



Oracle Rdb Extension for OEM 9i Release V7.1.0.0

Oracle Rdb Extension for OEM 9i

Installation Guide

Release 7.1.0.0

for Oracle Enterprise Managers on Windows NT, Windows 2000, Sun Solaris OS (SPARC)
for Oracle Intelligent Agents on OpenVMS for Alpha

June 2003

This readme provides information on how to install the Oracle Rdb Extension for the Oracle Enterprise Manager 9i and the Oracle Rdb Extension for the Oracle Management Server on Windows NT, Windows 2000, and Sun Solaris OS (SPARC) systems, and on how to install the Oracle Rdb Extension for the Oracle Intelligent Agent on OpenVMS for Alpha systems.

The Oracle Enterprise Manager 9i is a 3-tier management framework consisting of

- Oracle Enterprise Manager Console
- Oracle Management Server
- Oracle Intelligent Agent

Together, they can be used to

- Administer the complete Oracle environment, including databases, iAS servers, applications, and services.
- Diagnose, modify, and tune multiple Oracle databases.
- Schedule tasks on multiple systems at varying time intervals.
- Monitor Oracle database conditions throughout the network.
- Administer multiple network nodes and services from many locations.
- Share tasks with other administrators.
- Group related services together to facilitate administration tasks.
- Launch integrated Oracle and third-party tools.

In order to facilitate the management of Oracle Rdb databases through the management framework, an additional installation is required at each tier. Each of these additional installations are described in this readme.

The top tier consists of the Oracle Enterprise Manager Console. The Console is a GUI that allows you to interface into the management framework. Via the Console, you may interact with the Oracle Management Server and the Oracle Intelligent Agent to perform all the functions listed above.

With the addition of the Rdb Extension for the Oracle Enterprise Manager, the management framework is expanded to manage Oracle Rdb 7.1 databases or higher. For Oracle Rdb databases specifically, you can

- View the database structure, specifically the schema, storage, and security.
- Schedule tasks on multiple Oracle Rdb databases at varying time intervals.
- Monitor Oracle Rdb database conditions throughout the network.

The Oracle Management Server is the middle tier layer of the management framework. It consists of an Oracle9 repository that is used to manage the scheduling and recording of target events and jobs. The Oracle Management Server may reside on the same node as the Oracle Enterprise Manager console or may reside on a separate node.

With the addition of the Rdb Extension for the Oracle Management Server, this management framework is enabled to schedule and record events and jobs for Oracle Rdb 7.1 databases or higher.

The Oracle Intelligent Agent is the third tier layer of the management framework. It interacts with the targets and their host systems directly. An Agent must exist on every node that houses Oracle Rdb databases you want to manage via the Oracle Enterprise Manager framework.

The Agents must also be updated with the Rdb Extension for the Oracle Intelligent Agent in order for the entire management framework to work for Oracle Rdb databases. In addition, the Agents need to be manually informed of the Oracle Rdb databases that reside on their respective nodes.

Overview

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The Rdb-OEM Installation Kit

The Rdb-OEM Installation Kit (RDBOEM071.ZIP) is a zip file created with WinZip 7.0. It contains all the Rdb Extensions for the Oracle Enterprise Manager Console, the Oracle Management Server, and the Oracle Intelligent Agent.

Please note that the Rdb Extension for the Oracle Intelligent Agent is stored in additional zip file (RDBAGENT071.ZIP) within the Rdb-OEM Installation kit. This agent zip file was created with an OpenVMS zip utility that is available as freeware from the Compaq/HP OpenVMS [freeware website](#). This zip file should be copied to an OpenVMS node using FTP (binary mode) and then unzipped there using an OpenVMS unzip utility that is also available from the Compaq/HP OpenVMS [freeware website](#).

Installing Rdb-OEM Components

Preparing to Install the Rdb-OEM Kit

It is assumed that the basic Oracle Enterprise Management framework has already been set up on a Windows NT, Windows 2000, or Sun Solaris OS (SPARC) system. This would include the installation of the Oracle9i (9.0.1 or 9.2) Enterprise Manager console and the creation of a Oracle Management Server and its repository. Information on how to do that set up may be found in the Oracle9i and Oracle Enterprise Manager documentation which may be found at [Oracle's documentation website](#).

