

DCE Manager 3.1 Oracle for Paradyne NMS Installation Instructions

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Database

The database versions that are presently being supported are:

- Oracle, version 7.1.6.2 or higher for DCE Manager 3.0.
- Oracle, version 7.2.2.3 or higher for DCE Manager 3.1 and 3.1.1.

NOTE:

DCE Manager 3.1 and 3.1.1 use shared (dynamic) libraries.

Oracle for Workgroups or Oracle Server software purchased from Oracle Corporation can be used for these applications. These sets of software must be able to support Dynamic (shared) libraries. After January 1996 Oracle Corporation applications support the Dynamic libraries.

Oracle Installation Overview

In order to install Oracle, the following sequence of actions must be performed.

Refer to the Oracle documentation booklet *Installation and Configuration Guide* (shipped with your Oracle software) for the particular release of Oracle that you are installing.

Space Requirements

Follow the step-by-step procedure as described in the Oracle *Installation and Configuration Guide* supplied by Oracle to calculate your disk storage and memory needs. The total disk space in megabytes is determined by:

- Types of Oracle utilities to be loaded, e.g., SQL*Net, SQL*Forms.
- Amount of storage to be allocated for the table size, i.e, related to the size of the tables and the number of table records to be stored.

Hard Disk Space

Check to see that you have a minimum of 500 megabytes of free hard disk space before you attempt installation of a minimally configured Oracle database.

Memory

The memory (RAM) requirement is dependent upon the application being installed. For a standalone DCE Manager application, the system with 64 megabytes of RAM is sufficient.

Swap

In order to run the application efficiently, the recommended swap space allocation for both the Solaris and HPUX systems is at least twice the size of the installed RAM in any particular system. If this is not set properly, the operating system will page swap too frequently, reducing the performance.

Preinstallation Tasks

► Procedure

1. Decide on a maximum 4-character Oracle Server database system identifier. This should be an alphanumeric word, e.g., dev1. This is normally referred to as ORACLE_SID.
2. Decide on passwords for the database system administrator (DBA) accounts system and sys. Please make a note of these.
3. If any application requires relinking during installation, for example, during a software upgrade, the following is required:
 - C compiler cc – located under /usr/5bin
 - archiver ar – located under /usr/5bin
 - ranlib – located under /bin
 - relinking requires at least 15 megabytes in directory /tmp
4. As a super user (login as root user), create dba group,
 - Create a group named dba in /etc/group for the DBAs to allow separate database privileges.
 - Example: entry in file /etc/group will look like:
dba:*:101:oracle,vsk,scy,jwh
5. Create an Oracle software owner login.
 - Example in file/etc/passwd:
oracle:321:101:Oracle Login:/home/oracle:/bin/ksh
UID number: between 3 and 32767
Default GID number: between 2 and 32767, corresponding to group named dba.

GCOS field: Specify Oracle software owner for the user name.

Set the Oracle home directory

Set the login shell to example: `/bin/ksh`

6. Create Oracle directory.

NOTE:

This should be done under the file system where you would like the Oracle to be installed. This file system must have approximately 300 megabytes of free hard disk space.

— Example: `mkdir /home/oracle`

For installation on HP platforms only:

Create directory called “oracle_link” with approximately 100 megabytes of free disk space.

— Example: `mkdir /home/oracleexport dba`
`ORACLE_HOME=/home/oraclechown oracle $ORACLE_HOMEchgrp`
`$ORACLE_HOMEchmod 755 $ORACLE_HOME`

If not present, create a local bin directory: `/usr/local/bin`. Ensure that this directory is included in every user’s path.

7. Oracle User variables.

Set the following when logged in as user “oracle”:

At file creation the file permissions are set to read by group and others by the command:

Set `umask 022`

Set `ORACLE_TERM` to e.g. `sun5`

Set `PATH` environment variable, include the following:

`$ORACLE_HOME/bin, /usr/local/bin,`
`/usr/5bin, /bin`

Set the `ORACLE_SID` to e.g. `dev1`

Set the `ORACLE_DOC` to `/home/oracle_doc` if online documentation is being installed.

