGRADE STARTED
************************************************************
cdos_inst.log 24-JUN-1997 15:48:02.79 EMMA
Start of pre_menu_checks.com
----------------------------
Checking current user
Checking current directory
Checking VMS version
Checking motif installed
Checking DECnet
Checking year
Checking s/w installed
Checking server running
Checking version of SYBASE server
Checking if envox_readonly exists
generating list of ENVOX databases
Checking ENVOX P3.4 is installed
Returning status to installation program
cdos_INST.LOG 24-JUN-1997 15:48:34.84 EMMA VAXstation 4000-60
```

```
Start of inter_menu_checks.com
------------------------------
Checking sylogin
Checking disk
Checking Y/N
Checking uic
Checking server name
Checking TCPIP_software
Checking port_number
Checking interfaces
Checking current cdos disks
Checking cdos diskspace
Checking disk
Checking tape device
CDOS_INST.LOG 24-JUN-1997 15:51:04.56 EMMA VAXstation 4000-60
start of inst_cdos.com
----------------------
CDOS installation
setup sybase & cdos logicals.
stopping cdos processes
removing cdos from startup files
removing cdos images
saving license and vtf files
deleting cdos files
form_cdos_disk_logicals
creating/updating accounts
creating cdos directories
copying cdos files
unloading savesets
restoring files
creating expiry file
updating interface file
initialising server files
modifying files
setting permissions
installing cdos images
start_cdos_server
checking for errors
add servers
cdos install completed successfully on 24-JUN-1997 15:59:33.30
Now login as user Sybase and re-tune the Sybase dataserver
by issuing the commands:
   $ set def [sybase.install]
   $ @sybase_tune.com
```

C.12 CDOS Upgrade Log

```
************************************************************
************************************************************
 CDOS version P2.0 INSTALLATION/UPGRADE STARTED
************************************************************
cdos_inst.log 26-FEB-1998 14:34:54.12 JANUS
Start of pre_menu_checks.com
----------------------------
Checking current user
Checking current directory
Checking VMS version
Checking motif installed
Checking DECnet
Checking year
Checking CHIP installed
Checking SYBASE installed
Checking ENVOX installed
Checking version of SYBASE server
Returning status to installation program
cdos_INST.LOG 26-FEB-1998 14:35:09.26 JANUS AlphaStation 255/300
Start of inter_menu_checks.com
------------------------------
Checking sylogin
Checking current cdos disks
Checking cdos diskspace
Checking disk
Checking tape device
CDOS_INST.LOG 26-FEB-1998 14:35:19.26 JANUS AlphaStation 255/300
start of inst_cdos.com
----------------------
CDOS client-server upgrade
setup sybase & cdos logicals.
checking interfaces file
stopping cdos processes
removing cdos images
saving license and vtf files
deleting cdos files
creating cdos directories
copying cdos files
unloading savesets
restoring files
creating expiry file
setting permissions
installing cdos images
start_cdos_server
checking for errors
cdos install completed successfully on 26-FEB-1998 14:39:37.84
```

C.13 CDOS De-installation Log

```
************************************************************
************************************************************
 CDOS version P1.0 INSTALLATION/UPGRADE STARTED
************************************************************
cdos_inst.log 24-JUN-1997 16:48:28.07 PAINTD
Start of pre_menu_checks.com
----------------------------
Checking current user
Checking current directory
Checking VMS version
Checking motif installed
Checking DECnet
Checking year
Checking s/w installed
Checking server running
Checking version of SYBASE server
Checking if envox_readonly exists
generating list of ENVOX databases
Checking ENVOX P3.4 is installed
Returning status to installation program
cdos_INST.LOG 24-JUN-1997 16:49:14.21 PAINTD DEC 3000 - M300X
Start of inter_menu_checks.com
------------------------------
CDOS_INST.LOG 24-JUN-1997 16:49:16.01 PAINTD DEC 3000 - M300X
start of inst_cdos.com
----------------------
cdos De-installation
setup sybase & cdos logicals.
stopping cdos processes
removing cdos from startup files
removing cdos images
deleting cdos files
remove cdos account
cdos Deinstall completed successfully on 24-JUN-1997 16:50:59.89
Now login as user Sybase and re-tune the Sybase dataserver
by issuing the commands:
   $ set def [sybase.install]
   $ @sybase_tune.com
```

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History

The list below shows the documents available for released ENVOX® software versions.