Your setup must include an Oracle Management Server either local to your Oracle Enterprise Manager Console or accessible on the network. This Oracle Management Server MUST be updated with the Rdb Extension for Oracle Management Server as described below.

Once you have obtained the Rdb-OEM installation kit, copy it to a temporary folder and unzip its contents.

Windows NT, Windows 2000 Only

Using the graphical Winzip interface or any other suitable zip utility, unzip the Rdb-OEM installation kit contents into a temporary folder.

Sun Solaris OS (SPARC) Only

Using the unzip command or any other suitable unzip utility, unzip the Rdb-OEM installation kit contents into a temporary folder.

```
% mkdir /temp
% unzip rdboem071.zip -d /temp
```

Running Oracle Universal Installer

The minimum required version of the Oracle Universal Installer (2.2.0.12.0) is included in the Rdb-OEM installation kit.

Windows NT, Windows 2000 Only

To start the Oracle Universal Installer, run `setup.exe` located in the `Disk1/install/win32/` folder in the temporary location where you unzipped the contents of the installation kit.

Sun Solaris OS (SPARC) Only

To start the Oracle Universal Installer, run `runInstaller` located in the `Disk1/install/solaris/` folder in the temporary location where you unzipped the contents of the installation kit.

```
% cd /temp/Disk1/install/solaris
% ./runInstaller
```

Welcome Page

With any of the operating systems, running the Oracle Universal Installer will display its [Welcome](#) page. If you are unfamiliar with the Installer, click **Help** for more information, otherwise click **Next** to continue.



Figure 1 - Oracle Universal Installer Welcome page

From the Oracle Universal Installer's *File Location* page, select the Rdb-OEM `products.jar` file and the appropriate Oracle Home as shown in [figure 2](#) and click **Next**.



Figure 2 - Selecting the products.jar and Oracle Home

Selecting the Appropriate Rdb-OEM Product

The Rdb-OEM installation kit contains two separate products:

- Rdb Extension for Oracle Enterprise Manager
- Rdb Extension for Oracle Management Server

The Oracle Universal Installer will ask you to select the appropriate Rdb-OEM product from its [Available Products](#) page.

If the system on which you are installing the Rdb-OEM kit contains ONLY the Oracle Enterprise Manager Console, then you need to install the *Rdb Extension for Oracle Enterprise Manager* product.

If the system on which you are installing the Rdb-OEM kit contains the Oracle Management Server and optionally contains the Oracle Enterprise Manager Console, then you need to install the *Rdb Extension for Oracle Management Server* product. Since the *Rdb Extension for Oracle Management Server* is a superset of the *Rdb Extension for Oracle Enterprise Manager* product, it is unnecessary to install both on a system that is running both the Oracle Enterprise Manager console and the Oracle Management Server.

Installing Rdb Extension for Oracle Enterprise Manager

To install the Rdb-OEM kit on a system that just contains the Oracle Enterprise Manager Console, select the "Rdb Extension for Oracle Enterprise Manager" product and click **Next** as illustrated in figure 3.