8. SQL*Net V2 Product: This application is designed to allow Oracle clients to connect to the database across networks. The DCE Manager is designed to operate in a client/server environment. This product is included in the installation phase.

For access to Oracle via the TCP/IP protocol, do the following:

Verify that the network is functioning by using the `ftp` command to do a file transfer between the server on which you are installing Oracle and another system.

Reserve a port for SQL*Net listener by placing the following entry into the `/etc/services` file:

`sqlnet 1521/tcp # For use by oracle sqlnet.`

Preinstallation Tasks for HP

► Procedure

Example: under `$ORACLE_HOME`, enter the following:

```
chown oracle oracle_link
chgrp dba oracle_link
chmod 755 oracle_link
```

1. Using the SAM tool (system administration manager), select the “Disk Devices” menu item under the “Disk & File Systems” item.
2. Double click the CD-ROM displayed record. SAM now displays the CD-ROM’s system name, e.g., “/dev/dsk/c0t3/d0”. “t3” indicates the SCSI address allocated to the CD-ROM.
3. Exit SAM.

NOTE:

Steps 4 and 5 mount this CD-ROM.

4. Click on the Show Devices File menu.
5. At a # prompt, enter: `mount -r -F cdfs /dev/dsk/c0t3d0 /cdrom`
6. Create directory called “oracle_link” with approximately 100 megabytes of free disk space.
7. Open an Xterm window.
8. Change directory to `/cdrom/ORAINST`
Execute the following: `./START.SH` (This will now create a preliminary install mount point under `./oracle_link` directory that was created earlier. This can take approximately 15 minutes.)
9. Change directory to `../oracle_link/orainst`
10. Proceed to Step 5 in the *Main Installation Tasks* section.

Main Installation Tasks

NOTE:

Steps 1-4 in the following procedure apply to a Solaris installation.

► Procedure

1. Mount the CD-ROM.
Log in as a root user.

```
mkdir /cdrom
mount -r -t hsfs /dev/sr0/cdrom else mount -r -t hsfs
/dev/sr1/cdrom
```

-
2. Log in as an Oracle user.
 3. Check the ORACLE_TERM setting.
 4. Change directory to /cdrom/oracle/orainst
 5. Execute the following: ./orainst

NOTE:

As the install proceeds, a log file called install.log is written. This can be found under \$ORACLE_HOME/orainst. You may tail this file to check the progress of install and for errors.

6. Enter the pathname of your ORACLE_HOME directory: /home/oracle
7. Enter the pathname for your ORACLE_DOC directory: /home/oracle_doc
8. Enter the name of the Oracle owner: oracle
9. Select the desired installation.
 - Complete Software database fresh install.
 - Install upgrade / path SW only.
 - Create New database.
 - Migration.
 - Patch Deinstallation.
10. Select Install all available online help.
11. Enter your ORACLE_SID: "Enter here your chosen 4-character Oracle source identifier".
12. Specify language type: American English.
13. Select "Install from cdrom" option.
14. Relink: select Yes
Do you want the port-specific documentation installed:
15. Enter YES or NO
Online documentation, select: "For all products being installed"
16. Enter YES or NO
17. Select products to be installed (use Spacebar to select, and Tab key to change from options):
 - Oracle easy SQL
 - Oracle Names
 - Oracle RDBMS
 - Oracle Network Manager
 - Oracle Server Manager - Not required if the database monitoring is to be done via a textual window
 - Pro C 2.0 or (2.1.2) - Only Select this for development purposes.

SQL Net V.2 (2.2.2) - For client server configuration.
SQL Plus
TCP/IP Protocol Adapters (V2)
Oracle UNIX Installer & Doc viewer - Not needed if Online
Documentation is not being installed
Oracle Data Query
PL/SQL V2

NOTE:

If all the above products are selected, they will take up approximately
125 megabytes of disk space.

18. Select the group that is to accommodate the DBA.
Dba select OSOPER group: dba
19. Enter the database name associated with the ORACLE_SID instances:
dev1
20. Select the character set: US7ASCII
21. Select SYSTEM user password: oracle
22. Select SYS user password: oracle
23. Set dba Password: NO (Enter YES if you wish to set a password for dba
and operator)
24. Enter concurrent users: 10
25. Enter password for the TNS listener: oracle (not essential to set)
26. Automatically start the multithreaded server and SQL*Net
Listener: YES
27. Select control files.