ENVOX P1.0

- *Installing ENVOX Software and Migrating PROFLEX® Data*
  PN4.14:SW3151 (Original — July 1990) D3P00481002
- *Installing ENVOX Software and Migrating PROFLEX Data*
  PN4.14:SW3151 (Change 1 — December 1990) D3P00482012
- *Using ENVOX Configuration Software*
  UM4:14:SW3151 (Original + Change 1 — December 1990) D2U00481012

ENVOX P1.1

- *Installing ENVOX Software and Migrating PROFLEX Data*
  PN4.14:SW3151 (Revision A — April 1991) D3P00481102
- *ENVOX Tutor*
  TU4.14:SW3151 (Original — June 1991) D2T00481002
- *Using ENVOX Configuration Software*
  UM4:14:SW3151 (Revision A — April 1991) D2U00481102

ENVOX P1.2

- *Installing ENVOX Software and Migrating PROFLEX Data*
  PN4.14:SW3151 (Revision B — October 1991) D3P00481202
- *ENVOX Technical Reference*
  TR4.14:SW3151 (Revision A — October 1991) D2R00481102
- *ENVOX Tutor*
  TU4.14:SW3151 (Original — June 1991) D2T00481002
- *Using ENVOX Configuration Software*
  UM4:14:SW3151 (Revision B — October 1991) D2U00481202

ENVOX P2.0

- *Installing ENVOX Software and Migrating PROFLEX Data*
  PN4.3:SW3151 (Revision C — October 1992) D3P00481302
- *ENVOX Technical Reference*
  TR1.0:SW3151 (Revision B — September 1992) D2R00481202
- *ENVOX Tutor*
  TU4.14:SW3151 (Original — June 1991) D2T00481002
- *Using ENVOX Configuration Software*
  UM4:14:SW3151 (Revision C — October 1992) D2U00481302

ENVOX P3.0

- *Installing ENVOX Software and Migrating PROFLEX Data*
  PN6.0:SW3151 (Revision D — December 1993) D3P00481402
- *ENVOX Technical Reference*
  TR1.0:SW3151 (Revision C — December 1993) D2R00481302
- *ENVOX Tutor*
  TU4.14:SW3151 (Original — June 1991) D2T00481002
- *Using ENVOX Configuration Software*
  UM6.1:SW3151 (Revision D — December 1993) D2U00481402

ENVOX P3.2

- *Installing Type SW3151 Configuration Software (VMS)*
  PN6.1:SW3151:VMS (Revision E — June 1994) D3P00481502
- *Installing Type SW3153 Configuration Software (HP-UX)*
  PN6.2:SW3153:HPX (Original — January 1995) D3P01381002
- *Installing Type SW3155 Configuration Software (ENVOX DEC AXP)*
  PN6.3:SW3155:AXP (Original — December 1994) D3P01391002
- *Installing Type SW3157 Configuration Software (AIX)*
  PN6.4:SW3157:AIX (Original — January 1995) D3P01411002
- *The System Manager's Guide to ENVOX Configuration Software*
  SM1.0:SW3151 (Revision A — June 1994) D3R00501102
- *ENVOX Technical Reference*
  TR1.0:SW3151 (Revision D — June 1994) D2R00481402

- *ENVOX Tutor*
  TU4.14:SW3151 (Original — June 1991) D2T00481002
- *Using ENVOX Configuration Software*
  UM6.1:SW3151 (Revision F — December 1994) D2U00481602

ENVOX P3.3

- *Installing ENVOX Configuration Software on DEC VAX and DEC AXP systems*
  PN6.1:SW3151:VMS (Original — June 1995) D3P01461002
- *Installing ENVOX Configuration Software on HP-UX Systems*
  PN6.2:SW3153:HPX (Revision A — June 1995) D3P01381102
- *Installing ENVOX Configuration Software on IBM AIX Systems*
  PN6.4:SW3157:AIX (Revision A — June 1995) D3P01411102
- *The System Manager's Guide to ENVOX Configuration Software*
  SM1.0:SW3151 (Revision C — June 1995) D3R00501302
- *ENVOX Technical Reference*
  TR1.0:SW3151 (Revision E — June 1995) D2R00481502
- *ENVOX Tutor*
  TU4.14:SW3151 (Original — June 1991) D2T00481002
- *Using ENVOX Configuration Software*
  UM6.1:SW3151 (Revision G — June 1995) D2U00481702

ENVOX P3.4

