# Oracle® CDD/Repository

## Installing Oracle CDD/Repository

Release 7.3 for HPE OpenVMS Industry Standard 64 for Integrity
Servers and
OpenVMS Alpha operating systems

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**ORACLE**®

Installing Oracle CDD/Repository Release 7.3 for HPE OpenVMS Industry Standard 64 for Integrity Servers and OpenVMS Alpha operating systems

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# Preface

This guide describes how to install Oracle CDD/Repository release 7.3 on an OpenVMS Alpha or HPE OpenVMS Industry Standard 64 for Integrity Servers system running the OpenVMS operating system.

## Intended Audience

This document is intended for the system manager who will install the Oracle CDD/Repository software product.

## Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

## Document Structure

This document contains three chapters and two appendixes.

- Chapter 1 describes the preparations and requirements necessary for installing Oracle CDD/Repository.

- Chapter 2 provides a step-by-step description of the installation procedure and information on error recovery.

- Chapter 3 describes tasks that you may need to perform after you install Oracle CDD/Repository.

- Appendix A contains a sample installation of Oracle CDD/Repository release 7.3.

- Appendix B lists the files that are installed and the logical names that are defined during the Oracle CDD/Repository installation.

## Related Documents

For more information on Oracle CDD/Repository, see the other guides in this documentation set, including:

- Using Oracle CDD/Repository on OpenVMS Systems

- Oracle CDD/Repository CDO Reference Manual

- Oracle CDD/Repository Architecture Manual

- Oracle CDD/Repository Callable Interface Manual

- Oracle CDD/Repository Information Model Volume I

- Oracle CDD/Repository Information Model Volume II

A glossary of terms is available online in CDO Help:

```
$ HELP CDD_REPOSITORY GLOSSARY
```

## Conventions

The following conventions are also used in this guide:

| | |
|---|---|
| word | A lowercase word in a format example indicates a syntax element that you supply. |
| *n* | A lowercase italic *n* indicates the generic use of a number. For example, 19*nn* indicates a 4-digit number in which the last 2 digits are unknown. |
| [ ] | In format descriptions, brackets enclose optional clauses from which you can choose one or none. In a prompt, brackets indicate that the enclosed item is the default response. For example, [y] mans the default response is yes. |
| { } | Braces enclose clauses from which you must choose one alternative. |
| Ctrl/x | This symbol tells you to press the Ctrl (control) key and hold it down while pressing a letter key. |
| $ | A dollar sign represents the OpenVMS DCL system prompt. |
| . . . | In format descriptions, horizontal ellipses indicate one of the following: |

- An item that is repeated

- An omission, such as additional optional arguments

- Additional parameters, values, or other information that you can enter

Vertical ellipsis indicate the omission of information from an example or command format. The information is omitted because it is not important to the topic being discussed.

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## References to Products

The Oracle CDD/Repository documentation often refers to related products by their abbreviated names:

- Oracle CDD/Repository software is referred to as CDD/Repository or the dictionary. (Previous to Version 5.0, CDD/Repository was called CDD/Plus.)

- HPE OpenVMS Industry Standard 64 for Integrity Servers is referred to as OpenVMS I64.

- OpenVMS refers to both the OpenVMS I64 and OpenVMS Alpha operating systems.

- Hewlett-Packard Enterprise Company is referred to as HPE.

- VMS Software Inc. is referred to as VSI.

- HPE DATATRIEVE software is referred to as DATATRIEVE.

- HPE Language-Sensitive Editor for OpenVMS software is referred to as LSE.

# 1

# Preparing to Install Oracle CDD/Repository

This chapter describes the preparations and requirements that are necessary before you install Oracle CDD/Repository.

Oracle CDD/Repository provides online release notes. You should read the release notes before proceeding with the installation. See Section 2.1.4 for information on selecting the release notes option.

## 1.1 Required Operating System Components

Oracle CDD/Repository release 7.3 on OpenVMS Alpha systems requires OpenVMS Alpha version 8.4 or later.

Oracle CDD/Repository release 7.3 on OpenVMS I64 systems requires OpenVMS version 8.4 or later.

The OpenVMS operating system comes with a variety of support options or classes. Classes include such features as networking and RMS journaling. To use Oracle CDD/Repository, your system must be running a version of OpenVMS that includes the following classes:

- OpenVMS required save set
- Network support
- Programming support
- System programming support
- Utilities

## 1.2 Oracle Rdb Requirements

Oracle CDD/Repository release 7.3 requires Oracle Rdb release 7.3 or later.

You must install Oracle Rdb before you install Oracle CDD/Repository.

If you are installing Oracle CODASYL DBMS and you intend to use it with Oracle CDD/Repository, install Oracle CODASYL DBMS after you install Oracle CDD/Repository.

_____ **Caution** _____

CDD$COMPATIBILITY can only be used by one version of Oracle Rdb and does not support the use of multiple versions of Oracle Rdb.

_____

You should specify the lowest version of Oracle Rdb that is installed before you install Oracle CDD/Repository. Otherwise, if after the installation you define a repository and specify a version of Oracle Rdb that is *lower* than the version with which the template repository was created, you will see "cannot convert" error

messages, and the DEFINE REPOSITORY command will continue without using the template repository. To specify the version of Oracle Rdb, use the following command:

```
$ @SYS$LIBRARY:RDB$SETVER nn
```

Replace *nn* with the version number of Oracle Rdb.

## 1.3 DEC Distributed Transaction Manager Requirements

Oracle CDD/Repository release 7.3 requires DEC Distributed Transaction Manager (DECdtm) services for all transactions.

### 1.3.1 Enabling DECdtm Services for Oracle CDD/Repository

You must create a DECdtm transaction log for each node in your OpenVMS cluster environment, and you must define SYS$JOURNAL as a search list of all directories that contain DECdtm transaction logs.

If you do not have a DECdtm transaction log, you will receive the following error messages when you try to install Oracle CDD/Repository:

```
-CDO-E-ERRSTARTSESS, error starting an Oracle CDD/Repository session
-CDD-F-STARTSESS, error starting session
-SYSTEM-F-ABORT, abort
```

To create a transaction log, invoke the OpenVMS Log Manager Control Program (LMCP) utility. Then use the LMCP CREATE LOG command in the following format:

```
$ RUN SYS$SYSTEM:LMCP
LMCP>CREATE LOG /SIZE=nnnn -
_LMCP>device:[dirspec]SYSTEM$node.LM$JOURNAL/OWNER=SYSTEM
LMCP> EXIT
```

In this example, *nnnn* is the size of the transaction log in blocks. By default, the size of the transaction log is 4000 blocks. The *device:[dirspec]* is the full specification of the directory in which you want to create the transaction log, and *node* is the name of the node.

For detailed information on creating transaction logs and managing DECdtm services, see the OpenVMS documentation for system managers.

Oracle CDD/Repository uses DECdtm to handle its two-phase commit actions. DECdtm startup is automatic as long as the logical name SYS$DECDTM_INHIBIT is not defined for your system. If DECdtm is not started, a "File spec cannot be parsed" or a %SYSTEM-F-ABORT error occurs.

To prevent these errors, perform the following steps:

1. Log in to any node in the OpenVMS cluster.

2. Enable OPER privilege.

3. Check that the system executive logical SYS$DECDTM_INHIBIT is not defined. If it is defined, regardless of its translation, deassign it using the OpenVMS System Management (SYSMAN) utility as shown in the following example:

```
$ SHOW LOGICAL SYS$DECDTM_INHIBIT
  "SYS$DECDTM_INHIBIT" = "YES" (LNM$SYSTEM_TABLE)
$ RUN SYS$SYSTEM:SYSMAN
SYSMAN> SET ENVIRONMENT/CLUSTER
SYSMAN> SET PROFILE/PRIVILEGES=SYSNAM
SYSMAN> DO DEASSIGN/SYSTEM/EXECUTIVE SYS$DECDTM_INHIBIT
```

4.  Execute the DECdtm startup procedure, which defines the SYS$JOURNAL
    logical name.

    ```
    SYSMAN>DO @SYS$STARTUP:DECDTM$STARTUP.COM FULL
    SYSMAN>EXIT
    ```

5.  Edit the SYS$STARTUP:SYLOGICALS.COM command procedure to delete
    the SYS$DECDTM_INHIBIT definition. This ensures that DECdtm services
    start automatically when you boot the system.

## 1.4 HPE LSE

If you plan to use the HPE Language-Sensitive Editor (LSE) with the Data
Definition Language utility (CDDL), you must install LSE before installing
Oracle CDD/Repository release 7.3.

Some sites may experience slow startup performance after installing LSE
version 4.1-10 or after installing Oracle CDD/Repository. The cause of the slow
startup may be that duplicate PDF keywords have been stored in the system
environment file. You can tell if this is true for your system by using the LSE
SHOW KEYWORD * command. If you see duplicate PDF keywords, then your
system exhibits the problem.

To solve the problem, start LSE with the system environment file by using the
following command line qualifiers:

```
$ LSE /NOSYSTEM_ENVIRONMENT -
/ENVIRONMENT=SYS$LIBRARY:LSE$SYSTEM_ENVIRONMENT
```

Issue the LSE commands DELETE KEYWORD * and SAVE
ENVIRONMENT/ALL *filename*. If you plan to use PDF keywords, redefine
those keywords before saving the environment file. It is recommended that you
replace the SYS$LIBRARY:LSE$SYSTEM_ENVIRONMENT.ENV environment
file with a newly created environment file.

## 1.5 Verifying and Backing Up Repositories

Before you install Oracle CDD/Repository release 7.3, you should verify and
back up all repositories on your system. This section describes how to locate
repositories, verify them, and prepare for a backup operation.

### 1.5.1 Locating Repositories

Repository databases can exist on any storage device on your system. To locate
the repositories on your system, enter the DCL DIRECTORY command for the
CDD$DATABASE.RDB relational database file:

```
$ DIR disk:[000000...]CDD$DATABASE.RDB
```

An anchor specifies the OpenVMS directory where the repository hierarchy is
stored. The anchor can consist of node, device, and directory components. It can
also be described in a logical name format, for example, CDD$COMPATIBILITY.
The anchor directory contains the CDD$DATABASE.RDB relational database file,
as well as several files and subdirectories that make up the repository hierarchy.