NOTE:

By default the control files ctrl1sid.ctl, ctrl2sid.ctl and ctrl3sid.ctl are
located on the same physical disk storage space. Oracle recommends
different disks to minimize risk of data loss. The default files are:

\$ORACLE_HOME/dbs/ctrl1sid.ctl
\$ORACLE_HOME/dbs/ctrl2sid.ctl
\$ORACLE_HOME/dbs/ctrl3sid.ctl

For the DCE Manager, the default settings are acceptable.

You may modify any of these values to meet the needs of your
application, by selecting NO in the third screen (heading Default DB)
to specify new values.

By default all the database files are located in \$ORACLE_HOME/dbs.
The minimum allowable size for LOG1,LOG2 and LOG3 files is 100KB.

Would you like to load the Data Query Dictionary
Table?

-
28. Enter YES
Are you licensed to run the Oracle Mail/Unix Gateway?
29. Enter YES or NO
Would you like to install SQL*Forms 3.0 demo forms and tables?
30. Enter YES or NO
Would you like to relink SQL*Plus with SQL*Forms 3.0?
31. Enter YES or NO
Would you like to install SQL*Menu 5.0 demo forms and tables?
32. Enter YES or NO
Would you like to relink SQL*Menu 5.0 with PL/SQL?
33. Enter YES or NO
Would you like to relink SQL*Forms 3.0 with SQL*Menu 5.0?
34. Enter YES or NO
Answer SQL*Plus prompts. (It is recommended you install this, since it helps to check that Oracle has been successful installed.)
Would you like to load the SQL*Plus help facility?
35. Enter YES
Would you like to load the SQL*Plus demo tables?
36. Enter YES
Answer the Server Manager Prompts. Select one or more user interfaces for Server Manage.
— Line Mode Interface
— Motif Bitmapped Interface
37. Select YES or NO
This will require 794212 bytes of disk space.
38. Select YES
Please enter the directory where the X Windows libraries (libXt.a, libX11.a) may be found.
39. Enter /tools/openwin/lib
Please enter the library where the Motif library (libXm.a) may be found.
40. Enter /tools/motif/lib

NOTE:

If compile of the Server Manager fails during install, just continue the installation. At the end of the Oracle installation, just copy the executable "svrmgrm" from the CD-ROM to \$ORACLE_HOME/bin.

-
- The Oracle install log file can be found under
\$ORACLE_HOME/install.log
 - SQL*Net TCP/IP prompt
 - When installing SQL*Net TCP/IP, you are prompted to indicate your
TCP/IP vendor:

41. Enter Sun/HP

The drivers for Sun/HP are placed in the \$ORACLE_HOME directory

SQL*Net Prompts

The SQL*Net V2 listener [tnslsnr] must be setuid root.
Would you like to setuid to root?

42. Enter NO

The SQL*Net must be shutdown before upgrading.

43. Select Yes

Would you like to install the SQL*Net Manager tables
in your database?

44. Enter NO

Would you like to install Oracle_protocol_adapters?

45. Enter NO

The Installation Completed prompt appears.

46. Select OK

47. Examine the installation log for possible errors.

Post-installation Tasks for Oracle Server

► Procedure

1. Run the root .sh script: Log in as root.
2. Change directories to \$ORACLE_HOME/orainst
3. Execute `sh ./root.sh`
4. Follow the appropriate prompts and set the \$ORACLE_HOME,
\$ORACLE_DOC and \$ORACLE_SID if they need to be changed.
5. Set the pathname of the local bin directory, i.e.: /usr/local/bin.