- *Installing and Upgrading ENVOX Configuration Software on DEC VAX and DEC AXP Systems*
  PN6.1:SW3151:VMS (Revision A — July 1996) D3P01461102
- *Installing and Upgrading ENVOX Configuration Software on HP-UX Systems*
  PN6.2:SW3153:HPX (Revision B — July 1996) D3P01381202
- *The System Manager's Guide to ENVOX Configuration Software*
  SM1.0:SW3151 (Revision D — July 1996) D3R00501402
- *The Technical Reference for ENVOX Configuration Software*
  TR1.0:SW3151 (Revision F — July 1996) D2R00481602
- *ENVOX Tutor*
  TU4.14:SW3151 (Original — June 1991) D2T00481002
- *Using ENVOX Configuration Software*
  UM6.1:SW3151 (Revision H — July 1996) D2U00481802

ENVOX P4.0

- *Installing and Upgrading ENVOX Configuration Software on DEC VAX and DEC AXP Systems*
  PN6.1:SW3151:VMS (Revision B — May 1998) D3P01461202
- *Installing and Upgrading ENVOX Configuration Software on HP-UX Systems*
  PN6.2:SW3153:HPX (Revision C — May 1998) D3P01381302
- *The System Manager's Guide to ENVOX Configuration Software*
  SM1.0:SW3151 (Revision E — May 1998) D3R00501502
- *The Technical Reference for ENVOX Configuration Software*
  TR1.0:SW3151 (Revision G — May 1998) D2R00481702
- *Using ENVOX Configuration Software*
  UM6.1:SW3151 (Revision J — May 1998) D2U00481902

Glossary

Algorithm
A set of logical steps to solve a problem or accomplish a task. A computer program contains one or more algorithms. Many configurations of PROVOX® systems also contain algorithms, particularly in operations, procedures, and function sequence tables.

Analog Input (AI)
A PROVOX point type. An analog input point receives a single analog value, the process variable.

Analog Output (AO)
A PROVOX point type. An analog output point generates a single analog value, the setpoint.

ASCII
1. A standard digital encoding scheme for data: a 7-bit binary code represents numbers, letters, symbols, and control codes. (The designation is an acronym for American Standard Code for Information Interchange.)
2. A PROVOX point type. An ASCII point contains a single real value, referenced by the setpoint attribute, and an 80-character ASCII string.

Audit Trail
A record of changes made to the ENVOX® database and to the system where the database resides. The record includes the type of change, when the change was made and who made it.

Batch
A specific quantity of a given product, produced in a single complete processing procedure.

CDV
Acronym: Comma Delimited Values

CHIP
Acronym: Computer/Highway Interface Package

Comma Delimited Values Format
An ASCII version of configuration data. The configuration data are in a specific order, separated by commas. CDV-format files result from both the export utility and the migrate utility.

Computer/Highway Interface Package (CHIP)
A PROVOX software product that allows user-written programs to interact with the PROVOX database. There are different CHIP versions, so that any of several types of computers can be the host computer.

Configuration (CONFIG)
Giving instructions and supplying reference information to the controllers and other devices that make up a process control instrumentation system. For some PROVOX systems,

configuration consists of responding to prompts in a series of console screen displays. For other PROVOX systems, configuration consists of creating and manipulating special ASCII text files.