To locate linked repositories, use the CDO SHOW REPOSITORIES command:

```
$ REPOSITORY OPERATOR
CDO> SET DEFAULT disk:[anchor-dir]
CDO> SHOW REPOSITORIES
```

### 1.5.2  Determining the Current Version

To determine the version number of the currently installed release of Oracle CDD/Repository, enter the DCL ANALYZE/IMAGE command:

```
$ ANALYZE/IMAGE/SELECT=IDENTIFICATION SYS$SHARE:CDDSHR.EXE
```

The contents of the image file will scroll on your screen; look for the image file identification information, which displays the version number. For example:

```
    .
    .
    .
"CDD V7.3-000"
    .
    .
    .
```

Or, to display the version number of the currently installed release from within the CDO utility, start CDO by entering the DCL REPOSITORY command, and enter the CDO SHOW VERSION command:

```
$ REPOSITORY OPERATOR
CDO> SHOW VERSION
```

### 1.5.3  Verifying the Repository

To verify the structural condition of a repository, perform the following steps:

1. Run the Oracle CDD/Repository startup procedure:

   ```
   $ @SYS$STARTUP:CDDSTRTUP
   ```

2. Start the CDO utility by entering the DCL REPOSITORY command:

   ```
   $ REPOSITORY OPERATOR
   ```

3. At the CDO prompt, enter the CDO VERIFY/ALL/NOFIX command:

   ```
   CDO> VERIFY/ALL/NOFIX disk:[anchor-dir]
   CDO> EXIT
   ```

   In some cases, it may be necessary to run the VERIFY command more than once. If an error occurs after you use the /NOFIX qualifier, then run VERIFY/ALL/FIX to ensure that the repository is completely verified.

   _____ **Note** _____

   The VERIFY/ALL command was changed in release 6.1 to make /NOFIX the default. Use the /NOFIX qualifier when you enter VERIFY/ALL to determine if there is corruption. Only use /FIX if the results of /NOFIX make it necessary. You must have SYSPRV or BYPASS privilege to execute the VERIFY/FIX command.

   _____

4. Review the results. If problems exist, correct them. For example, you may need to upgrade the repository if you have recently installed a new version of Oracle Rdb.

Most other errors can be corrected with the CDO VERIFY/ALL/FIX command:

a. Confirm whether or not the repository you are verifying is linked to other repositories. See Section 1.5.1 for information on how to locate linked repositories.

b. Enter the CDO command VERIFY/ALL/FIX for each repository, including your CDD$COMPATIBILITY repository. Wait for each VERIFY command to complete before entering the next command.

   Do not enter concurrent VERIFY commands against linked repositories. By default, VERIFY locks the repository it is verifying. A concurrent VERIFY will report errors when it attempts to access a linked repository that is locked.

c. After each VERIFY/ALL/FIX command completes, you can enter a VERIFY/ALL/NOFIX command to verify the structural condition of the repository. Again, wait for each VERIFY command to complete before entering the next command.

### 1.5.4 Before You Begin a Backup Operation

Before you install Oracle CDD/Repository release 7.3, back up all your repositories. When possible, back up repositories during a time when your system is used least.

Prohibit the use of the repository to other users:

1. Notify users that you are planning to install a new version of Oracle CDD/Repository and remind them not to use Help. For example:

   ```
   $ REPLY/BELL/ALL "Installing Oracle CDD/Repository - Do not use help."
   ```

   Broadcasting a message requires OPER (operator) privilege.

2. Check that no one is accessing the repository or database by entering the following RMU command on each cluster for each repository you are about to back up:

   ```
   $ RMU/DUMP/USERS disk:[anchor-dir]CDD$DATABASE.RDB
   ```

3. Stop access to the repository by starting the shutdown procedure, SYS$STARTUP:CDDSHUTDOWN.COM. This prevents users from starting up Oracle CDD/Repository. If you have distributed repositories (linked repositories that share data), prohibit the use of each repository. Repeat this command for each linked repository on other systems. Once Oracle CDD/Repository is shut down, it is down for all repositories.

## 1.6 Regular Repository Backup

To perform a full backup of your repository, perform the following steps:

1. Back up the non-database components (your file and directory system) by using the OpenVMS BACKUP command. Do not create the backup file (.BCK) in the OpenVMS directory that contains the repository you are backing up. Either specify a different directory for the .BCK file, or set default to a different directory, then perform the backup operation.

   ```
   $ BACKUP/VERIFY/EXCLUDE=(.RDA,.RDB,.SNP) -
   _$disk:[anchor-dir...] disk:[different-dir]filename.BCK/SAVE
   ```

If you are backing up more than one repository, it is important to give the backup files meaningful names.

2. Back up your repository database component by using the RMU/BACKUP command. Do not create the backup file (.RBF) in the OpenVMS directory that contains the repository you are backing up. Either specify a different directory in the RMU/BACKUP command, or set default to a different directory, then perform the backup operation.

```
$ RMU/BACKUP disk:[anchor-dir]CDD$DATABASE -
_$ disk:[different-dir]filename.RBF
```

_____ **Caution** _____

Do not use the CDO VERIFY/REBUILD_DIRECTORY command with the RMU/BACKUP and RMU/RESTORE commands or the DCL COPY command to perform a repository backup. Use the OpenVMS Backup utility (BACKUP) and the RMU/BACKUP command, as described in these steps. Combining the OpenVMS and the RMU/BACKUP commands is critical for a valid repository backup.

_____

3. If you have linked repositories, back up each repository. Back up linked repositories at the same time to avoid inconsistencies between repositories.

If you are using Oracle CDD/Repository for configuration management, you may want to perform an image backup operation rather than a regular backup operation. An image backup operation backs up the entire contents of the device that contains your repository. A regular backup operation makes extra copies of any files (binaries) that are opened in user contexts. As a result, more disk space is required during the restore operation. See the OpenVMS Backup utility documentation for more information on performing an image backup operation.

If all the components of the CDD$DATABASE files and the .RUJ files are not all on the same disk as the image backup, you must also perform the RMU/BACKUP operation.

## 1.7  Recovering from RMU Backup Errors

If an error occurs during the backup procedure, you may see one of the following messages:

```
%RDO-F-DELBACKUP, EXPORT errors, interchange file deleted
-RDMS-F-NOMONITOR, database monitor is not running
```

```
%RDO-F-DELBACKUP, EXPORT errors, interchange file deleted
-RDB-E-UNAVAILABLE, Oracle Rdb is not available on your system
```

If either message is displayed, you must restart the Oracle Rdb monitor by entering the following command:

```
$ @SYS$STARTUP:RMONSTARTnn
```

In this command, *nn* is the version number of Oracle Rdb.

Also, make sure you have specified the version of Oracle Rdb that is required to access the repository. To do this, specify the version of Oracle Rdb with which the repository was created, as follows:

```
$ @SYS$LIBRARY:RDB$SETVER nn
```

Replace *nn* with the version number of Oracle Rdb.

You should periodically perform regular backups of each repository under your control, as outlined in Section 1.6.

## 1.8 Running the Startup Procedure

If your system has a previous version of Oracle CDD/Repository installed, perform the following steps:

1. Run the Oracle CDD/Repository startup procedure to define the Oracle CDD/Repository logical names by entering the following command:

   ```
   $ @SYS$STARTUP:CDDSTRTUP
   ```

   You can skip this step if Oracle CDD/Repository is not currently installed.

2. The Oracle Rdb monitor must be running when you install Oracle CDD/Repository. Be sure to start the Oracle Rdb monitor for the correct version:

   ```
   $ @SYS$STARTUP:RMONSTART nn
   ```

   In the preceding command, *nn* is the version number of Oracle Rdb.

## 1.9 Checking Access Privileges for Previous Versions

If you have previously installed Oracle CDD/Repository on your system, the installer's account must have the following access privileges at the CDD$TOP directory:

- EXTEND (X)
- GLOBAL_DELETE (G)
- PASS_THRU (P) or CONTROL (C)

To check the access privileges, enter the following Dictionary Management Utility (DMU) commands:

```
$ RUN SYS$SYSTEM:DMU
DMU> LIST/PROTECTION CDD$TOP
[*,*], Username: "SHANE"
Grant - EGPX, Deny - none, Banish - none
[234,234], Username: GUEST
Grant - none, Deny - CDEFGHMPRSUWX, Banish - none
[*,*], Username: "LAWNER"
Grant - CDHPSX, Deny - none, Banish - none
```

For more information about DMU access privileges, see the DMU HELP SPECIFY PRIVILEGES command.

The installer's account must have CONTROL privilege for the directory CDD$TOP.CDD$EXAMPLES, which is created by the Installation Verification Procedure (IVP). If CDD$EXAMPLES does not exist, you need CONTROL privilege at CDD$TOP.

Issue this command to assign or change privileges:

```
DMU> SET PROTECTION/EDIT CDD$TOP
```

## 1.10 Privileges

To install Oracle CDD/Repository or to run the IVP, you must be logged in to an account that has either SETPRV or the privileges shown in Table 1-1 enabled.

**Table 1–1  Required User Privileges**

| Privilege Name | To Install Oracle CDD/Repository | To Run the IVP |
|---|---|---|
| CMKRNL | X | X |
| EXQUOTA | X | |
| NETMBX | X | |
| OPER | X | |
| SYSNAM | X | X |
| SYSPRV | X | X |
| TMPMBX | X | |
| WORLD | X | |
| PRMGBL | | X |
| SYSGBL | | X |
| SYSLCK | | X |

VMSINSTAL turns off BYPASS privilege at the start of the installation.

To check the default privileges of the installation account, log in to the installation account (if you have not already done so) and enter the following command:

```
$ SHOW PROCESS/PRIVILEGES
```

If the installation account has either SETPRV or the privileges in Table 1–1 enabled, you can proceed with the installation.

If the installation account has neither SETPRV nor the other required privileges, use one of the following options:

- Ask your system manager to use the OpenVMS Authorize utility (AUTHORIZE) to modify the default privileges of the installation account to include either SETPRV or the privileges in Table 1-1.

- Run AUTHORIZE and make the changes yourself, if your account has SYSPRV.

You must log out and log in again for the changes that you made using AUTHORIZE to take effect.

## 1.11 Disk Space Requirements

Oracle CDD/Repository requirements for free disk space are different during installation and after installation.