Oracle Environment

The following has to be set in your user profile to access the Oracle database:

```
TWO_TASK= "Type here your ORACLE_SID"
```

Two-task is only set when the Oracle database instance is NOT installed on the same machine as your application.

```
ORACLE_HOME=" Enter here the explicit path where Oracle is installed",
```

```
example: "/home/oracle"
```

```
ORACLE_SID=" Enter here your chosen ORACLE_SID"
```

```
TNS_ADMIN=$ORACLE_HOME/network/admin
```

Set your environment such that the variable PATH includes the location of the Oracle database executable utilities:

```
export PATH=$ORACLE_HOME/bin:$PATH
```

Oracle Client/Server Network Setup

Using the Server Manager documentation, locate the necessary community and domain.

This creates a file listener.com in directory \$oracle_home/network/admin

The listener.ora file should resemble the following:

NOTE:

You may type in this file or cut and paste. However, it should not contain any Tab characters; also it must have the matching number of parenthesis as below. Note that # characters are comment delimiters.

```
#####  
# Filename.....: listener.ora  
# Name.....: cancun  
# Date.....: 21-JUL-95 15:07:10  
# Here the ORACLE_SID = dev1; the hostname = cancun.
```

NOTE:

You can replace the hostname with its corresponding IP address.

```
#####  
LISTENER  
  
    (ADDRESS=  
      (PROTOCOL=IPC)  
      (KEY= dev1)  
    )  
    (ADDRESS =  
      (COMMUNITY = oracle_community.world)
```

```

        (PROTOCOL = TCP)
        (Host = cancun)
        (Port = 1526)
    )
)
STARTUP_WAIT_TIME_LISTENER = 0
CONNECT_TIMEOUT_LISTENER = 10
SID_LIST_LISTENER =
  (SID_LIST =

    (SID_DESC =
      (SID_NAME = dev1)
      (ORACLE_HOME = /home/oracle)
    )
  )

TRACE_LEVEL_LISTENER = OFF
# END OF FILE

```

The corresponding tnsnames.ora file should resemble the following:

NOTE:

This file basically resolves the Oracle database instance names and then opens the connection to the appropriate database instance.

```

#####
# Filename.....: tnsnames.ora
# Name.....: LOCAL_REGION.world
# Date.....: 21-JUL-95 15:07:10
#####
dev1 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS =
        (PROTOCOL = TCP)
        (Host = cancun)
        (Port = 1526)
      )
    )
    (CONNECT_DATA =
      (SID = dev1)
    )
  )
# End of file

```

The corresponding tnsnames.ora file should resemble the following:

NOTE:

This file basically resolves the Oracle database instance names and then opens the connection to the appropriate database instance.

```
#####
# Filename.....: tnsnames.ora
# Name.....: LOCAL_REGION.world
# Date.....: 21-JUL-95 15:07:10
#####
dev1 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS =
        (PROTOCOL = TCP)
        (Host = cancun)
        (Port = 1526)
      )
    )
    (CONNECT_DATA =
      (SID = dev1)
    )
  )
# End of file
```

Similarly, you may copy this file and make the necessary changes to correspond to your particular settings.

NOTE:

Please **do not** include any Tab characters.

Database Startup

Normally, the relevant Oracle instance starts automatically, once the Oracle installation process is complete. To check that your particular database is running, enter the following at the prompt sign:

```
ps -ef | grep ora
```

The output should resemble the following:

```
oracle 1043 1038 0 Jan 8 pts/0 0:00 -ksh
oracle 1055 1 0 Jan 8 ? 1:23
ora_pmon_sar1
oracle 1056 1 0 Jan 8 ? 2:41
ora_dbwr_sar1
oracle 1057 1 0 Jan 8 ? 1:27
ora_lgwr_sar1
oracle 1058 1 0 Jan 8 ? 0:13
ora_smon_sar1
oracle 1059 1042 0 Jan 8 pts/1 0:00 -ksh
oracle 1060 1 0 Jan 8 ? 0:04
ora_s000_sar1
oracle 1069 1 0 Jan 8 ? 0:04
ora_d000_sar1
oracle 1076 1 0 Jan 8 ? 0:05
/opt/oracle/bin/tnslsnr LISTENER -inherit
```

If the (ora_pmon_ORACLE_SID, ora_dbwr_ORACLE_SID, ora_lgwr_ORACLE_SID, ora_smon_ORACLE_SID) process is running, then the Oracle database is active.