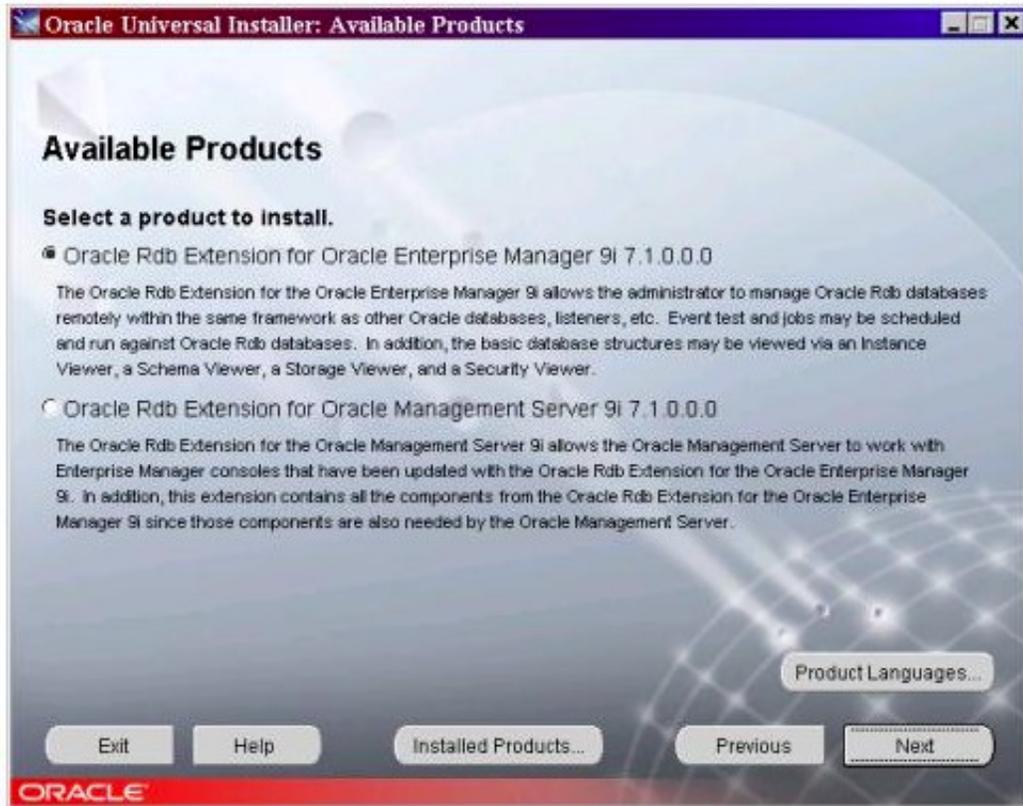


Figure 3 - Selecting the Rdb Extension for the Oracle Enterprise Manager product

The *Summary* page is then shown ([figure 4](#)) that highlights the installation process. After reviewing, click **Install** to continue.