Configuration Source File
A special ASCII text file that certain PROVOX systems use for configuration. Such a source file contains instructions and reference information for the controllers and other devices in the system.

Console Trend Display (CTD)
A PROVOX software product that collects process operating data for continuous control applications, then presents the data in a graphical trend format on the operator console. CTD layers on CHIP software.

Data
A general term that denotes any information an MPU can process.

Database
A collection of data stored in a systematic way so that searches and sorts are rapid and so that retrieval of items is simple.

Database Index (DBI)
A sequential integer by which a computer or other electronic device finds or keeps track of storage locations in a database.

Datatype
Determines the rules that entries for specific columns must follow.

DBI
Acronym: Database Index

DCL
Acronym: Digital Command Language

DDP
Acronym: Detail Display Parameter

Detail Display Parameter (DDP)
An item of information usually considered changeable or tunable for a control loop or point. Common examples are gain, rate, reset, and alarm trip points.

Device
A piece of electronic hardware that performs one or more prescribed functions.

Discrete Control Device (DCD)
A PROVOX point type. A DCD point encompasses as many as 8 discrete output and 16 discrete input channels into a single point. This makes possible 16 setpoints and matching input/output states. A common use for a DCD point is to control a discrete device that provides feedback about its status. If the point works with a DCD template, it can use different combinations of channels at different times during the execution of a process-control algorithm.

Discrete Input (DI)
A PROVOX point type. A DI point monitors a single discrete value of the process variable. That is, a DI point reads discrete data from a sensor or other system device.

Discrete Output (DO)
A PROVOX point type. A DO point generates a single discrete value referenced by the setpoint.

Download
To transfer configuration instructions and reference information from a configuration device to other devices of a process control system.

Dump Device
A tape or disk device to which a database and its associated transaction log can be copied to usually for backup purposes.

ED
Acronym: Emergency Download

Emergency Download
A download from a special download file while the SYBASE server is not available or if the ENVOX database is suspect.

Engineering Units (EU)
The units of measurement for percentage values of an analog process variable. Possible examples are gallons per hour, degrees Celsius, and pounds per square inch. The low (0 percent) and high (100 percent) engineering unit limits define the anticipated range of the variable. For example, low and high engineering-unit values of 50 and 1550 might define a range for degrees Fahrenheit. In this example, the EU span would be 1500 degrees; each percent of the EU span equals 15 degrees.

ENVOX® Software
A Fisher–Rosemount Systems' line of configuration products for PROVOX systems. The use of a third–party relational database is the principle distinguishing feature of configuration with ENVOX software.

ENVOXDB Database
The default user database which stores all configuration data and is created by ENVOX software upon ENVOX installation.

envox_readonly Database
An ENVOX system database containing reference data which is used by all of the ENVOX user databases in the system. The database is created by ENVOX software upon ENVOX installation.

Exception
A type of unsolicited reporting: the reporting device sends a new value only if the sample period has expired and the value has changed significantly since the last transmission.

Export
The extraction of ENVOX configuration data and placing it in CDV files.

Export Set
CDV files prepared for import to an ENVOX database.

FST
Acronym: Function Sequence Table

Function Sequence Table (FST)
A list of controller instructions to perform specific logical and mathematical operations, in a specific order. An FST resembles a sequence of programming subroutines, but defining an FST does not involve actual computer programming.

Group
A PROVOX point type. A group point controls as many as 8 DCD points so that they work in unison. A Group point uses a Group template which contains up to 16 setpoints for driving DCD point setpoints. the user defines group templates as part of system configuration.

Group Display
A set of 12 point templates that appear together on a PROVOX console screen, so that an operator can see at a glance the most important information about 12 different points. During system configuration, the user establishes the number of group displays, as well as which point faceplates make up each group display.