If the above is not displayed, the particular database instance has to be brought up via the following procedure:

► **Procedure**

1. Log in as Oracle user:

```
su - oracle
passwd: Enter your Oracle user password
```

For HP platforms:

```
sqldba lmode=y
```

For Solaris platforms:

```
svrmgrl lmode=y
SQLDBA> connect internal
SQLDBA> startup
```

Once this runs to completion,

2. Type `exit` to quit.

The repeat "`ps -ef | grep ora`" to confirm the database processes are running.

The last entry shown above (`/opt/oracle/bin/tnslsnr LISTENER - inherit`) indicates that the SQL Net application is running. If not, this can be started via the following procedure:

► **Procedure**

1. Log in as Oracle user:

```
su - oracle
passwd:
Enter: lsnrctl start
```

2. To check the listener's status, type `lsnrctl status`

NMS User

Create NMS user so that the DCE Manager application can connect to the Oracle database.

The DCE Manager application uses the hostname of the computer where these applications run as the USERID to access the database.

So if the hostname of the workstation is "ebola," that will be the name used to access the Oracle database. By default the password that the application uses for this is "oracle". Hence, at this stage a login ID has to be created on the Oracle database server to allow the DCE Manager application to access the necessary data.

NOTE:

Please be aware that "hostname" means type in the given hostname of the computer where the DCE Manager application will be running. To create a login ID, perform the following:

► Procedure

Log in on the Oracle database as sqldba user:

For HP platforms:

```
sqldba lmode = y
```

For Solaris platforms:

```
svrmgrl lmode=y
```

If successful, you will see the following:

```
SQL*DBA: Release 7.1.6.2.0 - Production on Thu Jan 9
11:05:34 1997 Copyright (c) Oracle Corporation 1979,
1994. All rights reserved. Oracle7 Server Release
7.1.6.2.0 - Production Release PL/SQL Release 2.1.6.2.0 -
Production
SQLDBA>
SQLDBA> connect internal
SQLDBA> create profile NMSUSER limit cpu_per_session
default
cpu_per_call unlimited
connect_time unlimited
idle_time unlimited
sessions_per_user unlimited
logical_reads_per_call default
private_sga default
composite_limit default;
SQLDBA> create user "hostname" identified by oracle
default tablespace "SYSTEM"
```

NOTE:

hostname = your workstation's hostname

```
temporary tablespace "TEMP" quota unlimited on "SYSTEM
profile "NMSUSER";
SQLDBA> grant "CONNECT" to "hostname";
SQLDBA> grant "RESOURCE" to "hostname";
SQLDBA> exit
```

Test Oracle Environment

Before proceeding to this phase, ensure that the Oracle database instance is running (i.e., check the processes). In addition, check to make sure that the listener is running (lsnrctl status).

This can be checked by doing the following:

► Procedure

1. Enter: `$ sqlplus scott/tiger@"ORACLE_SID"`

If successful, you will see something resembling the following:

```
SQL*Plus: Release 3.1.3.7.1 - Production on Thu Jan 4
15:00:32 1996
Copyright (c) Oracle Corporation 1979, 1994. All rights
reserved.
Connected to:
Oracle7 Server Release 7.1.6.2.0 - Production Release
PL/SQL Release 2.1.6.2.0 - Production
SQL> select * from scott.dummy;

          DUMMY
-----
          0
SQL> quit
```

NOTE:

Steps 2-4 apply only if you have not previously created **"hostname"**.

2. Perform the following:

```
$sqlplus
SQL*Plus: Release 3.1.3.7.1 - Production on Thu Jan 9
11:31:57 1997
Copyright (c) Oracle Corporation 1979, 1994. All rights
reserved.
```

3. Enter user-name: `hostname`

4. Enter password: `oracle`

```
Connected to:
Oracle7 Server Release 7.1.6.2.0 - Production Release
PL/SQL Release 2.1.6.2.0 - Production
SQL> If you get this prompt, you have successfully
logged into the Oracle database
```

You are now ready to install the DCE Manager application.

