Oracle Trace for OpenVMS

Installation Guide

Release 7.2 for HP OpenVMS Industry Standard 64 for Integrity Servers and OpenVMS Alpha operating systems.

January 2006
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Preface

This document describes how to install the Oracle Trace release 7.2 for OpenVMS software.

Oracle Trace for OpenVMS is a layered product that gathers and reports event-based data from any combination of OpenVMS layered products and application programs containing Oracle Trace service routine calls. The Oracle Trace documentation refers to application programs that contain Oracle Trace service routines as facilities. The following products are facilities:

- OpenVMS ACMS
- ALL–IN–1
- HP DECforms
- Oracle CODASYL DBMS
- Oracle RALLY
- Oracle Rdb

You can collect event-based data from products that contain Oracle Trace service routine calls. You can also add Oracle Trace service routines to your own applications to collect data from them. The process of adding Oracle Trace service routine calls to an application is called instrumenting an application. The products that are instrumented for Oracle Trace provide documentation that describes details of their instrumentation.

Oracle Trace software operates with minimal performance impact on the system. It can run with both the development and production versions of your application to give you information about the behavior of your application.

Several third-party Fourth Generation Language (4GL) products contain Oracle Trace service routine calls and work with Oracle Trace and Oracle Expert for Rdb. Contact your 4GL vendor for more information.
Intended Audience

This manual is intended for system managers.

Licensing

The Oracle Trace for OpenVMS license provides all Oracle Trace capabilities in one license. With this license you can:

• Collect event-based data.
• Schedule, run, and manage Oracle Trace images.
• Instrument your application using Oracle Trace routines.
• Produce hard-copy reports.
• Display event-based data interactively

Structure

This manual has three chapters and two appendixes.

Chapter 1 Describes how to prepare for the installation.
Chapter 2 Describes how to install the Oracle Trace software.
Chapter 3 Describes what to do after the installation.
Appendix A Provides a sample installation log.

Related Documents

The other components of the Oracle Trace documentation set are:

• Oracle Trace Collector User’s Guide—Provides a detailed description of how to use the Oracle Trace software.
• Oracle Trace for OpenVMS Release Notes—Provides additional information about Oracle Trace that was not included in the Oracle Trace Collector User’s Guide.
• Oracle Trace Getting Started—Provides an introduction and overview to the Oracle Trace software.
• Oracle Trace Monitor User’s Guide—Describes how to use the online display capabilities of the Oracle Trace for OpenVMS Monitor.
Conventions

The special symbols used in this book are:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTRL/x</td>
<td>This symbol tells you to press the CTRL (control) key and hold it down while pressing the specified letter key.</td>
</tr>
<tr>
<td>BOLD</td>
<td>Bold lettering in text indicates the definition of a new term.</td>
</tr>
<tr>
<td>[]</td>
<td>Brackets indicate optional elements.</td>
</tr>
<tr>
<td>...</td>
<td>Horizontal ellipsis in an example indicate that you can enter additional parameters, values, or information.</td>
</tr>
<tr>
<td>. . .</td>
<td>Vertical ellipsis in an example means that information not directly related to the example has been omitted.</td>
</tr>
<tr>
<td>$</td>
<td>The dollar sign is used to indicate the DCL prompt. This prompt may be different on your system.</td>
</tr>
</tbody>
</table>

References to Products

The Oracle Trace for OpenVMS documentation often refers to products by their abbreviated names:

- Oracle Trace for OpenVMS software is referred to as Oracle Trace.
- HP 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.
Preparing to Install Oracle Trace

This chapter discusses the preparations and requirements necessary for installing Oracle Trace release 7.2.

Oracle Trace provides online release notes. Oracle strongly recommends that you read the release notes before proceeding with the installation. For information on accessing the online release notes, see Section 2.1.1.

1.1 Required Operating System Components

Oracle Trace release 7.2 is available for the HP OpenVMS Industry Standard 64 for Integrity Servers (OpenVMS I64) and OpenVMS Alpha operating systems. Oracle Trace requires OpenVMS Version 8.2-1 or later for the OpenVMS I64 operating system, or OpenVMS Version 8.2 for the OpenVMS Alpha operating system.

1.2 Prerequisite and Optional Software

This section discusses the software you must have installed on your system before installing Oracle Trace. The section also includes information about optional software that you can use together with Oracle Trace.

Oracle Trace release 7.2 requires Oracle Rdb release 7.2 or later.

Oracle Trace release 7.2 is compatible with the following software products:

- ALL–IN–1
- OpenVMS ACMS
- Oracle CODASYL DBMS
1.3 OpenVMS Cluster Considerations

To use Oracle Trace in a cluster environment, specify EPC$ROOT (when prompted during the installation) to be on a common shared disk for all nodes that will run Oracle Trace.

If you are installing Oracle Trace for OpenVMS in a mixed cluster environment, you must perform the installation procedure on each of the system disks in the cluster. The Oracle Trace software distinguishes the group of nodes booted from each system disk as a separate cluster for cluster operations using Oracle Trace commands. Alternately, you can specify EPC$ROOT to point to a cluster-wide accessible directory for all nodes comprising the mixed cluster. Oracle Trace would then treat all nodes in the mixed cluster as members of a single cluster.

1.4 Preparing Your System and the Installing Account

The following sections discuss various requirements for installing Oracle Trace.

1.4.1 Time

The installation takes approximately 10 to 20 minutes, depending on your type of media and your system configuration.

1.4.2 Privileges

To install Oracle Trace, you must be logged in to an account that has SETPRV or at least the following privileges:

<table>
<thead>
<tr>
<th>Privilege</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTPRI</td>
</tr>
<tr>
<td>DETACH</td>
</tr>
<tr>
<td>SYSGBL</td>
</tr>
<tr>
<td>SYSPRV</td>
</tr>
<tr>
<td>BYPASS</td>
</tr>
<tr>
<td>NETMBX</td>
</tr>
<tr>
<td>SYSLCK</td>
</tr>
<tr>
<td>TMPMBX</td>
</tr>
<tr>
<td>CMKRNL</td>
</tr>
<tr>
<td>PRMGBL</td>
</tr>
<tr>
<td>SYSNAM</td>
</tr>
<tr>
<td>WORLD</td>
</tr>
</tbody>
</table>

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

1.4.3 Disk Space

The installation procedure checks your system during installation and determines whether you are in a cluster or standalone environment. On a standalone system, the installation creates a smaller administration database. If you later add this standalone machine to a cluster, or build a cluster around the standalone node, you must reinstall the Oracle Trace software so that the installation procedure creates the larger cluster administration database. See the EXTRACT DEFINITION command in the Oracle Trace Collector User’s Guide.
Guide for information on how to move existing facility definitions from one administration database to another.

Table 1–1 summarizes the storage requirements during and after installation for the Full, Collector, Monitor and Reporter Versions of Oracle Trace. Note that the requirements for an upgrade may be higher because the installation procedure attempts to convert existing history and administration databases to the release 7.2 format.

### Table 1–1 Disk Space Requirements for Oracle Trace

<table>
<thead>
<tr>
<th>Version</th>
<th>Blocks During Installation</th>
<th>Blocks After Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Trace for OpenVMS Full License</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standalone version</td>
<td>23,30000</td>
<td>14,100</td>
</tr>
<tr>
<td>Oracle Trace for OpenVMS Full License</td>
<td>26,900</td>
<td>18,100</td>
</tr>
<tr>
<td>Cluster version</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporter</td>
<td>15,300</td>
<td>1700</td>
</tr>
<tr>
<td>Monitor</td>
<td>12,900</td>
<td>5000</td>
</tr>
<tr>
<td>Collector</td>
<td>20,900</td>
<td>11,200</td>
</tr>
</tbody>
</table>

During the installation, you can put the Oracle Trace root directory (EPC$ROOT) on any device that is accessible from all nodes in your cluster. Table 1–2 shows the disk space requirements for each device. You should plan for additional space on the EPC$ROOT device to accommodate the history database (EPC$HISTORY_DB) and any dump files created by Oracle Trace in the case of a bugcheck. If disk quotas are enabled on the EPC$ROOT device, the EPC$SERVER account is given a quota of 100,000 blocks.