To determine the number of free disk blocks on the current system disk, enter the following command:

```
$ SHOW DEVICE SYS$SYSDEVICE
```

The CDD$COMPATIBILITY, CDD$TEMPLATE, CDD$TEMPLATEDB, and CDD$DICTIONARY directories may be located on a device other than the system disk. Verify that these directories have enough disk space on the appropriate devices. Table 1–2 and Table 1–3 show the number of blocks required for each of these directories.

If you want to run the IVP, you will need an additional 15,000 blocks on any available device to create an IVP repository.

**Table 1–2  Disk Space Requirements**

| Oracle CDD/Repository File Name | System Logical Name | Blocks Required |
|---|---|---|
| Root dictionary | CDD$DICTIONARY | 150 |
| Template directory files | CDD$TEMPLATE | 20 |
| Template database files | CDD$TEMPLATEDB | 8000 |

**Table 1–3  Disk Space Requirements for CDD$COMPATIBILITY**

| Platform | Oracle CDD/Repository File Name | System Logical Name | Blocks Required |
|---|---|---|---|
| OpenVMS Alpha and OpenVMS I64 | Compatibility dictionary | CDD$COMPATIBILITY | 13000 |

In addition to the amounts specified in Table 1-2 and Table 1-3, the Oracle CDD/Repository installation requires the following on your system disk:

- Approximately 60,000 additional blocks are required on OpenVMS Alpha systems.
- Approximately 90,000 additional blocks are required on OpenVMS I64 systems.

If you require all the locations listed in Table 1-2 and Table 1-3, you need the following:

- Approximately 82,000 blocks on OpenVMS Alpha systems.
- Approximately 105,000 blocks on OpenVMS I64 systems.

## 1.12  Process Account Quotas

Table 1–4 lists the process account quotas that are required for the installation account.

**Table 1–4  Process Account Quotas for the Installation Account**

| Account Quota | Value |
|---|---|
| ASTLM | 24 |
| BIOLM | 80 |
| BYTLM | 32768 |
| DIOLM | 40 |

**Table 1–4 (Cont.)   Process Account Quotas for the Installation Account**

| Account Quota | Value |
| --- | --- |
| ENQLM | 2000 |
| FILLM | 100 |
| PGFLQUOTA | 50000 |
| PRCLM | 10 |
| WSDEFAULT | 256 |
| WSQUOTA | 256 |
| WSEXTENT | 512 |

See Table 3–1 for the minimum requirements for individual user account quotas to run Oracle CDD/Repository.

User account quotas are stored in the SYSUAF.DAT file. Use the OpenVMS Authorize utility (AUTHORIZE) to verify and change user account quotas. First, set your directory to SYS$SYSTEM, then run AUTHORIZE:

```
$ SET DEFAULT SYS$SYSTEM
$ RUN AUTHORIZE
UAF>
```

To change a quota, enter the MODIFY command. The following example changes the FILLM quota for the SMITH account and then exits from the utility:

```
UAF> MODIFY SMITH /FILLM=100
UAF> EXIT
```

After you exit from the utility, the system displays messages indicating whether changes were made. You must log out and log in again for the new quotas to take effect.

## 1.13  Checking System Parameter Values

Installing Oracle CDD/Repository requires certain system parameter values. Table 1–5 and Table 1–6 list these minimum required values.

**Table 1–5   Minimum Required System Parameter Values**

| System Parameter | Minimum Value |
| --- | --- |
| CLISYMTBL | 250 pages |
| CTLPAGES | 32 pages |
| GBLPAGFIL | 2048 pages |
| GBLSECTIONS | 25 free sections |
| NPAGEDYN | 400000 bytes |
| PAGEDYN | 890000 bytes |
| VIRTUALPAGECNT | 50000 pages[1] |

[1]The value of VIRTUALPAGECNT must be higher than the largest PGFLQUOTA value on the system. Performing a minor upgrade using CDO CONVERT/REPOSITORY requires a minimum VIRTUALPAGECNT value of 200,000.

**Table 1–6  Minimum Required GBLPAGES**

| Platform | Minimum GBLPAGES Value |
|---|---|
| OpenVMS Alpha and OpenVMS I64 | 15600 free pages |

The values listed for GBLPAGES and GBLSECTIONS represent the number of free global pages and global sections required for the installation, not the total number you need to run your system and other software.

Depending on the programs and applications running at your site, you might need higher values for some parameters.

The installation requires higher values for these parameters than may be needed for everyday use of Oracle CDD/Repository. Also, running the shutdown procedure will free global sections and pages.

```
$ @SYS$STARTUP:CDDSHUTDOWN
```

To check the system parameter values, enter the following command at the DCL prompt to invoke the OpenVMS System Generation utility (SYSGEN):

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN>
```

At the SYSGEN prompt, enter the SHOW command to display the value of a system parameter. For example, to display the GBLPAGFIL value, enter the following command:

```
SYSGEN> SHOW GBLPAGFIL
```

The value that is displayed should equal or exceed the system parameter value listed in Table 1–5.

After checking the parameters with the SHOW command, enter the EXIT command at the SYSGEN prompt to return to DCL level ($).

## 1.13.1  Calculating GBLSECTIONS and GBLPAGES Values

To install and run Oracle CDD/Repository, you must have sufficient free global sections and free contiguous global pages.

To check the number of free global sections and free contiguous global pages on your system, use the WRITE command with the F$GETSYI lexical function. The following example shows how to display this information at your terminal (the default for SYS$OUTPUT):

```
$ WRITE SYS$OUTPUT F$GETSYI("CONTIG_GBLPAGES")
15848
$ WRITE SYS$OUTPUT F$GETSYI("FREE_GBLSECTS")
24
```

If the GBLSECTIONS value is less than the value in Table 1–5, or the GBLPAGES value is less than the value in Table 1–6, you must increase the system parameter value. To increase the GBLSECTIONS and GBLPAGES values, use the AUTOGEN procedure.

### 1.13.2  Changing System Parameter Values with AUTOGEN

To change system parameters with AUTOGEN, edit the following file:

```
SYS$SYSTEM:MODPARAMS.DAT
```

To add a new parameter, add a line to the file that includes both the name of the parameter and its value. For example:

```
GBLPAGFIL = 12200
```

To modify incremental parameters such as GBLPAGES and GBLSECTIONS, use ADD_. The following example increases the GBLPAGES value by 2000:

```
ADD_GBLPAGES = 2000
```

When you set the page file size, do not use a value that exceeds the amount of page file space available on the system.

After you make the changes, exit from the editor, and execute AUTOGEN to recalculate your system parameters. The following command recalculates your system parameters and reboots the system:

```
$ @SYS$UPDATE:AUTOGEN GETDATA REBOOT
```

When you specify REBOOT, AUTOGEN performs an automatic system shutdown and then restarts the system. Any users logged in to the system are immediately disconnected during the shutdown.

The AUTOGEN procedure automatically adjusts some of the SYSGEN parameters based on the consumption of resources since the last startup. If you do not want to take advantage of this automatic adjustment, include the NOFEEDBACK qualifier on the AUTOGEN command line.

For more information about AUTOGEN, see the OpenVMS documentation.

### 1.13.3  Setting Dynamic System Parameter Values

Use the OpenVMS System Generation utility (SYSGEN) to set the dynamic system parameters. When you set the dynamic system parameters with the SYSGEN WRITE ACTIVE command, they become active immediately. You do not need to reboot your system; rebooting returns the values to their previous settings.
After you change the dynamic parameter values, complete the installation before rebooting the system. After you complete the installation, reset the dynamic parameters to their previous values or let them be automatically reset the next time you restart your system.

If the dynamic parameter values on your system are less than the values listed in Table 1–5 and Table 1–6, use the following series of commands to change the values. This example changes the CLISYMTBL value to 250.

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> USE ACTIVE
SYSGEN> SET CLISYMTBL 250
SYSGEN> WRITE ACTIVE
SYSGEN> EXIT
```

## 1.14 VMSINSTAL Requirements

When you invoke VMSINSTAL, it checks the following:

- Whether or not you are logged in to a privileged account

- Whether or not you have adequate quotas for installation

- Whether or not DECnet is running

- Whether or not any users are logged in to the system

- Whether or not the installation account has minimum quotas

If VMSINSTAL detects any problems during the installation, it notifies you and asks if you want to continue the installation. In some instances, you can enter YES to continue. To stop the installation process and correct the situation, enter NO or press the Return key. Then correct the problem and restart the installation.

## 1.15 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Back up your system disk before installing any software. Use the backup procedures that are established at your site. For more information about performing a system disk backup, see the OpenVMS documentation on the Backup utility and system maintenance.

# 2

# Installing Oracle CDD/Repository

This chapter provides a step-by-step description of the installation procedure and information on error recovery.

## 2.1 Installation Procedure

The installation procedure consists of a series of questions and informational messages. See Appendix A for a sample of the installation on an OpenVMS Alpha system.

To end the installation procedure, press Ctrl/Y at any time before you see the following message:

```
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
```

When you press Ctrl/Y before this message, the procedure deletes all files created up to that point and exits. You can then restart the installation.

### 2.1.1 Invoking VMSINSTAL

Log in to a privileged account, and enter the following command to start the VMSINSTAL command procedure:

```
@SYS$UPDATE:VMSINSTAL saveset-name device-name option-list
```

The elements you specify when you start VMSINSTAL are as follows:

**saveset-name**
The installation name for the component.

If you do not provide the saveset name when you invoke VMSINSTAL, it will prompt you for this information later in the procedure.

The saveset name for this version of Oracle CDD/Repository is CDDV73000I073 for OpenVMS I64 systems and CDDV73000A073 for OpenVMS Alpha systems.

**device-name**
The name of the device on which you plan to mount the media and the directory containing the Oracle CDD/Repository save set.

If you do not provide the device name when you invoke VMSINSTAL, it will prompt you for this information later in the installation procedure.

**option-list**
The word OPTIONS, followed by one or more of the optional designators (G, L, N), explained in the following list:

- Get save-set option (G)

  Lets you temporarily store product save sets on a magnetic tape or in a disk directory.

- File log option (L)

Logs all activity to the terminal during installation.

- Display or print release notes option (N) Indicates that you want to see the question on release notes. If you do not include the N option, VMSINSTAL does not prompt you during the installation procedure.

  Be sure to include OPTIONS N on the VMSINSTAL command line to access the release notes during the installation. You should review the release notes before proceeding with the installation because they may contain additional information about the installation.