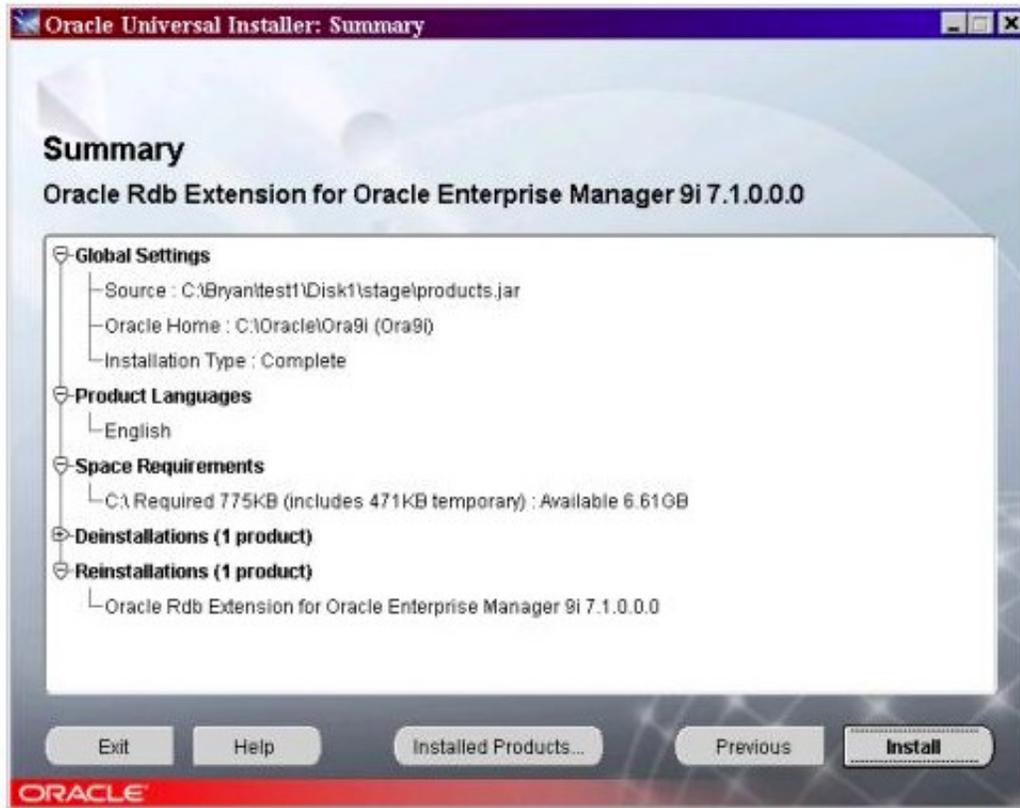


Figure 4 - Rdb Extension for the Oracle Enterprise Manager installation summary

The installation will then proceed to copy the appropriate files to the appropriate directories in the previously selected Oracle Home. After a few minutes, the Oracle Universal Installer will display the *End of Installation* page (see [figure 5](#)) showing that the installation has successfully completed.

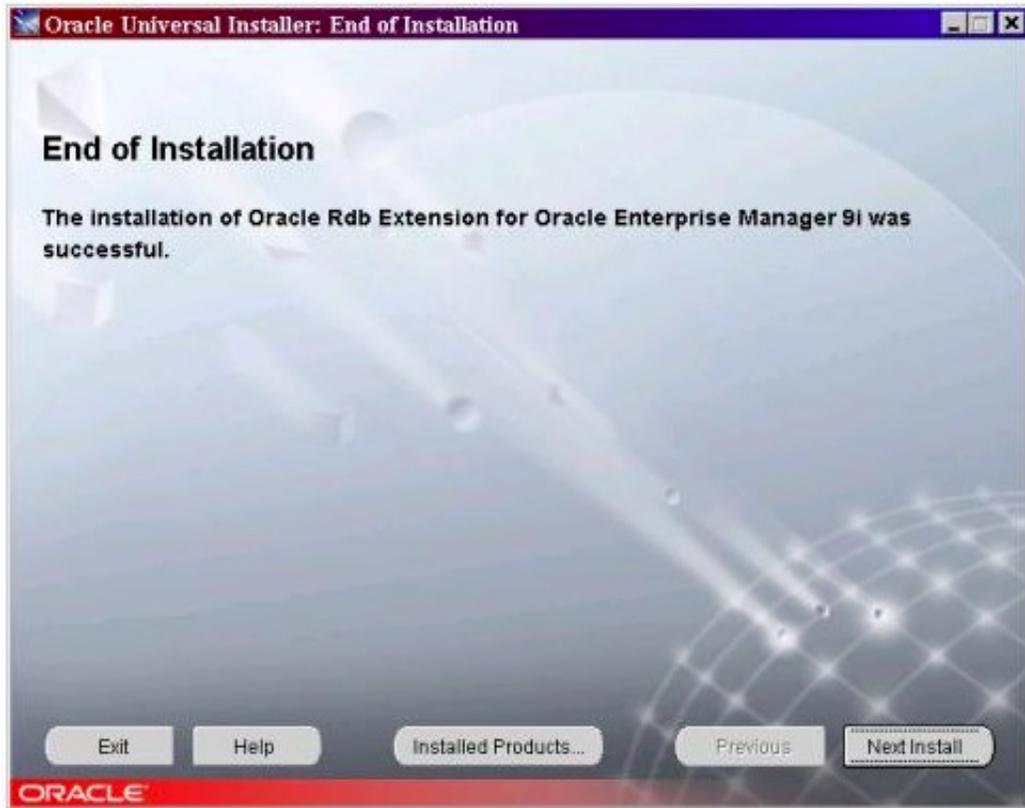


Figure 5 - Successful installation

Installing Rdb Extension for Oracle Management Server

To install the Rdb-OEM kit on a system that contains the Oracle Management Server and optionally the Oracle Enterprise Manager Console, select the "Rdb Extension for Oracle Management Server" product and click **Next** as illustrated in figure 6. As mentioned earlier, this product is a superset of the "Rdb Extension for Oracle Enterprise Manager" so it is unnecessary to install both products on the same system.