### Table 1–2 Permanent Disk Space Requirements for Oracle Trace Full or Collector Versions Using Two Devices

<table>
<thead>
<tr>
<th>Configuration</th>
<th>System Disk</th>
<th>EPC$ROOT Disk</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standalone</td>
<td>5,900</td>
<td>8,200</td>
<td>23,300</td>
</tr>
<tr>
<td>Cluster</td>
<td>9,700</td>
<td>8,400</td>
<td>26,900</td>
</tr>
</tbody>
</table>

To determine the number of free disk blocks on the current system disk, enter the following command at the DCL prompt:
1.4.4 System Parameters

Installing Oracle Trace requires certain system parameter settings. Table 1–3 lists the minimum required system parameter values for the installation. Depending on the kinds of programs and applications running at your site, you might need higher values for some settings.

Table 1–3 Required System Parameter Values

<table>
<thead>
<tr>
<th>System Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLISYMTBL¹</td>
<td>250</td>
</tr>
<tr>
<td>GBLPAGES</td>
<td>105 available pages</td>
</tr>
<tr>
<td>GBLSECTIONS</td>
<td>8 available sections</td>
</tr>
<tr>
<td>LOCKIDTBL_MAX²</td>
<td>2048 entities</td>
</tr>
<tr>
<td>MAXBUF²</td>
<td>1200 bytes</td>
</tr>
<tr>
<td>PROCSECTCNT</td>
<td>32 sections</td>
</tr>
<tr>
<td>RESHASHTBL</td>
<td>512 entries</td>
</tr>
<tr>
<td>SRPCOUNTV</td>
<td>2048 packets</td>
</tr>
<tr>
<td>VIRTUALPAGECNT³</td>
<td>20000</td>
</tr>
</tbody>
</table>

¹The CLISYMTBL dynamic system parameter must be set to a minimum value of 250 during the installation procedure. If the current CLISYMTBL setting is less than 250, you can lower the setting to its original value once the installation is finished.

²These dynamic system parameters must be set permanently to values equal to or greater than the values listed. Do not lower these values after the installation.

³This parameter should be set high to facilitate formatting of large data collection files and reporting on large formatted databases. You might need to raise this parameter to 50,000.

The following sections show you how to:

- Check system parameter values
- Calculate values for the GBLPAGES and GBLSECTIONS system parameters
- Change parameter values with the VMS AUTOGEN command procedure
- Set dynamic parameters (such as CLISYMTBL) with the VMS System Generation Utility (SYSGEN)
1.4.4.1 Checking System Parameter Values

To check the values of your system parameters, enter the following command at the DCL prompt to invoke the System Generation Utility:

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

At the SYSGEN> prompt, enter the SHOW command to display the value of a system parameter. The values displayed should equal or exceed the values of the parameters listed in Table 1–3. The following command displays the value for the MAXBUF system parameter:

```
SYSGEN> SHOW MAXBUF
```

After checking the parameters by using the SHOW command, enter the EXIT command at the SYSGEN> prompt to return to DCL level.

1.4.4.2 Calculating the Values for GBLPAGES and GBLSECTIONS

To install and run Oracle Trace, you must have sufficient free global pages and global sections. You must first find out how many free global pages and sections you have on your system. Then use AUTOGEN if you need to increase the GBLPAGES and GBLSECTIONS system parameters.

Use the WRITE command with the F$GETSYI lexical function to find the number of free global pages and global sections. The following example shows how to get this information at your terminal (the default for SYS$OUTPUT):

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

If the values displayed by the system are greater than the values in Table 1–3, you do not need to increase the values for these parameters. If the values of free global pages or global sections are less than the values in Table 1–3, you must increase the system parameter settings.

Section 1.4.4.3 describes the procedures for increasing these values by using AUTOGEN. Refer to the OpenVMS System Management Subkit for information on using AUTOGEN.
1.4.4.3 Changing System Parameter Values with AUTOGEN

You use the AUTOGEN command procedure to change system parameters. AUTOGEN automatically adjusts values for parameters that are associated with the values you reset manually. To change system parameters with AUTOGEN, edit the following file:

SYS$SYSTEM:MODPARAMS.DAT

Use an editor to access the file. To change a parameter value that is already listed in this file, delete the current value associated with that parameter and enter the new value.

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

WSMAX = 1024

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

ADD_GBLPAGES = 2000

After you have made all your changes, exit from the editor and run the AUTOGEN procedure to recalculate your system parameters. Enter the following command at the DCL prompt:

$ @SYS$UPDATE:AUTOGEN GETDATA REBOOT

When you specify REBOOT, AUTOGEN performs an automatic system shutdown and then reboots the system when it has finished. Any users logged on to the system are immediately disconnected during the shutdown. The automatic reboot puts the new parameter values into effect.

The AUTOGEN Utility automatically adjusts some of the SYSGEN parameters based on the consumption of resources since the last reboot. 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 using AUTOGEN, see the OpenVMS System Management Subkit.

1.4.4.4 Setting Dynamic System Parameter Values

You use the System Generation (SYSGEN) Utility to set dynamic parameters. Dynamic parameters changed with the SYSGEN WRITE ACTIVE command become active immediately without any need to reboot your system. In fact, rebooting returns dynamic system parameter values to their previous settings.
Once you change dynamic parameter values, you should complete the installation before rebooting the system. After you finish with the installation, you can reset the dynamic parameters to their previous values or let them reset automatically when you next reboot your system.

Oracle Trace requires the following dynamic parameter value:

- **CLISYMTBL**—250

If the dynamic parameter values on your system are less than the values previously listed, use the following series of commands to change the values. This example changes the CLISYMTBL value to 250:

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

### 1.4.5 Process Account Quotas

The account you use to install Oracle Trace must have sufficient quotas to enable you to perform the installation. Table 1–4 summarizes the process quotas required for the installing account.

<table>
<thead>
<tr>
<th>Account Quota</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTLM</td>
<td>24</td>
</tr>
<tr>
<td>BIOLM</td>
<td>20</td>
</tr>
<tr>
<td>BYTLM</td>
<td>20480</td>
</tr>
<tr>
<td>DIOLM</td>
<td>20</td>
</tr>
<tr>
<td>ENQLM</td>
<td>1800</td>
</tr>
<tr>
<td>FILLM</td>
<td>50</td>
</tr>
<tr>
<td>PGFLQUO&lt;sup&gt;1&lt;/sup&gt;</td>
<td>20000</td>
</tr>
<tr>
<td>WSEXMENT&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2048 or greater</td>
</tr>
<tr>
<td>WSQUOTA&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1024 or greater</td>
</tr>
</tbody>
</table>

<sup>1</sup>These parameters need to be set high to facilitate the formatting of large data collection files.

User account quotas are stored in the file SYSUAF.DAT. Use the OpenVMS Authorize Utility to verify and change user account quotas. First set your directory to SYSSYSTEM and then run AUTHORIZE:
At the UAF> prompt, use the SHOW command with an account name to check a particular account. For example:

UAF> SHOW SMITH

To change a quota, use the MODIFY command. MODIFY has the following format:

```
MODIFY account-name /quota-name=NNN
```

The following example changes the FILLM quota for the SMITH account and then exits from the utility:

```
UAF> MODIFY SMITH /FILLM=50
UAF> EXIT
```

After you exit from the utility, the system displays messages indicating whether or not changes were made. Once the changes have been made, you must log out and log in again for the new quotas to take effect.

For more information on modifying account quotas, see the OpenVMS Authorize Utility Manual.