  If you are restarting the installation and have already reviewed the release notes, you do not need to specify the N option.

If you specify more than one option, separate the options with commas, such as:

```
OPTIONS L,N
```

When you invoke VMSINSTAL, the installation procedure checks if you have the quota values shown in Table 1-4. It also checks if you are logged in to a privileged account and if DECnet is running.

If VMSINSTAL detects any problems during the installation, it notifies you and asks if you want to continue the installation.

For example, if users are logged in, VMSINSTAL asks whether or not you want to continue:

```
* Do you want to continue anyway [NO]?
```

If you want to continue, enter YES. If you want to stop the installation, press Return. Correct the problem and restart the installation.

When the installation procedure starts, the system displays the software product installation message and release number with the current date and time.

### 2.1.2 Confirming System Backup

VMSINSTAL asks if you are satisfied with the backup of your system disk:

```
* Are you satisfied with the backup of your system disk [YES]?
```

If you are satisfied with your backup, press Return. Otherwise, enter NO to stop the installation. Perform a system disk backup, then restart the installation.

For more information about performing a system disk backup, see the OpenVMS documentation.

### 2.1.3 Mounting Distribution Volumes

If you omitted the device name on the VMSINSTAL command line, the following prompt is displayed:

```
* Where will the distribution volumes be mounted:
```

If this prompt is displayed, enter the name of the distribution (media) device and directory that contains the Oracle CDD/Repository kit (save set).

Depending on the type of device and whether or not the device is mounted, the following prompt may or may not appear:

```
Please mount the first volume of the set on <device>
* Are you ready?
```

If you have not already done so, insert the distribution volume on the device you specified when you invoked VMSINSTAL. The device name appears on the line preceding the question. VMSINSTAL then asks if you are ready to continue.

If you respond YES to indicate that you are ready, VMSINSTAL will display a message that the installation has begun.

If you entered the wrong device name when you invoked VMSINSTAL and you need to restart the installation, enter NO in response to the "Are you ready?" question. To stop the installation for other reasons, press Ctrl/Y.

## 2.1.4  Selecting a Release Notes Option

If you specified OPTIONS N when you invoked VMSINSTAL, you are now asked to choose one of the four options for reviewing the release notes:

```
Release notes included with this kit are always copied to SYS$HELP.

Additional Release Notes Options:

    1.  Display release notes
    2.  Print release notes
    3.  Both 1 and 2
    4.  None of the above

* Select option [2]:
```

If you select Option 1, VMSINSTAL displays the release notes immediately on the terminal. You can stop the display at any time by pressing Ctrl/C.

If you select Option 2, VMSINSTAL prompts you for the name of the print queue that you want to use:

```
* Queue name [SYS$PRINT]:
```

Press Return to send the file to the default output print device, or enter another queue name.

If you select Option 3, VMSINSTAL displays the release notes immediately on the terminal and then prompts you for a queue name for the printed version.

Select Option 4 if you have reviewed the release notes and are restarting the installation.

Next, VMSINSTAL displays the following question:

```
* Do you want to continue the installation [NO]?
```

To continue the installation, enter YES. Otherwise, press Return. In either case, the release notes file is copied to the SYS$HELP directory:

```
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.
```

The name of the file consists of the product name and current version number in text, PDF and PostScript output:

```
SYS$HELP:CDD073.RELEASE_NOTES
SYS$HELP:CDD073_RELEASE_NOTES.PDF
SYS$HELP:CDD073_RELEASE_NOTES.PS
```

After the installation, to find the name of the release notes file, enter the following command:

```
$ DIRECTORY SYS$HELP:CDD*.RELEASE_NOTES
```

To review the release notes, type or print the file.

### 2.1.5 Pressing Return After the Copyright Notice

The copyright notice is displayed, followed by the prompt:

```
* Press return to continue:
```

If you want to continue the installation, press Return.

### 2.1.6 Checking for the HPE Language-Sensitive Editor

The installation procedure will check for the HPE Language-Sensitive Editor, and will notify you if it is not installed on your system:

```
The HPE Language-Sensitive Editor is not installed on your system.
To have HPE Language-Sensitive Editor support, you must:

        1.   Exit the Oracle CDD/Repository installation now
        2.   Install the HPE Language-Sensitive Editor
        3.   Install Oracle CDD/Repository

* Do you want to continue the installation [NO]?
```

If you want to continue the installation, enter yes.

### 2.1.7 Confirming the Location of the Root Dictionary File

The CDD$DICTIONARY system logical name identifies the location of the root DMU dictionary file.

The equivalence string for CDD$DICTIONARY must resolve to a device and directory (for example, DBA0:[CDD_DIRECTORY]). Choose an existing system directory that is located on a permanently mounted device.

The default is SYS$COMMON:[SYSEXE]. The default file name for the root dictionary file is CDD.DIC.

If a previous version of Oracle CDD/Repository has been installed, and if CDDSTRTUP.COM has been executed, the installation procedure displays the current translation of CDD$DICTIONARY and asks you to confirm the location:

```
* Is this the correct location for your system's root dictionary file [YES]?
```

Press Return or enter a new file specification including device and directory name for the location of the root dictionary file. (For example, you might want to create a new root dictionary file if there is insufficient disk space on the specified device.)

If you define CDD$DICTIONARY to be SYS$SYSTEM, the installation procedure automatically changes the definition to SYS$COMMON:[SYSEXE].

You can also specify a search list for CDD$DICTIONARY. If you did not create CDD$DICTIONARY (by installing a previous version of Oracle CDD/Repository), Oracle CDD/Repository places the root dictionary file in the first location in the search list.

_____ Caution _____

If you choose to enter a new translation for CDD$DICTIONARY, you can move your root dictionary file to the new file location before or after you run the IVP. If you do not move your root dictionary file, the IVP creates a new root dictionary file for you, and you will not be able to access your existing dictionary.

_____

Perform the following steps to move your root dictionary file:

1. Use the DCL COPY command and specify your root dictionary file as the source and an existing directory as the target:

   ```
   $ COPY/READ/WRITE  DISK1:[SMITH.DICTIONARY]CDD.DIC -
   _$ CDD$DISK:[TAYLOR.DICTIONARY]CDD.DIC
   ```

2. The installation creates a new SYS$STARTUP:CDDSTRTUP.COM file so that the logical name CDD$DICTIONARY points to the new anchor directory. This is in effect as soon as CDD$STRTUP.COM has been run, which is at the end of the installation.

3. Define the logical name CDD$DICTIONARY for users on the current system so that it points to the new root dictionary directory:

   ```
   $ DEFINE/SYSTEM/EXEC CDD$DICTIONARY CDD$DISK:[TAYLOR.DICTIONARY]
   ```

   The file SYS$STARTUP:CDDSTRTUP.COM can be edited to include the logical name definition for CDD$DICTIONARY.

## 2.1.8  Confirming the Location of the Compatibility Repository

The system logical name CDD$COMPATIBILITY identifies the location of the compatibility repository.

The equivalence string for CDD$COMPATIBILITY must resolve to a device and directory (for example, DBA0:[CDDPLUS]). You should use a directory on a disk that is permanently mounted. The directory must be used by Oracle CDD/Repository exclusively. It also should be a directory that contains an existing compatibility repository or is currently empty. If a directory does not exist, the installation procedure creates a directory for you.

The default is SYS$COMMON:[CDDPLUS].

If you have previously installed Oracle CDD/Repository, the installation procedure displays the default translation of CDD$COMPATIBILITY and asks you to confirm the location:

```
* Is this the correct location for your system's compatibility repository [YES]?
```

Press Return to accept the default, or type NO to display a prompt where you can enter a new directory specification.

## 2.1.9  Choosing to Continue the Installation

If a repository exists in the CDD$COMPATIBILITY location and that repository is at a version prior to release 6.1, the installation procedure will remind you that the repository must be upgraded immediately after installation. If the existing repository is at release 6.1 or later, it does not need to be upgraded for Oracle CDD/Repository release 7.3.

You have the option of continuing with the installation or stopping now. To continue, press Return.

```
* Do you want to continue the installation [YES]?
```

### 2.1.10 Confirming the Location of the Template Repository Files

The system logical name CDD$TEMPLATE identifies the location of the template repository files that are supplied by Oracle CDD/Repository.

The equivalence string for CDD$TEMPLATE must resolve to a device and directory (for example, DBA0:[CDD$TEMPLATE]). You should use a directory on a disk that is permanently mounted. The directory must be used by Oracle CDD/Repository exclusively. It also should be a directory that contains a prior version of template files or is currently empty. If a directory does not exist, the installation procedure creates a directory for you.

The default is SYS$COMMON:[CDD$TEMPLATE].

This installation procedure deletes all files in the current template repository directory and then re-creates the template repository.

If you have previously installed Oracle CDD/Repository, the installation procedure displays the current translation of CDD$TEMPLATE and asks you to confirm the location:

```
* Is this the correct location for your system's template repository [YES]?
```

Press Return to accept the default, or type NO to display a prompt where you can enter a new directory specification.

### 2.1.11 Confirming the Location of the Template Repository Database File

The system logical name CDD$TEMPLATEDB identifies the location of the Oracle CDD/Repository template repository database file.

The default is SYS$COMMON:[CDD$TEMPLATEDB].

The equivalence string for CDD$TEMPLATEDB must resolve to a device and directory (for example, DBA0:[CDD$TEMPLATEDB]). You should use a directory on a disk that is permanently mounted. The directory must be used by Oracle CDD/Repository exclusively. It also should be a directory that contains a prior version of template files or is currently empty. If a directory does not exist, the installation procedure creates a directory for you.

If you have previously installed Oracle CDD/Repository, the installation procedure displays the current translation of CDD$TEMPLATEDB and asks you to confirm the location:

```
* Is this the correct location for your system's template repository database
  file [YES]?
```

Press Return to accept the default, or type NO to display a prompt where you can enter a new directory specification.

### 2.1.12 Confirming the Location of the Extensions Directory

The CDD$EXTENSIONS directory is an empty directory to be used for extensions to the type hierarchy.

The equivalence string for CDD$EXTENSIONS must resolve to a device and directory (for example, DBA0:[CDD_EXTENSIONS]). You should use a directory on a disk that is permanently mounted. The directory must be used by Oracle CDD/Repository exclusively. It also should be a directory that is currently empty or does not exist. If a directory does not exist, the installation procedure creates a directory for you.