HART Instrument Locator Tool (HILT)
The HART Instrument Locator Tool (HILT) is a standalone utility run from the ENVOX command line. The utility gathers information about smart field devices connected to a PROVOX system through configured controllers. HILT stores the collected information in a Comma Delimited Values (CDV) file specified by the user so that Asset Management Solutions (AMS) can correctly address the instruments when the need arises.

HP-UX
Hewlett Packard's version of the UNIX operating system.

IAC
Acronym: *1.* (adjective): interactive. *2.* (noun) interactive controller

Import
The process of placing configuration data into an ENVOX database from CDV file format.

Information stream
The first stream in a CDV file.

Interactive Controller (IAC)
A regulatory controller, part of a PROVOX instrumentation system, that handles from one to eight control loops.

ISQL
SYBASE's stand-alone utility program for database queries.

IO or I/O
Acronym: Input/Output

Item
A general term for an ENVOX database entity. Items include device definitions, points, and templates.

LCP
Acronym: Logic Control Point

Load
A software-initiated action on a database. The term refers to the SYBASE database load function and not the Open Database load utilities embedded in ENVOX software.

Locks
A software-initiated action on a database table. The database software locks tables that are being affected by a process. The ENVOX administrator can determine which processes are locking which tables.

Logical Device
A designated area on a disk for databases and transaction logs. A database and its associated transaction log should be on separate physical devices, if possible. Logical devices are used on VMS systems, AIX systems, and some HP systems.

Logical Volume
Designated areas mapped by the operating system across one or more disks for databases and transaction logs.

Logic Control Point (LCP)
A PROVOX point type for an advanced batch or multifunction controller, such as a UOC or IFC. A role for a multivariable point, an LCP calls a programmed subroutine defined by an FST. As configured, the LCP activates the FST in a continuous loop, as a single shot program, or as required as part of a control loop.

Loop
1. A control loop.
2. A PROVOX point type. A loop point provides control for a continuous process. Loop points have many attributes, so can provide very sophisticated control. Bias or ratio factors often can be added to loop points.

Master Database
The central database which holds details of all of the other databases. It is created by SYBASE when SYBASE is installed.

Migrate
The process of converting PROFLEX configuration data into CDV file format, from which the data can be imported into an ENVOX database

Model Database
The database which is used as the basis for a new database. It is created by SYBASE when SYBASE is installed.

Null
Having no assigned value. In a CDV file, null is represented as two commas with zero or more spaces in between.

OpenVMS
A mark of Digital Equipment Corporation for one of the firm's computer operating systems; an acronym for Open Virtual Memory System. OpenVMS provides an operating environment for technical applications of VAX computers and certain other computer systems.

Operand
1. In the language editor, a value that modifies or qualifies a function.
2. In ASCII configuration source files, an expression, a simple operand, a phrase list, or an operand list.

Operation
[See Unit Operation]

Operator Workplace Console (WPCON)
The PROVOX console products that are used in the PROVOX operator workplace concept. The consoles use a global database configuration and have high-resolution graphics, ergonomically designed keyboards, and color printers.

PDF
Acronym: PROVOX Display Format

Plant Management Area (PMA)
A collection of plant process areas (PPAs). A PMA controls the console point reporting load, and indirectly, central processing unit (CPU) loading.

Plant Process Area (PPA)
Within a process-control system, a collection of equipment that uses a common alarm strategy.

PMA
Acronym: Plant Management Area

Point
A set of process-control parameters and data. The makeup and structure of each point depends on its role in collecting and reporting data and the type of device in which the point resides. Points are the most important logical units of a process control system; the number of points is a measure of the system's size and sophistication.

Primary Control Algorithm (PCA)
The principle control equation of a continuos loop in a PROVOX system. The PCA type and station (STA) type defined during configuration determine the main functionality of a point.

PPA
Acronym: Plant Process Area

Process
A user-initiated action that affects or accesses a database. Each process represents one connection to the server. An ENVOX user typically has three to five processes active at once. Adding a point, generating files, and downloading files are examples of processes. The ENVOX administrator can determine which users have initiated which processes and can also kill processes.