### 1.4.6 VMSINSTAL Requirements

When you invoke VMSINSTAL, it checks whether or not you have:

- Set your default device and directory to SYS$UPDATE
- Logged in to a privileged account
- Provided adequate quotas for installation
- DECnet running
- Any users logged in to the system

See Table 1–4 for the minimum quotas required for the installation account. 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 RETURN. Then correct the problem and restart the installation.
1.4.7 Backing Up Your System Disk
At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Oracle recommends that you do a system disk backup before installing any software.

Use the backup procedures established at your site. For details on performing a system disk backup, see the *OpenVMS Backup Utility Manual*.

1.4.8 Oracle Trace Requirements
During the installation procedure, the Oracle Trace software checks if:

- Oracle Rdb release 7.2 or later is installed, and the Oracle Rdb monitor process is active on the system. To start the Oracle Rdb monitor, issue the following command:

  \$ @SYS$STARTUP:RMONSTART

- The Oracle Trace Registrar process is running, to learn if this is a reinstallation. For reinstallations, be sure to first stop the Oracle Trace Registrar process by issuing the following command on all nodes in the OpenVMS cluster:

  \$ COLLECT STOP SYSTEM/ABORT

In addition, all users should exit from the Oracle Trace command environment. If any user is bound to the history or administration databases, the installation procedure will not be able to convert those files to the new 7.2 format.

- ACMS/EPC is installed on the system. For systems currently running ACMS/EPC, stop the Registrar process by issuing the following command:

  \$ EVENT COLLECT SHUTDOWN

In addition, Oracle recommends that before starting an upgrade, you first cancel all active collections, then shut down the Registrar process. After the installation, all registered images should be restarted.

If you do not cancel all collections before an upgrade, any processes that are gathering data will continue to do so until the collection interval ends, or the image terminates, whichever comes first. Changes to facility definitions might make it impossible to format or merge the data collection files produced by previous versions of Oracle Trace.

After an upgrade, any processes which had been registered should be restarted so that they will reregister and be available for collection.
This chapter describes how to install Oracle Trace. Section 2.2 contains a step-by-step description of the installation procedure.

2.1 General Information

This section includes information about the following topics:

- Determining files and logical names added to your system
- Running the Installation Verification Procedure (IVP)
- Aborting the installation

2.1.1 Accessing the Online Release Notes

Oracle Trace provides online release notes. You must specify OPTIONS N when you invoke VMSINSTAL to see the question about online release notes. This question comes near the beginning of the installation.

You should review the release notes in case they contain any information about last-minute changes in the installation procedure. If you are starting the installation over again and have already reviewed the release notes, you do not need to specify OPTIONS N.

Once Oracle Trace has been installed, the release notes are located in the following file:

SYS$HELP:EPC072.RELEASE_NOTES

2.1.2 Determining the Logical Names and Files Added to the System

The following logical names are defined on your system:

- EPC$ADMIN_DB
- EPC$DATABASE_DIR
- EPC$EXAMPLES
- EPC$HISTORY_DB
• EPC$HOME_DIR
• EPC$ROOT

See the end of Appendix A for a list of all files created by the installation procedure.

To remove Oracle Trace from your system, use the deinstallation procedure in SYS$UPDATE:EPC$DEINSTAL.COM. See Section 3.8 for information.

2.1.3 Running the Installation Verification Procedure (IVP)

The Installation Verification Procedure (IVP) for Oracle Trace verifies the installation. During the installation, you are asked if you want to run the IVP as part of the installation. If you respond YES, VMSINSTAL runs the IVP. Oracle recommends that you run the IVP to make sure that the Oracle Trace software is installed correctly.

After Oracle Trace is installed, you can run the IVP independently to verify that the software is available on your system. You might need to run the IVP after a system failure to make sure that users can access Oracle Trace.

2.1.4 Cancelling the Installation

To cancel the installation procedure at any time, press CTRL/Y. When you press CTRL/Y, the installation procedure deletes all files it has created up to that point and exits. You can then start the installation again.

2.2 The Installation Procedure

The Oracle Trace installation procedure consists of a series of questions and informational messages.

2.2.1 Invoking VMSINSTAL

To start the installation, invoke the VMSINSTAL command procedure from a privileged account, such as the SYSTEM account. VMSINSTAL is in the SYS$UPDATE directory. Use the following syntax to invoke VMSINSTAL:

@SYS$UPDATE:VMSINSTAL saveset-name device-name OPTIONS N

saveset-name
The installation name for the component. For Oracle Trace, use the following installation name:

EPC0720
device-name
The name of the device on which you plan to mount the media. It is not necessary to use the console drive for this installation. However, if you do use the console drive, you should replace any media you removed once the installation is complete.

OPTIONS N
An optional parameter that indicates you want to see the release notes question. If you do not include the OPTIONS N parameter, VMSINSTAL does not ask you about the release notes. You should review the release notes before proceeding with the installation in case they contain new information about the installation.

Note that there are several other options you can select when you invoke VMSINSTAL. See the OpenVMS documentation on software installation in the OpenVMS System Management Subkit for information on these options. If you specify more than one option, separate the options with commas (OPTIONS A,N).

The following example invokes VMSINSTAL to install Oracle Trace from a disk directory that contains the kit saveset and shows the system response. This example uses the OPTIONS N release note parameter:

$ @SYS$UPDATE:VMSINSTAL EPC0720 DISK1:[TRACE072.KIT] OPTIONS N

OpenVMS Software Product Installation Procedure V8.2-1

It is 14-JUL-2005 at 17:09.
Enter a question mark (?) at any time for help.

If you do not supply either the product name or the device name, VMSINSTAL prompts you for this information later in the installation procedure. VMSINSTAL does not prompt you for any options, so be sure to include OPTIONS N on the VMSINSTAL command line to access the release notes during the installation.

2.2.2 Installation Questions

This section discusses the questions that appear during the installation. Appendix A contains a sample installation procedure showing how the questions can be answered.

Each question asked during the installation procedure is marked with an asterisk (*) at the beginning of the line. Some questions show the default response in brackets, for example [YES]. To use the default response, press the RETURN key.
1. Verifying interactive login status

VMSINSTAL displays a list of all active processes. It then asks if you want to continue the installation. NO is the default response to the question.

%VMSINST-W-ACTIVE, The following processes are still active:

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

2. Verifying system backup

VMSINSTAL asks if you are satisfied with your system backup. You should always back up your system disk before performing an installation. If you are satisfied with the backup of your system disk, press RETURN. Otherwise, enter NO to discontinue the installation. After you back up your system disk, you can restart the installation.

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

3. Mounting the media

Mount the distribution volume on the device you specified when you invoked VMSINSTAL.

The following products will be processed:

EPC0 V7.20

Beginning installation of EPC0 V7.20 at 17:09

%VMSINST-W-RESTORE, Restoring product saveset A...

4. Specifying release note options

If you specified OPTIONS N when you started the installation, VMSINSTAL asks a release notes question. There are four options:

The display is as follows:

Release notes included with this kit are always copied to SYSSHELP.

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]: 2
If you select option 1, VMSINSTAL displays the release notes immediately on the console terminal. You can terminate 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]:

You can press RETURN to send the file to the default output print device or you can enter another queue name.

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

VMSINSTAL automatically copies the Oracle Trace release notes to the system help directory. The file specification is:

SYSHELP:EPC072.RELEASE_NOTES

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

5. Accommodating multiple versions of Oracle Rdb

If you are running multiple versions of Oracle Rdb, you must select one version to use for the Oracle Trace databases. The Oracle Trace release 7.2 installation procedure attempts to list your current Oracle Rdb versions and prompts you to choose one of them.

The following messages and questions are displayed only if the installation procedure detects that you have multiple versions of Oracle Rdb installed:

Your current process level version of Oracle Rdb is as follows

Current PROCESS Oracle Rdb environment is version V7.2-050 (MULTIVERSION)
Current SYSTEM Oracle Rdb environment is version V7.2-050 (MULTIVERSION)

The following versions of Oracle Rdb are installed on your system

*RDBVMS$INSTALLED_VERSIONS" = ""V.7.2-050" (LMN$PROCESS_TABLE)
= ""V.7.2-00"

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

You have multiple versions of Oracle Rdb on your system. An asterisk beside the version indicates a multiversion variant of ORACLE Rdb and is not part of the actual version name. The different versions are:

* V7.2-050
* V7.2-00

******************************************************************************
The default version of ORACLE Rdb to be used for this installation is: 7.2.
The corresponding ORACLE Rdb monitor must be running.