The default is SYS$COMMON:[CDD_EXTENSIONS].

If you have previously installed Oracle CDD/Repository, the installation procedure displays the current translation of CDD$EXTENSIONS and asks you to confirm the location:

```
* Is this the correct location for your system's extensions directory [YES]?
```

Press Return to accept the default, or type NO to display a prompt where you can enter a new directory specification.

### 2.1.13  Selecting Programming Support Files

The installation procedure provides language description files that are needed if you use the Oracle CDD/Repository callable interface. These description files are used in writing code that uses the callable interface in a particular language. The callable interface manipulates the repository, reads and writes to the database, and commits transactions. Your code could be an application integrated with Oracle CDD/Repository. The choice of programming language is yours.

If you use the Oracle CDD/Repository callable interface to manipulate the repository, you need the description files in the programming language of your choice.

The installation procedure asks if you want all of the new language support files installed.

```
* Do you want all the description files provided [YES]?
```

If you answer YES to this question, the installation procedure installs support files for Ada, BLISS, BASIC, C, FORTRAN, MACRO, Pascal, and PL/I.

If you answer NO to this question, the installation procedure prompts you to specify which language files you want to install. If you do not install the language files, you cannot use the Oracle CDD/Repository callable interface. It is recommended that you choose whatever languages you have installed on your system.

After you specify the language files you want installed, the installation procedure lists them and asks:

```
* Is this OK [YES]?
```

Press Return to continue or type NO to select a different set of languages.

### 2.1.14  Choosing Japanese Language Support

If you have Japanese OpenVMS installed on your system, the installation procedure asks if you want to include the Japanese help and message files:

```
* Do you want to install the Japanese help and message files [NO]?
```

To exclude Japanese language support, press Return to accept the default.

### 2.1.15  Choosing the Installation Verification Procedure (IVP) Option

The IVP for Oracle CDD/Repository checks to be sure that the installation is successful. It is recommended that you run the IVP. To run the IVP, press Return at the following prompt:

```
* Do you want to run the IVP after the installation [YES]?
```

### 2.1.16  Choosing the Location for the IVP Repository

The IVP creates a temporary repository for tests used in the IVP. This repository is automatically deleted after the IVP completes.

If you are installing Oracle CDD/Repository on a system that has a previous version of Oracle CDD/Repository installed, the equivalence string for the IVP repository must resolve to a device and directory, for example, DBA0:[CDD$IVP_REPOSITORY].

You should use a directory on a disk that is permanently mounted. The directory must be used by Oracle CDD/Repository exclusively. It also should be a directory that is currently empty or does not exist. If a directory does not exist, the installation procedure creates a directory for you.

The default is SYS$COMMON:[SYSTEST.CDD$IVP_REPOSITORY].

The installation procedure displays the current translation of the IVP repository and asks you to enter a new location, if necessary:

```
* Enter the location of the IVP repository:
```

Press Return to accept the default, or enter a new directory specification, including a device name and directory name.

When you run the IVP from VMSINSTAL, the IVP creates the log file CDD$IVP.LOG. After the IVP runs successfully, the log file is deleted unless you explicitly request that it be saved. If an error occurs while running the IVP, the log file is saved in SYS$COMMON:[SYSTEST.CDD]. You can inspect the log file to help diagnose the problem:

```
* Do you want to print the log file from the IVP [NO]?
```

Enter YES if you want VMSINSTAL to submit the IVP log file to SYS$PRINT. Press Return if you do not want to print the log file.

VMSINSTAL also asks if you want to save the log file:

```
* Do you want to save the log file from the IVP [NO]?
```

Enter YES if you want to save a copy of the log file. Press Return if you do not want to save the log file.

### 2.1.17  Choosing the Purge Files Option

You have the option of purging files from previous versions of Oracle CDD/Repository that are superseded by this installation:

```
* Do you want to purge files replaced by this installation [YES]?
```

Purging files is recommended. However, if you need to keep files from the previous version, enter NO.

### 2.1.18  Reading Informational Messages

The installation procedure now displays informational messages. There will be no further questions. To continue with the installation, press Return:

```
* Do you want to continue the installation [YES]?
```

If the installation procedure has been successful up to this point, VMSINSTAL moves the new or modified files to their target directories, updates help files, updates DCL tables, and purges files if you selected the purge option.

### 2.1.19 Observing the Installation Verification Procedure (IVP)

If you chose to run the IVP, VMSINSTAL runs it now.

If DECdtm is not enabled, the following error will occur:

```
%VMSINSTAL-E-BADSPEC, File spec name cannot be parsed
```

DECdtm must be available on your system. See Section 1.3.1 for instructions on enabling DECdtm services.

After the IVP runs successfully, the following message is displayed:

```
Oracle CDD/Repository V7.3 IVP completed successfully
```

If your repositories need to be upgraded after the installation, the installation procedure displays a reminder just before the installation is complete:

```
IMPORTANT NOTE -  Please upgrade your system's CDD$COMPATIBILITY
                  repository!
```

The installation provides a command procedure called SYS$LIBRARY:CDD$UPGRADE.COM. Use this command procedure to upgrade all your existing repositories. (DMU dictionaries do not require an upgrade.) For detailed information on performing the upgrade procedure, see *Using Oracle CDD/Repository on OpenVMS Systems*.

### 2.1.20 Ending the Installation Procedure

A message displays when the installation of Oracle CDD/Repository is complete:

```
Installation of CDD V7.3 completed at 11:20
```

```
VMSINSTAL procedure done at 11:20
```

Depending on the parameters you specified on the VMSINSTAL command line, the * Products: prompt may appear. To exit the installation procedure and return to the DCL ($) prompt, type EXIT.

VMSINSTAL deletes or changes entries in the process symbol tables during the installation. Therefore, if you are going to continue using the system manager's account and want to restore these symbols, log out and log in again.

## 2.2 Error Recovery

If errors occur during the installation, IVP, or upgrade procedure, VMSINSTAL displays failure messages. An error can occur if any of the following conditions exist:

- Insufficient Disk Space Defining CDD$TEMPLATE or CDD$TEMPLATEDB

  Rerun the installation. Change the location of CDD$TEMPLATE and CDD$TEMPLATEDB, and specify disks that have enough disk space. See Table 1-2 for disk space requirements.

- Invalid Access Control List Entry Syntax

  If a SYSTEM-F-IVACL error occurs during the creation of the template repository, modify the installation account so that its UIC and Rights Identifier values match. Use the OpenVMS Authorize utility (AUTHORIZE). Log out of the OpenVMS account you are using, then log in again. Rerun the Oracle CDD/Repository installation procedure.

- Insufficient Disk Space Defining CDD$COMPATIBILITY

Free space on the CDD$COMPATIBILITY disk or choose a location with enough space. See Table 1-3 for disk space requirements. Rerun the Oracle CDD/Repository installation procedure.

- Insufficient Disk Space for Running the IVP

Locate a disk with approximately 15,000 free blocks. Run the IVP with the command:

```
$ @SYS$TEST:CDD$IVP
```

- Oracle Rdb Monitor Not Running

Be sure to start the Oracle Rdb monitor for the correct version of Rdb. See Section 1.9.

- Software Versions Incorrect

See Chapter 1 for the operating system and software version requirements.

- Insufficient Privileges

The account from which you invoked VMSINSTAL does not have adequate privileges. Install software from the system manager's account, or from an account that has SETPRV, or at least the privileges shown in Table 1–1.

- Insufficient System Parameter Values

See Section 1.13 for the required values.

- Help Library Currently in Use

Before starting the installation, notify users that you are planning to install Oracle CDD/Repository and they will not be able to use help. Change the file protection on SYS$HELP.HLB to grant access only to SYSTEM, then change the protection back after the installation.

# 3

# After Installation

This chapter describes the following tasks that you may need to perform after installing Oracle CDD/Repository:

- Running the IVP separately
- Editing the system startup and shutdown files
- Modifying system parameter settings
- Making Oracle CDD/Repository available on an OpenVMS cluster
- Setting user account quotas and privileges
- Upgrading repositories
- Assigning an identifier to prevent disk quota errors
- Tuning the lock-related parameters
- Creating a repository template

## 3.1 Running the Installation Verification Procedure Separately

You usually run the IVP during installation. However, if system problems occur and you want to run the IVP separately to ensure the integrity of the installed files, execute the following command procedure:

```
$ @SYS$TEST:CDD$IVP
```

See Section 3.11 for information about running the IVP.

## 3.2 Editing the System Files

You must edit the system startup and shutdown files to provide for automatic startup and shutdown of Oracle CDD/Repository when your system is restarted.

To start Oracle CDD/Repository, add the following command line to the system startup file:

```
$ @SYS$STARTUP:CDDSTRTUP
```

The system startup file is located in SYS$MANAGER:SYSTARTUP_VMS.COM.

Oracle CDD/Repository cannot start until after the network has started, so add the command line after the line that invokes the network startup command procedure:

```
$ @SYS$MANAGER:STARTNET.COM
     .
     .
     .
$ @SYS$STARTUP:CDDSTRTUP
```

Oracle recommends that you run the Oracle Rdb startup procedure and make sure DECdtm services are enabled before the Oracle CDD/Repository startup procedure. See Section 1.3.1 for more information.

Be sure to start the Oracle Rdb monitor for the correct version.

Enter the following command, where *nn* is the version number of Oracle Rdb:

```
$ @SYS$STARTUP:RMONSTARTnn
```

If the Oracle Rdb monitor is not started, errors are displayed stating that CDDSHR is not installed.

To shut down Oracle CDD/Repository, add the following command line to the system shutdown file, SYS$MANAGER:SYSHUTDWN.COM:

```
$ @SYS$STARTUP:CDDSHUTDOWN
```

Oracle recommends that you run the Oracle CDD/Repository shutdown procedure before the Oracle Rdb shutdown procedure.

Oracle CDD/Repository creates new startup and shutdown files in SYS$COMMON:[SYS$STARTUP]. Therefore, after you have successfully installed Oracle CDD/Repository, delete the CDDSTRTUP.COM and CDDSHUTDOWN.COM files if they exist in the SYS$COMMON:[SYSMGR] directory:

```
$ DELETE/CONFIRM SYS$COMMON:[SYSMGR]CDDSTRTUP.COM;*
$ DELETE/CONFIRM SYS$COMMON:[SYSMGR]CDDSHUTDOWN.COM;*
```

## 3.3 Modifying System Parameters

To install Oracle CDD/Repository, you must raise the values of the CLISYMTBL and CTLPAGES system parameters. (See Table 1–5). Once the installation is complete, lower these values as appropriate for your system to ensure efficient system performance.