Process Variable (PV)
In process control, a measurable quality or quantity whose change can cause other changes in the process, or make such changes possible. Common process variables are temperature, percent full, and rate of flow. The term *measured variable* is a synonym.

PROFLEX® Software
A Fisher-Rosemount Systems' line of configuration software products for PROVOX systems. ASCII text files are the principal distinguishing feature of configuration through a PROFLEX device.

PROVOX® Process Control Products
The Fisher-Rosemount Systems' line of process control products used in PROVOX process measurement systems. It is a distributed control and data acquisition system that communicates over a data highway.

PROVOX Display Format (PDF)
ASCII-based format used for operator screen displays on PROVOX system consoles.

PROVUE® Console
The Fisher-Rosemount Systems' line of console products for PROVOX systems that use a global database configuration and have high-resolution graphics, ergonomically designed keyboards, and color printers.

Register
A memory location for temporary storage of a value.

SAM
Acronym: System Administration Manager (The HP-UX system administration utility)

Setpoint (SP)
An input variable that contains the desired value for a process variable. Control loop algorithms compare the process variable with the setpoint, to determine an appropriate output.

Signal Value Analog (SVA)
The analog floating point portion of the accumulator register in a controller FST.

Signal Value Discrete (SVD)
The discrete portion of the accumulator register in a controller FST.

Signal Value Percent (SVP)
The analog percentage portion of the accumulator register in a controller FST.

Streams
A series of data fields separated by commas (CDV format), representing a configuration item. Streams begin with a keyword called an identifying field. This keyword identifies the stream type (for example, UOC_GROUP). Streams end with the keyword END.

Substreams
A series of data fields within a stream, separated by commas (CDV format) that begins with a keyword, and continues until the next keyword.

Sybsystemprocs Database
Used in SYBASE SYSTEM 10. It is the database which holds stored procedures that were previously held in the master database. It is created by SYBASE when SYBASE is installed.

Tag
A unique identifying mnemonic or label for a controller or point of a process control system.

Target Device
Any system device that receives point information, commonly a display device that shows the information to an operator.

Tempdb Database
The database in which all temporary tables are created. It is created by SYBASE when SYBASE is installed.

Template
A pattern for valid relationships among elements of a control strategy, defined without specifying particular elements. A template permits different specific elements to use the relationships at different times during the execution of the control algorithm. The user establishes templates as part of system configuration. [See Alias Template, DCD Template, and Group Template.]

Transaction Log
A log file maintained by the dataserver of all modifications to the database. As additions, updates, and deletions are performed on data, these changes are written to the transaction log. Once the changes have been accepted by the user process and the transaction is complete, the changes are applied to the appropriate data file in the database. If processing errors or system failures occur, transactions which have not properly completed are not applied to the data file, and the memory cache copy of the affected data is restored from the data file. The transaction log is *not* the Audit Trail log, but rather contains SYBASE-only information.

Tuning
The adjustment of control terms or parameter values to produce a desired control effect.

Tuning Parameter
A parameter adjustable without reconfiguration; an operator adjusts such a parameter to alter control effects. Common examples are gain, rate, reset, and alarm trip points. Such parameters appear in detail displays.

Unit
1. A defined group of specific process equipment that processes a particular batch. For control purposes, such a unit is one entity.
2. A PROVOX point type. A unit point has many attributes, enabling it to control the execution of a unit operation.

Unit Operation
In batch control, a list of controller instructions to perform specific mathematical and logical functions, as part of a time-and-event sequence for a defined set of equipment (the unit). A unit operation consists of phases, each of which is a set of related steps. Each step is an elemental control action.

UOC
Acronym: Unit Operations Controller

Upload
The movement of configuration instructions from system devices to a configuration device or interface. An upload lets the current values of parameters be incorporated into new configuration source files, eliminating specific user entry. Uploads also may be used to verify that configuration instructions are correct.

WPCON
Acronym: Workplace Console. this acronym is used in ENVOX forms. See definition for an Operator Workplace Console.

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