* Do you want to use this version of Rdb [YES]? YES

Next, you have a choice to set the system-wide Oracle Rdb version to the same as the one you chose for installing Oracle Trace. If the system-wide version is different, or if the correct monitor is not running, you will not be able to start the EPC$REGISTRAR detached process as it will be unable to bind to the Oracle Trace databases. The EPC$STARTUP.COM procedure that creates this process does not check for the correct version or for the existence of the correct monitor if you are using multiple version Oracle Rdb. However, in some cases you may want the Oracle Trace databases built using a different version of Oracle Rdb so that they will be ready when the system version of Oracle Rdb is upgraded.

The detached process EPC$REGISTRAR will be started with 7.2, as it is the default version.
If you wish to at this time, you may change this to be the default system version of Oracle Rdb as well.

* Do you want to set the Oracle Rdb version system-wide to the above version [YES]? YES

It is important to note that if you are upgrading Oracle Trace and choose to build the Oracle Trace databases using a version of Oracle Rdb older than the current databases, the extraction of data from the administration database may fail. In this case, you will need to extract the facility definitions yourself prior to the installation. All collection and selection data will be lost when new databases are built during the installation. After the installation, you can reinsert the facility definitions into the administration database. See the Oracle Trace Collector User's Guide for more information on extracting and inserting facility definitions.

See the Oracle Rdb Installation and Configuration Guide, Oracle Rdb Release Notes, and Oracle Rdb user documentation for information on using multiple versions of Oracle Rdb on your system.

If you answer "YES" to the using the process default prompt, the installation continues.
6. Specifying the device for the Oracle Trace root directory

You must specify a device for EPC$ROOT that is accessible from all nodes in your cluster. You usually put EPC$ROOT on your system disk, but you can use any disk that is accessible cluster-wide.

The default file location for EPC$ROOT is SYS$SYSDEVICE:[EPC].

If you are installing Oracle Trace in a mixed cluster, specify EPC$ROOT to point to a cluster-wide accessible device for each group of nodes comprising the mixed cluster. Oracle Trace distinguishes each group as a separate cluster for cluster options on Oracle Trace commands. Alternately, you can specify EPC$ROOT to point to a device that is accessible cluster-wide. Oracle Trace treats all nodes in the mixed cluster as members of a single cluster.

7. Allowing access to the administration and history databases

With Oracle Rdb, only creators of a database or users with BYPASS or SYSPRV privileges may read or modify a database. The Oracle Trace installation procedure allows you to grant non-privileged users access to the Oracle Trace administration and history databases.

******************************************************************
SYSTEM MANAGER:
By adding PUBLIC access to the Oracle Trace databases you are allowing all users on your system access to Oracle Trace. If you want to allow only certain users to access Oracle Trace, enter No at the prompts and add the users directly via the Oracle Trace SET ACCESS command after the installation.
******************************************************************

* Do you want to add public access to the ADMINISTRATION database [YES]? Y
* Do you want to add public access to the HISTORY database [YES]? Y

For reinstallation or upgrades from previous versions of Oracle Trace, the existing administration and history databases are converted to the new release 7.2 format. Access to the files is automatically granted to all users.

8. Creating the EPC$SERVER account

The installation requires an EPC$SERVER account. You must choose a unique UIC and password for this account. The UIC value, specified in octal, is a group and member number separated by a comma and enclosed in brackets. Oracle recommends that you use a unique member from within the 376 UIC group. Use the VMS Authorize Utility to list the accounts within the 376 UIC group. For example:
$ SET DEFAULT SYS$SYSTEM
$ RUN AUTHORIZE
UAF> SHOW/IDENTIFIER/USER=[376,*]

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$MOM$SERVER</td>
<td>[000376,000001]</td>
<td>NORESOURCE NODYNAMIC</td>
</tr>
<tr>
<td>PHONE$SERVER</td>
<td>[000376,000372]</td>
<td>NORESOURCE NODYNAMIC</td>
</tr>
<tr>
<td>FAL$SERVER</td>
<td>[000376,000373]</td>
<td>NORESOURCE NODYNAMIC</td>
</tr>
<tr>
<td>MAIL$SERVER</td>
<td>[000376,000374]</td>
<td>NORESOURCE NODYNAMIC</td>
</tr>
<tr>
<td>NOTES$SERVER</td>
<td>[000376,000377]</td>
<td>NORESOURCE NODYNAMIC</td>
</tr>
</tbody>
</table>

Choose a unique member number for the EPC$SERVER account:

*******************************************************************************
This installation requires the creation of the EPC$SERVER account. You MUST choose a UIC and password for this account.
*******************************************************************************
*******************************************************************************
The installation procedure will not proceed until you enter a valid user identification code (UIC) for the EPC$SERVER account.
*******************************************************************************

* Enter UIC to be used for EPC$SERVER account (e.g. [376,750]): [376,750]

Next, you must specify a password for the new EPC$SERVER account. The password can be from 15 to 31 characters in length, and can include alphanumeric characters, dollar signs ($), and underscores (_). For security reasons, your input is not echoed on the terminal.

For reinstallations or upgrades from previous versions of Oracle Trace, the old EPC$SERVER account will continue to be used. However, you must still enter a new password for it.

*******************************************************************************
The entire installation will FAIL if you do not enter a valid password for the EPC$SERVER account. This installation procedure requires at least 15 characters for the EPC$SERVER password. Valid characters for a password are:

A through Z
a through z
0 through 9
$ (dollar sign)
_ (underscore)
As with the DCL SET PASSWORD command, your input will not appear on the terminal.

Please enter a password of at least 15 characters.

Password:

* Verification:

Note that if disk quotas are enabled on the EPC$ROOT device, the EPC$SERVER account is given a quota of 100,000 blocks.

9. Choosing to run the Installation Verification Procedure (IVP)

The installation procedure now asks if you want to run the Installation Verification Procedure. The IVP for Oracle Trace checks to be sure that the installation is successful. Oracle recommends that you run the IVP.

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

10. Choosing to purge files

You have the option to purge files from previous versions of Oracle Trace that are superseded by this installation. Purging is recommended; however, if you need to keep files from the previous version, enter “NO” in response to the question.

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

If you answer “NO” and then choose to purge the Oracle Trace directories at some later time, note that some files are not replaced by the release 7.2 installation and therefore will not be purged. You should delete the following files:

- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA03.RDB
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA03.SNP
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA04.RDB
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA04.SNP
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA07.RDB
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA07.SNP
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA08.RDB
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA08.SNP
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA09.RDB
- EPC$DATABASE_DIR:EPC$ADMIN_DB_AREA09.SNP

11. Converting the history and administration databases

For reinstallations or upgrades from previous versions of Oracle Trace, the existing administration and history databases are automatically converted to the new release 7.2 format.
During the conversion of the administration database, the installation procedure checks for facility definitions with characteristics exclusive to Oracle Trace Version 1.0 and Version 1.0A, namely, events that are both point and duration. These facility definitions cannot be converted to the release 7.2 format and must be deleted from the administration database. The installation procedure lists any illegal facility definitions and gives you the option of cancelling the installation at that time. You can use the Oracle Trace DELETE DEFINITION command to remove the offending definitions and then restart the installation of Oracle Trace 7.2. If you choose to continue the installation without deleting the offending facility definitions, a new (empty) database is created and your old database is deleted.

Note that if any user is bound to the history or administration databases, the installation procedure will not be able to convert the database.