Helpful Hints

- Normally, Oracle has online help installed for its various products, at least for sqlplus. At the Unix prompt, type in `sqlplus`, and enter the Oracle userID and password when prompted.

```
SQL> help
```

To exit this, type `quit` at the prompt.

NOTE:

All sqlplus commands are terminated with a `{;}` semicolon character. The online help is a good utility to help you through looking at the database contents.

- For a standalone machine the `TWO_TASK` parameter has to be unset. There are normally two places to check it:

- The window from which you are invoking `ovw` or `ovstart`

- The parameters in the `envvars` file:

```
/opt/OV/att/attGEM/envvars
```

```
/opt/OV/att/attACM/envvars
```

A sample of the content of `envvars`:

```
#Begin#####
# This block is inserted for setting
# Oracle environment variables. Do NOT modify anything
# inside the block by hand. It will be read later
# by gem processes and attGEMremove.
#####
#ORACLE_HOME=/cancun/oracle
ORACLE_HOME=/db/oracle7.3.2.1sol/orahome
#ORACLE_HOME=/opus/sdesol/oracle
export ORACLE_HOME
ORACLE_SID=dev1
export ORACLE_SID
TWO_TASK=dev1
export TWO_TASK
TNS_ADMIN=/cancun/oracle/network/admin
export TNS_ADMIN
#replace oracle bin in the path with the input value
tmp_path=`echo $PATH|nawk -F: '{for
(i=1;i<=NF;i++){if(index($i,"oracle/bin")==0) printf
"%s", $i;if (i<NF) printf ":"}}`
PATH=$tmp_path:/cancun/oracle/bin
#End#####
```

You have to be root user to change the contents of this file.

- Using `ovstatus` is very useful. It resides under `/opt/OV/bin` (or `/usr/OV/bin` for HPOV 3.1). So, you can execute: `/opt/OV/bin/ovstatus`

-
- The system log files normally reside under: `/var/adm` e.g. `nettl.LOG00`
 - To log error, informative, or diagnostic messages, the following scripts can be used:

For HP platforms:

```
su << EOF
rm /var/adm/nettl.LOG00
touch /var/adm/nettl.LOG00
/usr/sbin/nettl -start
/usr/sbin/nettl -log i e w d -entity OVEXTERNAL
/usr/sbin/netfmt -F -f /var/adm/nettl.LOG00
EOF
```

For Solaris platforms:

```
su << EOF
cd /var/opt/OV/log
rm nettl.LOG00
touch nettl.LOG00
/opt/OV/bin/nettl -start
/opt/OV/bin/nettl -log i e w d -entity OVEXTERNAL
/opt/OV/bin/netfmt -F -f /var/opt/OV/log/nettl.LOG00
EOF
```

Sometimes you need to clean both the GEM and HPOV databases without having to reinstall. In such cases, the following procedure is used:

► **Procedure**

1. Exit OpenView
2. Log in as root
3. At the shell prompt, type `/opt/OV/bin/ovstop`
4. At the shell prompt in a window, where the proper Oracle env variables are set, type `sqlplus`
5. Enter userid
6. Enter password
7. `SQL> delete from device;`
Oracle replies and states the number of devices deleted
8. `SQL> delete from devcrd;`
9. Number of cards deleted
10. `SQL> delete from devif;`
11. Number of interfaces deleted
12. `SQL> commit;`
13. `SQL> quit`

14. At the root login window – shell prompt:

```
su << EOF
/opt/OV/bin/ovstop
cd /var/opt/OV/share/databases
rm -fr openview
/opt/OV/bin/ovstart ovwdb
/opt/OV/bin/ovw -fields
/opt/OV/bin/ovstart
EOF
```

Once these processes run to completion, you may start the HP OpenView GUI, via the ovw command from a nonroot user window.

NOTE:

The PATH must always be set to include /opt/OV/bin to ensure that the relevant HP OpenView commands can be executed.

Log Files

Periodically certain log files have to be checked and others need to be removed in order to maintain the system in working order. It is important to skim through the following for an overview of your database activity.

```
/etc/opt/
$oracle_home/network/admin/sqlnet.log
/etc/opt/OV/share/conf/C/oid_to_sym
/etc/opt/OV/share/conf/C/trapd.conf
```