## 3.4 Making Oracle CDD/Repository Available on an OpenVMS Cluster

If you are installing Oracle CDD/Repository on a processor that is a member of an OpenVMS cluster, make Oracle CDD/Repository available to other cluster members by performing the following steps:

1. You must run the Oracle CDD/Repository startup procedure, SYS$STARTUP:CDDSTRTUP.COM, from each node that will access the repository.

2. After running the startup procedure, you can optionally run the IVP on all other cluster members to verify that Oracle CDD/Repository is accessible from each node. See Section 3.11 for information about running the IVP.

3. If the SYSTARTUP_VMS file is not in the directory SYS$COMMON:[SYSMGR], edit the system startup and shutdown file of each cluster member on which you want to run Oracle CDD/Repository so that they invoke the Oracle CDD/Repository startup and shutdown procedures.

4. Make sure that each cluster member invokes the Oracle Rdb startup and shutdown command procedures. See Section 3.2 for information about editing the startup and shutdown files.

5. Create a DECdtm transaction log for each node in your OpenVMS cluster environment, deassign the logical name SYS$DECDTM_INHIBIT, and enable DECdtm services by executing SYS$STARTUP:DECDTM$STARTUP.COM. See Section 1.3.1 for more information.

6. Replace DCLTABLES on all nodes with the INSTALL command:

```
$ INSTALL
INSTALL> REPLACE SYS$SHARE:DCLTABLES
INSTALL> EXIT
```

7. Use SYSGEN to ensure that the system parameters listed in Section 1.14 are set properly.

8. Ensure that the value for the rights identifier CDD$SYSTEM is the same for all nodes in the cluster. Use the OpenVMS Authorize utility (AUTHORIZE) to determine the value:

```
$ RUN AUTHORIZE
UAF> SHOW/IDENTIFIER CDD$SYSTEM
```

## 3.5  User Account Requirements

The next two sections contain privilege and quota requirements for the user accounts on your system.

### 3.5.1  Privileges

To use Oracle CDD/Repository, each account must have at least the TMPMBX and NETMBX privileges. Run AUTHORIZE to determine whether or not users have the privileges they require.

### 3.5.2  User Account Quotas

Make sure that the appropriate user account quotas are sufficient to use Oracle CDD/Repository. Table 3–1 lists the required user account quotas.

The values in Table 3–1 are minimum requirements; the values required by users on your system might be higher if they use many layered products or complex applications. You should add the values shown in Table 3–1 to those required for other layered products and modify the values for each user as needed.

**Table 3–1  User Account Quotas for Oracle CDD/Repository**

| Account Quota | Value |
| --- | --- |
| ASTLM | 24 |
| BIOLM | 80 |
| BYTLM | 25000 |
| DIOLM | 40 |
| ENQLM | 2000 |
| FILLM | 100 |
| PGFLQUOTA | 50000 |

See Section 1.12 for information about verifying and changing account quotas.

## 3.6 Upgrading Existing Repositories

If you have Oracle CDD/Repository release 6.1 or later installed, it is not necessary to upgrade your existing repositories after you install Oracle CDD/Repository release 7.3.

However, existing repositories at releases prior to release 6.1 must be upgraded. Use the SYS$LIBRARY:CDD$UPGRADE.COM command procedure, which is provided with the Oracle CDD/Repository installation, or, if you are upgrading a release 5.n repository, use the CDO CONVERT/REPOSITORY command.

If you are upgrading a release 5.n repository to a higher release (performing a minor upgrade) using the CDO CONVERT/REPOSITORY command, check the value of the VIRTUALPAGECNT system parameter. If the value is less than 100,000 the upgrade will fail. For best performance, increase the VIRTUALPAGECNT value to a minimum of 200,000 pages.

For detailed information on how to perform the upgrade procedure, see Using Oracle CDD/Repository on OpenVMS Systems.

_____ **Note** _____

DMU CDD.DIC style dictionaries do not require an upgrade.

_____

### 3.6.1 Exporting a Release 5.n or Later Repository

If you are performing an export-only upgrade of a release 5.n or higher repository, additional PGFLQUOTA pages may be needed when the upgrade procedure generates the CDD$UPGRADE.CDDX export file.

The upgrade procedure checks the combined size of the CDD$DATA.RDA and CDD$DATABASE.RDA files when determining the PGFLQUOTA and disk space requirements for the EXPORT/IMPORT operation.

See <REFERENCE>(pgflquota_upgrade) for the appropriate values, and increase the PGFLQUOTA if necessary.

## 3.7 Installing Other Layered Products

Install any other layered products, such as DATATRIEVE, at this time.

## 3.8 Assigning an Identifier to Prevent Disk Quota Errors

Using the OpenVMS System Management utility (SYSMAN), you can create disk quota files to limit disk consumption. The quota file records the current usage and the maximum disk consumption for all users.

If you set disk quotas on the disk where the compatibility repository or any repository resides, Oracle CDD/Repository users must have a disk quota enabled on that disk; otherwise, CDO returns errors when users try to define something in the repository:

```
$ REPOSITORY OPERATOR
CDO> DEFINE FIELD LAST_NAME
cont> DATATYPE IS TEXT
cont> SIZE IS 20.
%CDO-E-ERRDEFINE, error defining an object
 %CDD-F-NOJNLCRE, cannot create journal file in anchor
 -RMS-E-OCRE, ACP FILE CREATE FAILED
 -NONAME-W-NOMSG MESSAGE NUMBER 00000000
```

To prevent this problem, perform the following steps:

1.  Use the OpenVMS Authorize utility (AUTHORIZE) to create a rights
    identifier called CDD_USER. Create the CDD_USER identifier with the
    RESOURCE attribute so that holders of the identifier can charge resources to
    it.

    ```
    $ RUN AUTHORIZE
    UAF> ADD/IDENTIFIER CDD_USER/ATTRIBUTES=RESOURCE
    UAF> EXIT
    ```

2.  Grant the CDD_USER identifier the same quotas as any other user of Oracle
    CDD/Repository. To prevent running out of journal file space, you should
    allow CDD_USER the same amount of disk space as the amount you want
    the repository to use. Any user holding the CDD_USER identifier can use
    this disk space.

    Because an empty repository uses approximately 15,000 blocks, Oracle
    recommends that you allow between 50,000 and 250,000 blocks, depending on
    how much the repository is used. To add the entry for the CDD_USER rights
    identifier, execute the following commands:

    ```
    $ RUN SYSMAN
    SYSMAN> DISKQUOTA ADD CDD_USER/DEVICE=yourdisk/PERMQUOTA=50000
    ```

3.  Create the repository anchor with the CDD_USER identifier as the owner.
    For example, if your compatibility repository anchor is DBA0:[CDDPLUS],
    execute the following command:

    ```
    $ CREATE/DIRECTORY/OWNER=CDD_USER DBA0:[CDDPLUS]
    ```

4.  Grant the CDD_USER identifier with the resource attribute to all users of
    the repository:

    ```
    $ RUN AUTHORIZE
    UAF> GRANT/IDENTIFIER CDD_USER/ATTRIBUTE=RESOURCE user-name
    UAF> EXIT
    ```

If you follow these steps, the CDD_USER identifier owns all the space allocated
to the repository files in the compatibility repository so individual users do not
need quotas on the system disk. Only users with the CDD_USER identifier and
users with quotas set for them on the compatibility repository's disk can use the
repository.

For more information about setting disk quotas, see the OpenVMS
documentation.

## 3.9 Tuning the Lock-Related Parameters

During the first few weeks that Oracle CDD/Repository is installed, check the actual number of locks your system is using by starting the OpenVMS Monitor utility (MONITOR):

```
$ MONITOR LOCK
```

The OpenVMS Monitor utility displays the maximum number of locks outstanding during the monitored period. You can use this value to tune the LOCKIDTBL_MAX and RESHASHTBL parameters according to the guidelines shown in Table 3–2.

**Table 3–2   Lock Parameter Values for Using Oracle CDD/Repository**

| Parameter | Value |
| --- | --- |
| LOCKIDTBL_MAX | This quota must be at least as high as the highest ENQLM setting in the system authorization file (SYSUAF.DAT). A larger LOCKIDTBL_MAX setting is recommended to allow for several simultaneous processes using Oracle CDD/Repository. |
| RESHASHTBL | As a general guideline, there should be one resource hash table entry for every 4 locks in the system; therefore, set the resource hash table parameter equal to the value of LOCKIDTBL_MAX divided by 4. |

For more information, see the OpenVMS documentation on the Monitor utility.

## 3.10  Creating a Repository Template

A repository template is a backup of a repository that contains protocols (element, relation, and property types) that are supplied by Oracle CDD/Repository. You use a repository template to create a new repository. Using a template improves performance and saves time when you define a repository.

A repository template is supplied when you install Oracle CDD/Repository. During the installation, if a template exists, it is deleted and replaced by a new template for the current version of Oracle CDD/Repository.

Oracle CDD/Repository also supplies a command procedure called SYS$SHARE:CDD_BUILD_TEMPLATE.COM that you can use to create a repository template.

You can also use a template to create a customized repository. If you extend your repository by defining new element types or by modifying existing types (using the Oracle CDD/Repository callable interface or the Oracle CDD/Administrator Extension utility), your modifications can be incorporated into a template. After you create a customized template, it can be used to automatically apply your extensions when you define a new repository.

### 3.10.1  CDD$TEMPLATE and CDD$TEMPLATEDB Logical Names

The installation procedure enters the CDD$TEMPLATE and CDD$TEMPLATEDB logical names into the system logical name table.

The CDD$TEMPLATE logical name points to the directory containing the files that Oracle CDD/Repository uses as a template when you define a repository. The CDD$TEMPLATEDB logical name points to a directory that contains the database file, which is an Oracle RMU backup file for the template.

When you issue the CDO DEFINE REPOSITORY command, Oracle CDD/Repository performs an Oracle RMU Restore operation using the files in the directories assigned to CDD$TEMPLATE and CDD$TEMPLATEDB and converts these files to repository files.