2.2.3 Informational Messages

At this point, the installation procedure displays a number of informational messages that report on the progress of the installation. There are no further questions. 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, and updates DCL tables, if necessary. If you chose to have files purged, that work is done now. The following message is displayed:

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

2.2.4 Running the Installation Verification Procedure

If you chose to run the IVP, VMSINSTAL runs it now. When the IVP runs successfully, you see the following display:

*        IVP Completed Successfully        *
*                                              *
*****************************************************************************

The IVP procedure is stored in SYS$TEST. You can run it any time you want to confirm that Oracle Trace is performing correctly. Use the following command to execute the procedure:

$ @SYS$TEST:EPC$IVP

The IVP displays the Monitor Process window as shown in Figure 2–1.
2.2.5 Completing the Installation Procedure

The following messages indicate that the VMSINSTAL procedure is complete:

Installation of EPC V7.2 completed at 17:30
VMSINSTAL procedure done at 17:30

You can now log out of the privileged account:

$ LOGOUT
SYSTEM logged out at 31-JAN-1991 17:31:10.60

Note that 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 you want to restore these symbols, you should log out and log in again.

2.3 Error Recovery

If errors occur during the installation itself or when the IVP is running, VMSINSTAL displays failure messages. If the installation fails, you see the following message:

%VMSINSTAL-E-INSFAIL, The installation of EPC V7.2 has failed.
If the IVP fails, the error is displayed, immediately preceding these messages:

```
* The Oracle Trace V72-0 IVP has failed.
* The reason for the failure is listed above.
* You should: 1. Correct the problem indicated
  2. Execute $@SYS$TEST:EPC$IVP.COM
```

Errors can occur during the installation if any of the following conditions exist:

- The operating system version is incorrect.
- A prerequisite software version is incorrect.
- Quotas necessary for successful installation are insufficient.
- System parameter values for successful installation are insufficient.
- The VMS help library is currently in use.

For descriptions of the error messages generated by these conditions, see the VMS documentation on system messages, recovery procedures, and VMS software installation. If you are notified that any of these conditions exist, you should take appropriate action as described in the message. (You might need to change a system parameter or increase an authorized quota value.) For information on installation requirements, see Chapter 1.
After installing Oracle Trace, you need to perform the following tasks:

- Insert registered facility definitions into the Oracle Trace administration database.
- Edit the system startup and shutdown files.
- Set user account quotas.
- Modify system parameter settings.

For cluster installations, you must:

- Reinstall (using the OpenVMS INSTALL utility) the image SYS$SHARE:DCLTABLES.EXE on each node that will be running Oracle Trace 7.2.
- Execute the SYS$STARTUP:EPC$STARTUP.COM startup file on each node that will be running Oracle Trace. Note that this is executed automatically as part of the IVP on the node you used for the installation.

This chapter also explains how to run the Installation Verification Procedure (IVP) independently after the software is installed.

3.1 Inserting Facility Definitions the First Time You Install Oracle Trace

If you are installing Oracle Trace for the first time, you must enter facility definitions into the Oracle Trace administration database using a command procedure called EPC$INSERT.COM.

To insert the facility definitions, execute the command procedure, as follows:

$ @EPC$EXAMPLES:EPC$INSERT.COM

The command procedure prompts you to verify each facility definition before it inserts the definition into the administration data base.
If you want to add all of the facility definitions from the Oracle Trace facility library, SYS$LIBRARY:EPC$FACILITY.TLB, into the administration database and submit the command procedure as a batch job, use the following command:

$ @EPC$EXAMPLES:EPC$INSERT.COM ALL

In both cases, the EPC$INSERT procedure checks for the existence of the Oracle Trace facility library, located in SYS$LIBRARY:EPC$FACILITY.TLB.

The command procedure does not move any facility definitions which have events defined as both point and duration into the release 7.2 administration database.

Note

After you run the EPC$INSERT.COM command file, you could have facility definitions for more than one version of a facility in the facility library. If this happens, you must take care to explicitly specify the correct facility version when you create a selection for a facility. If you do not supply a facility version on the CREATE SELECTION command, Oracle Trace uses the facility definition with the most recent creation date as the default version.

Subsequent versions of the layered products automatically insert their facility definitions into the Oracle Trace administration database as part of their installation procedures. That is why you have to run just the EPC$INSERT.COM command procedure when you are installing Oracle Trace for the first time.
3.2 Editing the System Files

You must edit the system startup and shutdown files to provide for automatic
startup and shutdown of Oracle Trace when your system is rebooted.

Add the command line that starts Oracle Trace to the system startup file
SYS$MANAGER:SYSTARTUP_VMS.COM. You must position this new
command line after the line that activates the Oracle Rdb monitor process.

$! Start the Oracle Rdb monitor process
$ @SYS$STARTUP:RMONSTART.COM
$! Start Oracle Trace
$ @SYS$STARTUP:EPC$STARTUP.COM

Add the Oracle Trace shutdown procedure to the system shutdown file
SYS$MANAGER:SYSHUTDWN.COM. You must position this new command
line before the line that stops the Oracle Rdb monitor process.

$! Shut down Oracle Trace and abort all active data collection
$ COLLECT STOP SYSTEM /ABORT
$! Wait for Registrar processing to complete
$ WAIT 00:00:30
$! Shut down the Oracle Rdb monitor process
$ @SYS$MANAGER:RMONSTOP.COM

3.3 Modifying System Parameters

The installation for Oracle Trace requires that you raise the values of the
CLISYMTBL and CTLPAGES system parameters. Once the installation is
complete, lower these values to ensure efficient system performance. Table 1–3
contains the values for the parameters under normal operations.

If you typically format very large data collection files, you may need to increase
the enqueue limit quota (ENQLM) on your process. If you do this, you must
also raise the corresponding system parameters. If you increase your ENQLM,
the lock ID table (LOCKIDTBL_MAX) must be set to a value at least as high
as the ENQLM. Also, the resource hash table (RESHASHTBL) should be set to
at least one-quarter the value of the lock ID table.

3.4 OpenVMS Cluster Considerations

Start the Oracle Trace Registrar process on each node for which you want data
collection enabled. Issue the following command on each node:

$ @SYS$STARTUP:EPC$STARTUP.COM
You may need to use the OpenVMS Install utility to replace the DCLTABLES.EXE image on each node:

```
$ INSTALL
INSTALL> REPLACE SYS$SHARE:DCLTABLES.EXE/OPEN/HEADER/SHARE
```

You must log out and back in again for the new DCL tables to take effect. If you do not, your process will not recognize the COLLECT command.

### 3.4.1 Dividing an OpenVMS Cluster

If you have Oracle Trace installed on an OpenVMS cluster and then decide to reorganize the cluster into two or more clusters, you can preserve the facility definitions and selections stored in your administration database. Perform the following steps:

1. Extract EPC$EXT_ADMIN_DB.DB_EXE and EPC$INS_ADMIN_DB.DB_EXE from the EPC0720.A saveset.
2. Shut down the Registrar processes on each node in the cluster by entering the COLLECT STOP SYSTEM /ABORT command on each system.
3. Run the EPC$EXT_ADMIN_DB.DB_EXE image on the original cluster. One EPC$DEF binary file and seven TXT flat files will be placed in the EPC$DATABASE_DIR directory.
4. Divide the cluster.
5. Reinstall Oracle Trace on the original and new clusters.
6. Shut down the Registrars on the nodes used to install Oracle Trace.
7. Run the EPC$INS_ADMIN_DB.DB_EXE image on the original cluster.
8. Copy the EPC$DEF and TXT files to the EPC$DATABASE_DIR directory on the new clusters.
9. Run the EPC$INS_ADMIN_DB.DB_EXE image on the new clusters.
10. Delete the EPC$DEF and TXT files.
11. Restart the Registrars on all nodes (@SYS$UPDATE:EPC$STARTUP).

---

**Note**

You cannot simply back up the original database and then restore it on the new cluster. The Registrar would attempt to start collections on nodes that are no longer part of the original cluster.
3.5 User Account Requirements

To work with Oracle Trace, user accounts on your system must have certain privileges and quotas. The next two sections contain information on these requirements.

3.5.1 Privileges

To use Oracle Trace, each account must have at least the TMPMBX and NETMBX privileges. Use the OpenVMS Authorize Utility to determine whether users have the privileges they require.

3.5.2 User Account Quotas

You must make sure that the appropriate user accounts have sufficient quotas to be able to use Oracle Trace. If you typically format very large collection files (over 50,000 blocks) and generate reports based on large formatted databases, you can improve performance by increasing several of your account quotas. Table 3–1 summarizes the required and optional user account quotas.

Table 3–1 User Account Quotas for Using Oracle Trace

<table>
<thead>
<tr>
<th>Account Quota</th>
<th>Normal Use</th>
<th>Formatting and Reporting on Large Files</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTLM</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>BIOLM</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>BYTLIM</td>
<td>20,480</td>
<td>34,810</td>
</tr>
<tr>
<td>DIOLM</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>ENQLM</td>
<td>1,800</td>
<td>10,000</td>
</tr>
<tr>
<td>FILLM</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>PGFLQUO</td>
<td>20,000</td>
<td>75,000</td>
</tr>
<tr>
<td>PRCLM</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>WSEXTENT</td>
<td>2048</td>
<td></td>
</tr>
<tr>
<td>WSQUOTA</td>
<td>1024</td>
<td></td>
</tr>
</tbody>
</table>

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

```
$ SET DEFAULT SYS$SYSTEM
$ RUN AUTHORIZE
UAF>
```
At the UAF> prompt, use the SHOW command with an account name to check a particular account. For example:

UAF> SHOW SMITH

To change a quota, use the MODIFY command at the UAF> prompt. MODIFY has the following format:

MODIFY account-name /quota-name=NNN

The following example changes the FILLM quota for the SMITH account and then exits from the utility:

UAF> MODIFY SMITH /FILLM=50
UAF> EXIT

After you exit from the utility, the system displays messages indicating whether or not changes were made. Once you have made the changes, the users must log out and log in again for the new quotas to take effect.

3.6 Testing Oracle Trace

If you did not choose to run the IVP as part of the installation procedure, you can run it interactively with the following command:

$ @SYS$TEST:EPC$IVP

Oracle recommends that you run the IVP on every node where you intend to use the Oracle Trace for OpenVMS.

3.7 Enhancing Oracle Trace Performance

After you install Oracle Trace, you might want to adjust your system to enhance performance or lower the use of some system resources. One recommendation is to increase process working set parameters which will speed up Oracle Trace formatting operations and report generations.

After you perform a number of collections on your system, you may wish to create a new version of the history database and purge (or offload) the old one. If you want to have this procedure performed automatically, add the Oracle Trace SET HISTORY/NEW_FILE command to your site-specific startup procedure. This command closes the old database and creates a new one. If you choose to do this, put the command before the execution of EPC$STARTUP so that no history data is lost. For example:

$ COLLECT SET HISTORY/NEW_FILE
$ PURGE/NOLOG/NOCONFIRM/KEEP=2 EPC$HISTORY_DB
$ @SYS$STARTUP:EPC$STARTUP
See the System Management chapter in the *Oracle Trace Collector User’s Guide* for more information on managing Oracle Trace usage.

### 3.8 Deinstalling Oracle Trace

A deinstallation procedure is provided in SYS$UPDATE:

```bash
$ @SYS$UPDATE:EPC$DEINSTAL.COM
```

Prior to removing Oracle Trace from your system, you may wish to move the facility definitions stored in the current administration database into the Oracle Trace facility library (EPC$FACILITY.TLB) located in SYS$SHARE. This text library is referenced during reinstallations of Oracle Trace so that you do not have to reinsert the definitions for layered products or for your own applications.

To list the facility definitions that are already stored in the facility library (and therefore do not need to be moved), issue the following command:

```bash
$ LIBRARY /LIST /FULL SYS$SHARE:EPC$FACILITY.TLB
```

To list the facility definitions that are stored in the Oracle Trace administration database, issue the following command:

```bash
$ COLLECT SHOW DEFINITION /FORMAT=NAMES_ONLY
```

Use the `EXTRACT DEFINITION` command to extract a facility definition from the Oracle Trace administration database. Then use the `INSERT DEFINITION/LIBRARY` command to insert the definition into the facility library. For example:

```bash
$ COLLECT EXTRACT DEFINITION ATM-SAMPLE ATM_FAC_DEF.EPC$DEF -$_$ /VERSION="V7.2"
$ COLLECT INSERT DEFINITION ATM_FAC_DEF.EPC$DEF -$_$ /LIBRARY /REPLACE
```

---

**Note**

If you are extracting definitions from an Oracle Trace Version 1.0 or Version 1.0A administration database, you will be unable to reinsert into Oracle Trace release 7.2 any definitions which have events that are both point and duration. See the *Oracle Trace for OpenVMS Release Notes* for more information.
A

Sample Installation

This appendix contains sample installations of the Oracle Trace for OpenVMS full license. This sample was run on a system that did not have a previous version of Oracle Trace installed.

The installation procedures vary slightly depending on the Oracle Trace option you are installing.

A.1 Example Installation of the Full Oracle Trace Option

@vmsinstall EPC0720 NODE1::DISK1:[TRACE_V07202.IA64.KIT]

OpenVMS Software Product Installation Procedure V8.2-1

It is 14-JUL-2005 at 10:31.
Enter a question mark (?) at any time for help.

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

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

The following products will be processed:

EPC0 V72.0

Beginning installation of EPC0 V72.0 at 10:32

%VMSINSTAL-I-RESTORE, Restoring product save set A ...

%VMSINSTAL-I-REMOVED, Product's release notes have been moved to SYSSHELP.

Installation procedures for: "Oracle Trace V7.2.0"

Be sure you have read the section entitled

"Installation Procedure Requirements"

in the Oracle Trace installation guide before continuing with the installation.

Checking system requirements ...

Your current process level version of Oracle Rdb is as follows

Current PROCESS Oracle Rdb environment is version V7.2-050 (MULTIVERSION)

Current SYSTEM Oracle Rdb environment is version V7.2-050 (MULTIVERSION)

The following versions of ORACLE Rdb are installed on your system
"RDBVMS$INSTALLED_VERSIONS" = "*V7.2-050" (LNM$PROCESS_TABLE)
= "*V7.2-00"

You have multiple of ORACLE Rdb on your system. An asterisk beside the version indicates a multiversion variant of ORACLE Rdb and is not part of the actual version name. The different versions are:
*V7.2-050
*V7.2-00

The default version of ORACLE Rdb to be used for this installation is: 7.2
The corresponding ORACLE Rdb monitor must be running.

* Do you want to use this version of Rdb [YES]?

The detached process EPC$REGISTRAR will be started with 7.2, as it's default version.
If you wish to at this time you may change this to be the default system version of Oracle Rdb as well.

* Do you want to set the Rdb version system wide to the above version [YES]? NO

%You have changed the default Oracle Rdb Version at a level other %than /PROCESS. The RMU symbol may have to be set by users %using Oracle Rdb at this level. This can be done with the %following DCL command: @SYS$SHARE:RDB$SETVER RESET

Current PROCESS Oracle Rdb environment is version V7.2-000 (MULTIVERSION)
Current SYSTEM Oracle Rdb environment is version V7.2-000 (MULTIVERSION)
Current PROCESS SQL environment is version V7.2-050 (MULTIVERSION)
Current PROCESS Rdb/Dispatch environment is version V7.2-050 (MULTIVERSION)
Current SYSTEM SQL environment is version V7.2-050 (MULTIVERSION)
Current SYSTEM Rdb/Dispatch environment is version V7.2-000 (MULTIVERSION)

* Specify device specification for EPC$ROOT [SYS$SYSDEVICE:]
%EPC0-I-LIBRARY, The logical name EPC$ROOT is defined as SYS$SYSDEVICE:[EPC.]