---
**Note**

---

You cannot use the template itself as a repository; the Oracle RMU Restore operation is required.

---

### 3.10.2 Building a New Template

To build a repository template, perform the following steps:

1. Set the release of Oracle Rdb that will be used to build the repository template.

   If you have a multiversion Oracle Rdb environment, set the release of Oracle Rdb to the lowest release available on your system. This will prevent errors and allow later releases of Oracle Rdb to use the template.

   To determine the release of Oracle Rdb that you are currently using, enter the Oracle RMU SHOW VERSION command or:

   Enter the following command:

   ```
   $ @SYS$LIBRARY:RDB$SHOVER
   ```

   Then, use the following command to set the release of Oracle Rdb:

   ```
   $ @SYS$LIBRARY:RDB$SETVER nn
   ```

   In the preceding commands, replace *nn* with a release number of Oracle Rdb.

2. Define the CDD$TEMPLATE and CDD$TEMPLATEDB logical names at the user process level to be equivalent to a blank space:

   ```
   $ DEFINE CDD$TEMPLATE " "
   $ DEFINE CDD$TEMPLATEDB " "
   ```

3. Create two empty directories for the template repository:

   ```
   $ CREATE/DIRECTORY DEVICE:[CDD$TEMPLATE_73]
   $ CREATE/DIRECTORY DEVICE:[CDD$TEMPLATEDB_73]
   ```

4. Create a new repository using the CDO DEFINE REPOSITORY command:

   ```
   $ REPOSITORY OPERATOR DEFINE REPOSITORY DEVICE:[CDD$TEMPLATE_73]
   ```

   Oracle CDD/Repository creates the new repository without using a template. This will take longer than defining a repository using a template, and may take a few minutes.

5. If you have an extended repository and want to build a customized template that contains your extensions, apply them to the newly created repository.

6. Execute the CDD_BUILD_TEMPLATE.COM command procedure:

   ```
   $ @SYS$LIBRARY:CDD_BUILD_TEMPLATE -
   _$ DEVICE:[CDD$TEMPLATE_73]
   DEVICE:[CDD$TEMPLATEDB_73]
   ```

   In this command, DEVICE:[CDD$TEMPLATE_73] represents the anchor of the new repository, and DEVICE:[CDD$TEMPLATEDB_73]represents the empty directory where the template database file will reside.

The CDD_BUILD_TEMPLATE.COM command procedure creates a new template with the installed release of Oracle CDD/Repository and the release of Oracle Rdb that you have set.

7. Reassign CDD$TEMPLATE and CDD$TEMPLATEDB as system logical names that point to their respective directories:

```
$ DEFINE/SYSTEM/EXEC CDD$TEMPLATE DEVICE:[CDD$TEMPLATE_73]
$ DEFINE/SYSTEM/EXEC CDD$TEMPLATEDB DEVICE:[CDD$TEMPLATEDB_73]
```

If you want these logical names automatically defined when the system is started, define them in the SYS$STARTUP:CDDSTRTUP.COM startup procedure.

8. Delete the old template directories; they are now obsolete.

## 3.11 Installation Verification Procedure

The Oracle CDD/Repository kit includes an Installation Verification Procedure (IVP) called CDD$IVP.COM. The IVP runs each component of the product to ensure it functions properly. The IVP is not a comprehensive test package. Its purpose is to verify that the product is installed correctly. The IVP does the following:

- Prompts you to choose a location for a temporary IVP repository. The IVP requires about 15,000 free blocks for this repository.

- Defines a repository in the specified location.

- Checks each executable image.

- Creates the root dictionary file if it does not exist.

- Tests the Data Definition Language utility (CDDL) by creating the sample dictionary structure in a directory named CDD$TOP.CDD$EXAMPLES.

- Tests the Common Dictionary Operator (CDO) utility by creating the CDD_PLUS$EXAMPLES directory and defining fields and records in it.

- Deletes the temporary repository created at the beginning of the IVP.

- Reports whether or not the installation is successful.

To run the IVP, you need the following privileges:

- OpenVMS privileges: CMKRNL PRMGBL SYSGBL SYSNAM SYSPRV SYSLCK

- Oracle CDD/Repository privileges: CONTROL privileges to entities at CDD$TOP and CDD$TOP.CDD$EXAMPLES

You run the IVP from the DCL command level ($) by using the following command:

$ @SYS$TEST:CDD$IVP

When you run the IVP with this command, your terminal displays the output from the procedure:

When the IVP runs, the following error messages may appear:

```
%CDO-E-ERRDELETE, error deleting object
-CDO-E-NOTFOUND, entity _CDD$TOP.CDD_PLUS$EXAMPLES.SALES.SALES_
RECORD;* not found in dictionary
%CDO-E-ERRDELETE, error deleting object
-CDO-E-NOTFOUND, entity _CDD$TOP.CDD_PLUS$EXAMPLES.SALES.JONES.LEADS_
RECORD;* not found in dictionary
```

This is because a cleanup procedure is running. The IVP will complete
successfully, and you do not need to take any corrective action.

# A

# Sample Multiversion Installation

This appendix lists the terminal output from an installation of the Oracle CDD/Repository release 7.3 kit on OpenVMS Alpha.

```
$ @sys$update:vmsinstal CDDV73000A073 $1$DGA11:[KITS]

 OpenVMS  Software Product Installation Procedure V8.4-2L2

It is 21-FEB-2019 at 10:17.

Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]?

The following products will be processed:
  CDDV73000A V7.3

 Beginning installation of CDDV73000A V7.3 at 10:17

No signature manifests found for CDDV73000A073

* Do you want to install this product [NO]? y

%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.

************************************************************************

                Oracle CDD/Repository V7.3-000
                  Kit Installation Procedure

  Copyright  2004,2007,2019 Oracle Corporation.  All Rights Reserved

************************************************************************

************************************************************************

  The CDD$DICTIONARY system logical name is used to identify the
  location of the pre-V4.0 CDD product root dictionary file.

  The default is SYS$COMMON:[SYSEXE].

  CDD$DICTIONARY is currently defined to be: SYS$COMMON:[SYSEXE]

************************************************************************

* Is this the correct location for your system's root dictionary file [YES]?

************************************************************************

  The CDD$COMPATIBILITY system logical name is used to identify
  the location of the compatibility repository.

  The default is SYS$COMMON:[CDDPLUS].

  CDD$COMPATIBILITY is currently defined to be: SYS$COMMON:[CDDPLUS]

************************************************************************

* Is this the correct location for your system's compatibility repository [YES]?

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

The CDD$TEMPLATE system logical name is used to identify the
location of the template repository.  The template repository
is used to create other repositories.

The default is SYS$COMMON:[CDD$TEMPLATE].

This installation procedure will delete all files in the
current template repository directory and then re-create the
template repository.

CDD$TEMPLATE is currently defined to be: SYS$COMMON:[CDD$TEMPLATE]

***************************************************************************

* Is this the correct location for your system's template repository [YES]?

***************************************************************************

The CDD$TEMPLATEDB system logical name is used to identify the
location of the template repository database file.

The default is SYS$COMMON:[CDD$TEMPLATEDB].

This installation procedure will delete all files in the current
template repository database file directory and then re-create
the template repository database file.

CDD$TEMPLATEDB is currently defined to be: SYS$COMMON:[CDD$TEMPLATEDB]

***************************************************************************

* Is this the correct location for your system's template repository database file [YES]?

***************************************************************************

The CDD$EXTENSIONS system logical name is used to identify the
location of the extensions directory.

The default is SYS$COMMON:[CDD_EXTENSIONS].

CDD$EXTENSIONS is currently defined to be: SYS$COMMON:[CDD_EXTENSIONS]

***************************************************************************

* Is this the correct location for your system's extensions directory [YES]?

***************************************************************************

This installation provides description files that are needed
when using the callable interface.

***************************************************************************

* Do you want all the description files provided [YES]?

***************************************************************************

The following languages have been chosen:

     ADA,BLISS,BASIC,C,FORTRAN,MACRO,PASCAL,PLI

***************************************************************************

* Is this OK [YES]?

***************************************************************************

A repository will be created in order to run the Installation
Verification Procedure (IVP).  This repository will be deleted
at the end of the installation.

***************************************************************************

* Do you want to run the IVP after the installation [YES]?

***************************************************************************

The Installation Verification Procedure repository location is
used to create a repository for the tests done in the IVP.

The default is SYS$COMMON:[SYSTEST.CDD$IVP_REPOSITORY].

The equivalence string for the IVP repository must resolve to a
device and directory (e.g. DBA0:[CDD$IVP_REPOSITORY).

*************************************************************************

* Enter the location of the IVP repository [SYS$COMMON:[SYSTEST.CDD$IVP_REPOSITORY]]:
* Do you want to print the log file from the IVP [NO]?
* Do you want to save the log file from the IVP [NO]?
* Do you want to purge files replaced by this installation [YES]?

*************************************************************************

To complete the installation on a standalone DEC 3000 Model
400 AXP will take approximately:

        7 minutes to install
        4 minutes to run the IVP

All required questions have been asked.  You can terminate
the installation procedure at this time.

*************************************************************************

* Do you want to continue the installation [YES]?
%VMSINSTAL-I-RESTORE, Restoring product save set B ...
*************************************************************************

The Oracle CDD/Repository V7.3-0 product registration has been
located and will now be removed from PCSI ...

The following product has been selected:
    ORCL AXPVMS CDD V7.3-0                  Transition (registration)

The following product will be removed from destination:
    ORCL AXPVMS CDD V7.3-0                  DISK$IA64VMSSYS1:[VMS$COMMON.]

Portion done: 0%...10%...20%...30%...40%...50%...60%...70%...80%...90%...100%

The following product has been removed:
    ORCL AXPVMS CDD V7.3-0                  Transition (registration)

*************************************************************************

%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSTEST.CDD].
%CREATE-I-EXISTS, VMI$ROOT:[SYSTEST.CDD] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  VMI$ROOT:[SYSHLP.EXAMPLES.CDD
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$COMMON:[CDDPLUS].
%CREATE-I-EXISTS, SYS$COMMON:[CDDPLUS] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$COMMON:[CDD$TEMPLATE].
%CREATE-I-EXISTS, SYS$COMMON:[CDD$TEMPLATE] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$COMMON:[CDD$TEMPLATEDB].
%CREATE-I-EXISTS, SYS$COMMON:[CDD$TEMPLATEDB] already exists
%VMSINSTAL-I-SYSDIR, This product creates system disk directory  SYS$COMMON:[CDD_EXTENSIONS].
%CREATE-I-EXISTS, SYS$COMMON:[CDD_EXTENSIONS] already exists

*************************************************************************

A startup file has been installed on your system in the
following location:

        SYS$STARTUP:CDDSTRTUP.COM

This startup file must be invoked whenever a system is rebooted.
This can be done automatically by adding the following line to
SYS$STARTUP:SYSTARTUP_VMS.COM:

        $ @SYS$STARTUP:CDDSTRTUP.COM

If SYS$STARTUP:SYSTARTUP_VMS.COM does not currently invoke
the Oracle Rdb startup procedure, this can also be done
automatically by adding the following line:

        $ @SYS$STARTUP:RMONSTARTnn.COM

```
   In this command, nn is the Oracle Rdb version number.