SYSTEM MANAGER:
By adding PUBLIC access to the Oracle Trace databases you are allowing all users on your system access to Oracle Trace. If you want to allow only certain users access to Oracle Trace, enter No at the prompts and add the users directly via the Oracle Trace SET ACCESS command after the installation.

*****************************************************************
* Do you want to add public write access to the ADMINISTRATION database [YES]?
* Do you want to add public write access to the HISTORY database [YES]?
*****************************************************************

An EPC$SERVER account has been found. This account will continue to be used. You will be asked to give a new password for the account.

*****************************************************************
* Please enter carriage return to continue:
*****************************************************************

The entire installation will FAIL if you do not enter a valid password for the EPC$SERVER account. This installation procedure requires at least 15 characters for the EPC$SERVER password. Valid characters for a password are:

- A through Z
- a through z
- 0 through 9
- $ (dollar sign)
- _ (underscore)

As with the DCL SET PASSWORD command, your input will not appear on the terminal.

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

Please enter a password of at least 15 characters.

* Password:
* Verification:

%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMISROOT:[SYSTBST.EPC].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory SYSSYSDEVICE:[EPC.][HOMEDIR].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory SYSSYSDEVICE:[EPC.][DATABASES].
%VMSINSTAL-I-SYSDIR, This product creates system disk directory VMISROOT:[SYSLP.EXAMPLES.EPC].

The sample data file used in the Oracle Trace Monitor User Guide will be copied to EPC$EXAMPLES:DEMO_DATA.DAT. This file is needed to run the Monitor portion of the IVP.
You may delete this file after the installation has completed

* Do you want to run the IVP after the installation [YES]?
* Do you want to purge files replaced by this installation [YES]?

Beginning installation ... 14-JUL-2005 10:33:03.18

If this is an upgrade an attempt will be made to convert the existing Trace databases. If the existing databases are compatible with this version, no conversion will be needed. If no errors are encountered, there will be no more questions.

%VMSINSTAL-I-RESTORE, Restoring product save set B ...

There are no more questions. The remainder of the installation takes approximately 5 minutes on a standalone HP rx2600

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

SYSTEM MANAGER:

The following command line MUST be added to the system startup command file SYSSMANAGER:SYSTARTUP_VMS.COM for all nodes that will be running Oracle Trace.

NOTE: Add this command line after starting Rdb/VMS

    $ @SYSSSTARTUP:EPC$STARTUP.COM

The following command line MUST be added to the system shutdown command file SYSSMANAGER:SYSHUTDWN.COM for all nodes that will be running Oracle Trace.

NOTE: Add this command line before shutting down the Rdb monitor.

    $ COLLECT STOP SYSTEM/ABORT

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

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

All applications instrumented with Oracle Trace must be restarted in order to be able to be part of an active collection.

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

The Oracle Trace Installation Verification Procedure (IVP) has been provided in SYS$TEST

It is invoked using the command:

    $ @SYS$TEST:EPC$IVP.COM

*******************************************************************************
One or more of the following obsolete files will be deleted from the EPC$EXAMPLES directory:

DBMSV41_FAC_DEF.COM
DBMSV42_FAC_DEF.COM
RDBV31_FAC_DEF.COM
ACMSV31_FAC_DEF.EPC$DEF
DBMSV41_FAC_DEF.EPC$DEF
DBMSV42_FAC_DEF.EPC$DEF
RDBV31AB_FAC_DEF.EPC$DEF
RDBV40_FAC_DEF.EPC$DEF
EPC$ATM-PASCAL.DAT

An Oracle Trace Post Installation Procedure has been provided in EPC$EXAMPLES. The purpose of this procedure is to insert ACMS, ALL-IN-1, DBMS, DECforms, RALLY, and Rdb facility definitions into the Oracle Trace administration database on your system.

It is invoked using the command:

$ @EPC$EXAMPLES:EPC$INSERT.COM

The Oracle Trace sample ATM application has been provided in EPC$EXAMPLES.

Sample Installation A–5

Oracle Trace is a layered product that collects and reports on event-based data gathered from layered products and applications that contain Oracle Trace service routine calls. Oracle Trace operates with minimal performance impact on the system and thus can be used in both production and development environments.
Additional HELP is provided within the Oracle Trace command environment and can be viewed with the command:

Press RETURN to continue ...

$ COLLECT HELP

Additional information available:

<table>
<thead>
<tr>
<th>Interface</th>
<th>Release_notes</th>
<th>Error_messages</th>
<th>Sample_application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical_names</td>
<td>IVP</td>
<td>Deinstallation</td>
<td></td>
</tr>
</tbody>
</table>

ORACLE_TRACE Subtopic?
Topic?

Displaying HELP using the Oracle Trace HELP command...

Information available:

%((Execute_Procedure) CANCEL_COLLECTION | Command_Syntax | CREATE
| DELETE | Error_Messages_and_Recovery | EXIT | EXTRACT_DEFINITION
| FORMAT | HELP | INSERT_DEFINITION | MONITOR | Name_Change_Notice
| REPORT | SCHEDULE_COLLECTION | Service_Routines | SET | SHOW
| SPAWN | STOP_SYSTEM |

Creating a facility definition...

%EPC-S-FACCRE, Facility definition EPC$IVP_FAC V1.0 was created

Showing the facility definition...

14-JUL-2005 10:33 Facility Definition Information Page 1

Facility: EPC$IVP_FAC
Number: 750
Version: V1.0 DEFAULT
Creation Date: 14-JUL-2005 10:33
Created By: SYSTEM

Events:

<table>
<thead>
<tr>
<th>Event Name</th>
<th>Event ID</th>
<th>Report Header</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST_EVENT</td>
<td>1</td>
<td>FIRST_EVENT</td>
</tr>
<tr>
<td>SECOND_EVENT</td>
<td>2</td>
<td>SECOND_EVENT</td>
</tr>
</tbody>
</table>

Items:
### Item Name

<table>
<thead>
<tr>
<th>Item Name</th>
<th>ID</th>
<th>Datatype</th>
<th>Max. Size</th>
<th>Usage Type</th>
<th>Item Report Header</th>
<th>Report Width</th>
<th>Char</th>
<th>Rad</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO</td>
<td>101</td>
<td>LONGWORD</td>
<td>4</td>
<td>COUNTER</td>
<td>Buffered I/O</td>
<td>11</td>
<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>DIO</td>
<td>102</td>
<td>LONGWORD</td>
<td>4</td>
<td>COUNTER</td>
<td>Direct I/O</td>
<td>11</td>
<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>PAGEFAULTS</td>
<td>103</td>
<td>LONGWORD</td>
<td>4</td>
<td>COUNTER</td>
<td>Pagefaults</td>
<td>11</td>
<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>PAGEFAULT_IO</td>
<td>104</td>
<td>LONGWORD</td>
<td>4</td>
<td>COUNTER</td>
<td>Pagefault I/O</td>
<td>11</td>
<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>CPU</td>
<td>105</td>
<td>LONGWORD</td>
<td>4</td>
<td>COUNTER</td>
<td>CPU Time</td>
<td>11</td>
<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>CURRENT_PRIO</td>
<td>106</td>
<td>WORD</td>
<td>2</td>
<td>LEVEL</td>
<td>Current Prio</td>
<td>6</td>
<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>VIRTUAL_SIZE</td>
<td>107</td>
<td>LONGWORD</td>
<td>4</td>
<td>LEVEL</td>
<td>Virtual Size</td>
<td>11</td>
<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>WS_SIZE</td>
<td>108</td>
<td>LONGWORD</td>
<td>4</td>
<td>LEVEL</td>
<td>Working Set</td>
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<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>WS_PRIVATE</td>
<td>109</td>
<td>LONGWORD</td>
<td>4</td>
<td>LEVEL</td>
<td>Private WS</td>
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<td>PRT</td>
<td>DEC</td>
</tr>
<tr>
<td>WS_GLOBAL</td>
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<td>4</td>
<td>LEVEL</td>
<td>Global WS</td>
<td>11</td>
<td>PRT</td>
<td>DEC</td>
</tr>
</tbody>
</table>

**Item Groups:**

- **Item Group Name:** RESOURCE_ITEMS

**Item Name**

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
</tr>
<tr>
<td>BIO</td>
</tr>
<tr>
<td>DIO</td>
</tr>
<tr>
<td>PAGEFAULTS</td>
</tr>
<tr>
<td>PAGEFAULT_IO</td>
</tr>
<tr>
<td>CPU</td>
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<tr>
<td>CURRENT_PRIO</td>
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<td>VIRTUAL_SIZE</td>
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<tr>
<td>WS_SIZE</td>
</tr>
<tr>
<td>WS_PRIVATE</td>
</tr>
<tr>
<td>WS_GLOBAL</td>
</tr>
</tbody>
</table>

**Class:** ALL  DEFAULT

**Event Name:** FIRST_EVENT

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<thead>
<tr>
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</thead>
<tbody>
<tr>
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<td></td>
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<td>x</td>
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</table>

14-JUL-2005 10:33  Facility Definition Information  Page 2  Oracle Trace V7.2-02
<table>
<thead>
<tr>
<th>Record Type</th>
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</thead>
<tbody>
<tr>
<td>PAGEFAULTS</td>
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<td></td>
</tr>
<tr>
<td>PAGEFAULT_I0</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>CPU</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>CURRENT_PRIO</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>VIRTUAL_SIZE</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>WS_SIZE</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>WS_PRIVATE</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>WS_GLOBAL</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

**Event Name:** SECOND_EVENT

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Item Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>DIO</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>PAGEFAULTS</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>PAGEFAULT_I0</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>CPU</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>CURRENT_PRIO</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>VIRTUAL_SIZE</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>WS_SIZE</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>WS_PRIVATE</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>WS_GLOBAL</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

Creating the facility selection...

%EPC-S-SELCRE, Selection EPC$IVP_SELECTION was created

Schedule a collection...
%EPC-S-SCHED, Data collection EPC$IVP_COLLECTION is scheduled

Showing the EPC$IVP_COLLECTION collection was scheduled...

Collections scheduled for node BRDBRY

<table>
<thead>
<tr>
<th>Collection Name</th>
<th>Selection Name</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
</table>

Running the IVP test program...

Canceling data collection...

%EPC-S-SCHED_ABTNG, Data collection EPC$IVP_COLLECTION has been set to aborting

Showing the EPC$IVP_COLLECTION collection was canceled...

%EPC-I-SCHED_NOMSGFND, No Collections Found

Showing any errors that may have occurred during collection...

Directory SYS$COMMON:[SYSTEST.EPC]

EPC$DCF.DAT;2 320 14-JUL-2005 10:33:55.38
EPC$DCF.DAT;1 320 28-SEP-2004 14:48:57.00

Total of 2 files, 640 blocks.

Formatting the data collection file...
Generating a Detail Report to epc$ivp_dir:epc$ivp_detail.txt...

Generating a Frequency Report...

14-JUL-2005 10:35 IVP Frequency Report Page 1
Selection: EPC$IVP_SELECTION Oracle Trace V7.2-02
Event: FIRST_EVENT In Facility: EPC$IVP_FAC Version: V1.0
Time Period Occurrences
14-JUL-2005 10:34:00 44
14-JUL-2005 10:35:00 6

14-JUL-2005 10:35 IVP Frequency Report Page 2
Selection: EPC$IVP_SELECTION Oracle Trace V7.2-02
Event: SECOND_EVENT In Facility: EPC$IVP_FAC Version: V1.0
Time Period Occurrences
14-JUL-2005 10:34:00 43
14-JUL-2005 10:35:00 7

14-JUL-2005 10:35 Index Page 3
Selection: EPC$IVP_SELECTION Oracle Trace V7.2-02
Report Index
Facility Name Event Name Join item Page
EPC$IVP_FAC FIRST_EVENT 1
EPC$IVP_FAC SECOND_EVENT 2

****** End of Frequency Report ******

Generating a Summary Report...

14-JUL-2005 10:35 IVP Summary Report Page 1
Selection: EPC$IVP_SELECTION Oracle Trace V7.2-02
Event: FIRST_EVENT In Facility: EPC$IVP_FAC Version: V1.0
Elapsed Buffered CPU Time Current Direct I/O Pagefaults I/O .01sec t Prio

Sample Installation
<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Dev</th>
<th>95 Prct</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.54</td>
<td>5.63</td>
<td>4.433</td>
<td>0.652</td>
<td>5.713</td>
<td>221.69</td>
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<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>-27</td>
<td>-26</td>
<td>-26.02</td>
<td>0.14</td>
<td>-25.74</td>
<td>-1301</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.02</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Dev</th>
<th>95 Prct</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>0.02</td>
<td>0.14</td>
<td>0.29</td>
<td>1</td>
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<tr>
<td></td>
<td>175167</td>
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<td>264</td>
<td>1024.00</td>
<td>0.00</td>
<td>264</td>
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<td>1024</td>
<td>51200</td>
<td>0.00</td>
<td>1024</td>
<td>51200</td>
</tr>
</tbody>
</table>

Selection: EPC$IVP_SELECTION  
Oracle Trace V7.2-02  

%EPC-I-RPQU_BAD_95, 95 Prct for events with counts under 1000 are less precise

---

**Report Index**

14-JUL-2005 10:35  
Index Page 3  
Selection: EPC$IVP_SELECTION  
Oracle Trace V7.2-02  

---

Sample Installation  A–11
Facility Name       Event Name          Join item Page
EPC$IVP_FAC         FIRST_EVENT       1
EPC$IVP_FAC         SECOND_EVENT      2
%EPC-S-RPCL_SUCCESS, Report successfully completed

********** End of Summary Report **********

Deleting the formatted database...
%DELETE-I-FI DEL, SYSSCOMMON:[SYSTEST.EPC]EPC$IVP_DB.RDB;1 deleted (6208 blocks)
%DELETE-I-FI DEL, SYSSCOMMON:[SYSTEST.EPC]EPC$IVP_DB.SNP;1 deleted (64 blocks)
%DELETE-I-TOTAL, 2 files deleted (6272 blocks)
%DELETE-I-FI DEL, SYSSCOMMON:[SYSTEST.EPC]EPC$DCF.DAT;2 deleted (320 blocks)
%DELETE-I-FI DEL, SYSSCOMMON:[SYSTEST.EPC]EPC$DCF.DAT;1 deleted (384 blocks)
%DELETE-W-SEARCHFAIL, error searching for SYSSCOMMON:[SYSTEST.EPC]EPC$IVP_DB.*;*
-RMS-E-FNF, file not found
%DELETE-I-TOTAL, 2 files deleted (704 blocks)

Executing Monitor IVP

Device: WSA3: [super]
Node: 138.2.233.53
Transport: TCPIP
Server: 0
Screen: 0

The Monitor IVP will run against EPC$EXAMPLES:DEMO_DATA.DAT.
If the display looks the same as the illustration in the installation
guide, then the installation has been successful. After the monitor reaches
the end of the sample file, click the OK button in the informational
window to exit and complete the monitor portion of the IVP. It
will take approximately 15 minutes for the monitor to reach the
end of file. If you wish to end the IVP sooner, click the Exit
button from the File menu. See the installation guide for more details

Starting Oracle Trace Monitor

%EPC-S-MONITOR, Monitor spawned successfully

******************************************************************************
* *
Oracle Trace Monitor completed successfully
******************************************************************************

******************************************************************************
* *
* IVP Completed Successfully
* *
******************************************************************************

Installation of EPC0 V72.0 completed at 10:49

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

A–12   Sample Installation
Creating installation data file: VMI$ROOT:[SYSUPD]EPC0720.VMI_DATA

VMSINSTAL procedure done at 10:50

<table>
<thead>
<tr>
<th>!+ Files provided by installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>! Size</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>7</td>
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<tr>
<td>30</td>
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</table>
Sample Installation