************************************************************************

************************************************************************

  A shutdown file has been installed on your system in the
  following location:

        SYS$STARTUP:CDDSHUTDOWN.COM

  This shutdown file should be invoked whenever the system is
  shut down.  This can be done automatically by adding the
  following line to SYS$STARTUP:SYSHUTDWN.COM:

        $ @SYS$STARTUP:CDDSHUTDOWN.COM

************************************************************************

************************************************************************

  An Installation Verification Procedure (IVP) has been
  installed on your system and can be run after the
  installation is complete.  It is invoked as follows:

        $ @SYS$TEST:CDD$IVP.COM

************************************************************************

    Providing the following LSE language(s):

        CDDL
        PKG_C_MCS
        PKG_VAXADA_MCS
        PKG_VAXMACRO_MCS
        PKG_VAX_MCS


%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
%CDD-I-CRETMPLRPO, The template repository will now be created...
%CDD-I-CRECONT, define repository continuing without template
%CDD-I-CRETMPLDBF, The template repository database file will now be created...

************************************************************************

  Begin Oracle CDD/Repository V7.3-000 IVP.

************************************************************************

************************************************************************

  Oracle CDD/Repository V7.3-000 IVP completed successfully.

************************************************************************

************************************************************************

  The Oracle CDD/Repository V7.3-000 product registration file has
  been located and will now be registered with PCSI ...

The following product has been selected:
    ORCL AXPVMS CDD V7.3-0                 Transition (registration)

The following product will be registered:
    ORCL AXPVMS CDD V7.3-0                 DISK$IA64VMSSYS1:[VMS$COMMON.]

Portion done: 0%...10%...20%...30%...40%...50%...60%...70%...80%...90%...100%

The following product has been registered:
    ORCL AXPVMS CDD V7.3-0                 Transition (registration)

************************************************************************
 Installation of CDDV73000A V7.3 completed at 10:18

    Adding history entry in VMI$ROOT:[SYSUPD]VMSINSTAL.HISTORY

    Creating installation data file: VMI$ROOT:[SYSUPD]CDDV73000A073.VMI_DATA
```

```
VMSINSTAL procedure done at 10:18
```

# B

# Files and Logical Names Installed on Your System

The Oracle CDD/Repository installation procedure installs a number of files on your system and defines some logical names, lists installed files, and lists the logical names that are added to the system logical name table.

## B.1 File Names

The installation procedure writes a file to your system that lists all the files Oracle CDD/Repository installed on your system. For a copy of this list, use the DCL PRINT or TYPE command to print or display the following file after the installation:

```
SYS$COMMON:[SYSMGR.VAXINFO$PRODUCTS]CDD073_FILES.DAT
```

An installed Oracle CDD/Repository facility consists of:

- Root dictionary file

  The CDD$DICTIONARY system logical name, defined in the Oracle CDD/Repository startup procedure (SYS$STARTUP:CDDSTRTUP), identifies the location of the root dictionary file, CDD.DIC.

  The root dictionary file cannot be a top-level directory (such as, dev:[000000]) or a top-level directory of a concealed rooted logical name (such as, SYS$COMMON:[000000.]).

- Compatibility repository files

  The CDD$COMPATIBILITY system logical name identifies the anchor directory containing the files for the compatibility repository.

- Repository template

  The CDD$TEMPLATEDB system logical name defined in the Oracle CDD/Repository startup procedure (SYS$STARTUP:CDDSTRTUP) identifies the OpenVMS directory that contains an Oracle RMU backup of the repository database used when you define a repository.

  The CDD$TEMPLATE system logical name identifies the anchor directory containing the rest of the files that Oracle CDD/Repository uses as a template when you define a new repository. It is not a complete template without the contents of CDD$TEMPLATEDB.

- A program interface providing access to the repository files

  This program interface consists of the SYS$LIBRARY:CDDSHR.EXE shared image, which is provided by the installation procedure.

  The program interface also consists of a protected shared image named SYS$LIBRARY:CDDPROSHR.EXE.

- The Common Dictionary Operator utility (CDO), SYS$SYSTEM:CDO.EXE

This utility lets you create, manage, and modify definitions in an Oracle CDD/Repository repository.

- The Dictionary Management Utility (DMU), SYS$SYSTEM:DMU.EXE

  This utility lets you create, manage, and modify the directory hierarchy of dictionaries created without CDO (DMU format dictionaries).

- Assorted subdictionary files (optional)

  You can create these subdictionary files by using the Dictionary Management Utility (DMU).

- The Data Definition Language utility (CDDL), SYS$SYSTEM:CDDL.EXE

  This utility lets you insert data definitions into the DMU format dictionary.

- The repository upgrade procedure, SYS$LIBRARY:CDD$UPGRADE.COM

  Use this command procedure to upgrade your existing repositories.

- The IMPORT/EXPORT utility, SYS$SYSTEM:CDDXnnn.EXE

  These executable images are needed to run the IMPORT/EXPORT utility.

- The startup procedure, SYS$STARTUP:CDDSTRTUP.COM

  This is a command procedure to install Oracle CDD/Repository images. You must invoke CDDSTRTUP each time you start your system, so you should run the procedure from your system manager's startup file. CDDSTRTUP is built by the installation procedure.

- The shutdown procedure, SYS$STARTUP:CDDSHUTDOWN.COM

  This is a command procedure that is invoked by the site-specific shutdown procedure, SYSHUTDOWN.COM, and deinstalls Oracle CDD/Repository images.

- Program support files, SYS$LIBRARY:CDDTAG*.*

  These files contain public definitions for data structures, constants, entry points, and error text in the callable interface.

- Remote support files, SYS$SYSTEM:CDD$REMOTE5.*,

  SYS$MANAGER:CDD$REMOTE5_NCP.COM, and

  SYS$MANAGER:VAXINFO$NETOBJ_INSERT.COM

  These files let you access definitions in repositories across a network.

- The Installation Verification Procedure (IVP) files, SYS$TEST:CDDIVP.COM and SYS$TEST:CDD$IVP.COM

  These command procedures create or open the repository, then check to ensure that the installation was successful.

- The repository template command procedure, SYS$LIBRARY:CDD_BUILD_TEMPLATE.COM

  This is a command procedure for customizing a repository template.

- Product demonstration files, SYS$COMMON:[SYSHLP.EXAMPLES.CDD]CDD_DEMO.*

  This directory contains an OpenVMS DCL command procedure, CDD_DEMO.COM, which shows the use of the product; a Microsoft PowerPoint file, CDD_DEMO.PPT, of the demonstration; and a text file, CDD_DEMO.TXT, which explains how to use the demonstration.

- Help library files for the Oracle CDD/Repository utilities

- Error message image files for the Oracle CDD/Repository utilities, CDDEXC.EXE, CDDLEXC.EXE, CDDVEXC.EXE, CDDX$MESSAGES.EXE, CDO$MESSAGES.EXE, and DMUEXC.EXE

- Release notes, CDD073.RELEASE_NOTES (text file), CDD073_RELEASE_NOTES.PS (PostScript file) and CDD073_RELEASE_NOTES.PDF (Adobe Acrobat file)

  The release notes files are placed in SYS$HELP by the installation procedure. The release notes describe new features, technical corrections, restrictions, and known problems in Oracle CDD/Repository release 7.3.

- Installation guide, CDD073_INSTALL_GUIDE.PS (PostScript file) and CDD073_INSTALL_GUIDE.PDF (Adobe Acrobat file)

  The installation guide files are placed in SYS$HELP by the installation procedure. The installation guide describes how to install Oracle CDD/Repository release 7.3.

- Error message text files, CDD_MSG.DOC, CDDL_MSG.DOC, CDDV_MSG.DOC, CDDX_MSG.DOC, CDO_MSG.DOC, DMU_MSG.DOC, MCS_MSG.DOC

  These files contains error messages in text format that can be displayed, printed, or searched. They are placed in SYS$HELP by the installation procedure.

- SYS$COMMON:[SYS$LDR]PIPEDRIVR.EXE, CDD$CALLBACK_VALIDATION.EXE

  These executable image files are required for compatibility with older releases of Oracle CDD/Repository.

- SYS$COMMON:[SYSLIB]CDD$BUFFER_EXAMPLE.C

  This example shows how to write code for a call to the MCS_SCAN_QUERY routine.

- SYS$COMMON:[SYSLIB]CDDLIBSHR.EXE

  This file contains routines used by layered products, such as COBOL, to record dependencies between elements.

- SYS$COMMON:[SYSLIB]CDOINTSHR.EXE

  This executable image provides support for calling CDO from an application.

- SYS$COMMON:[SYSLIB]INSTALL_ADA_MCS_BINDINGS-VMS.COM, SYS$COMMON:[SYSLIB]MCS*.

  These are programming language support files for the Management Control System (MCS) interface.

## B.2  Logical Names

The following logical names are entered into the system logical name table when Oracle CDD/Repository is installed. If you add CDDSTRTUP.COM to the SYSTARTUP_VMS.COM command procedure, these logical names are automatically entered into the system logical name table whenever the system is restarted or whenever SYS$STARTUP:CDDSTRTUP.COM is executed.

- CDD$COMPATIBILITY

- CDD$DICTIONARY
- CDD$EXTENSIONS
- CDD$SMGSHR
- CDD$TEMPLATE
- CDD$TEMPLATEDB