Figure 6 - Selecting the Rdb Extension for the Oracle Management Server product

The Rdb Extension for Oracle Management Server needs to update the Oracle Management Server registry with event and job definition information for Oracle Rdb databases. Since this registry is stored in the Oracle Management Server repository, the Oracle Universal Installer will prompt you for a username, password, and service identifier for that repository. It is highly recommended that you use the username that was originally specified when the Oracle Management Server repository was created by the Enterprise Manager Configuration Assistant. The Oracle Universal Installer will display the [Registry Update](#) page to solicit the username, password, and service identifier for the repository.



Oracle Universal Installer: Registry Update

Registry Update

Updating the Registry in the OMS Repository

The Oracle Rdb pre-defined events and jobs definitions need to be registered in the repository used by the Oracle Management Server on this system.

Username: oemrep_mgr

Password: *****

Service: oemrep

Exit Help Installed Products... Previous Next

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Figure 7 - Form for the username/password/service of the Oracle Manager Server repository

The *Summary* page is then shown ([figure 8](#)) that highlights the installation process. After reviewing, click **Install** to continue.

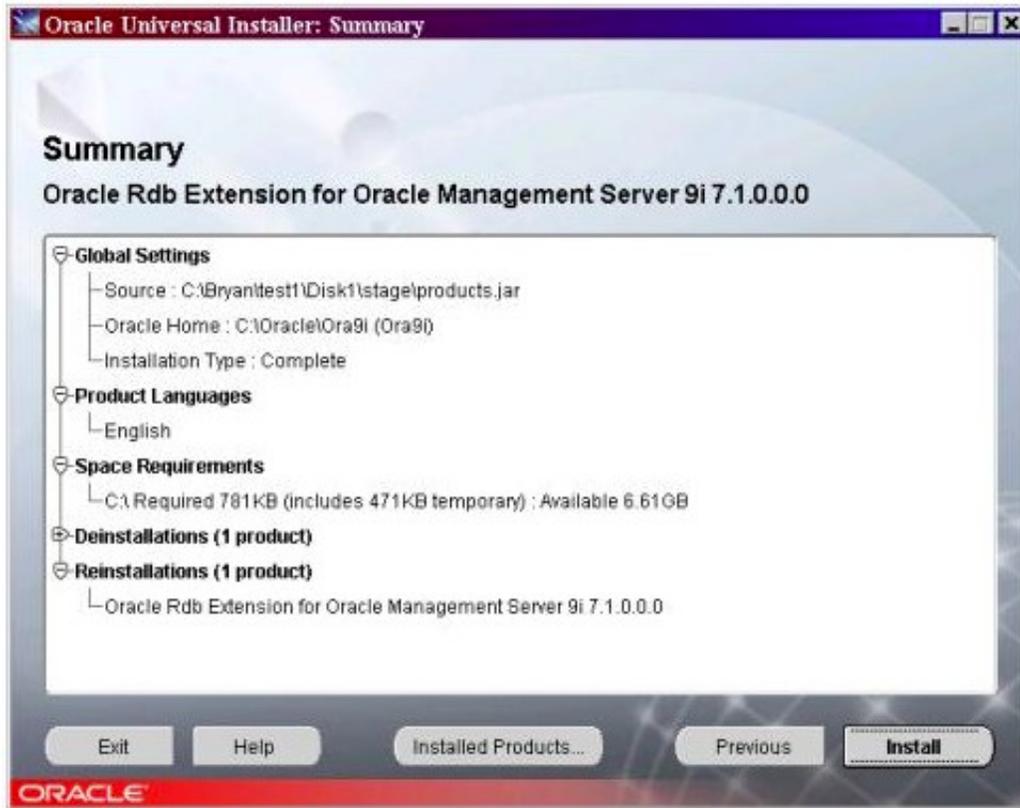


Figure 8 - Rdb Extension for the Oracle Management Server installation summary

The installation will then proceed to copy the appropriate files to the appropriate directories in the previously selected Oracle Home. In addition, the Oracle Management Server registry will be updated with information about Oracle Rdb databases. On Windows NT and Windows 2000, a Windows Command Prompt window may be temporarily displayed when the registry is updated. The Oracle Universal Installer will destroy that Command Prompt window when it has completed the task.

After a few minutes, the Oracle Universal Installer will display the *End of Installation* page (see

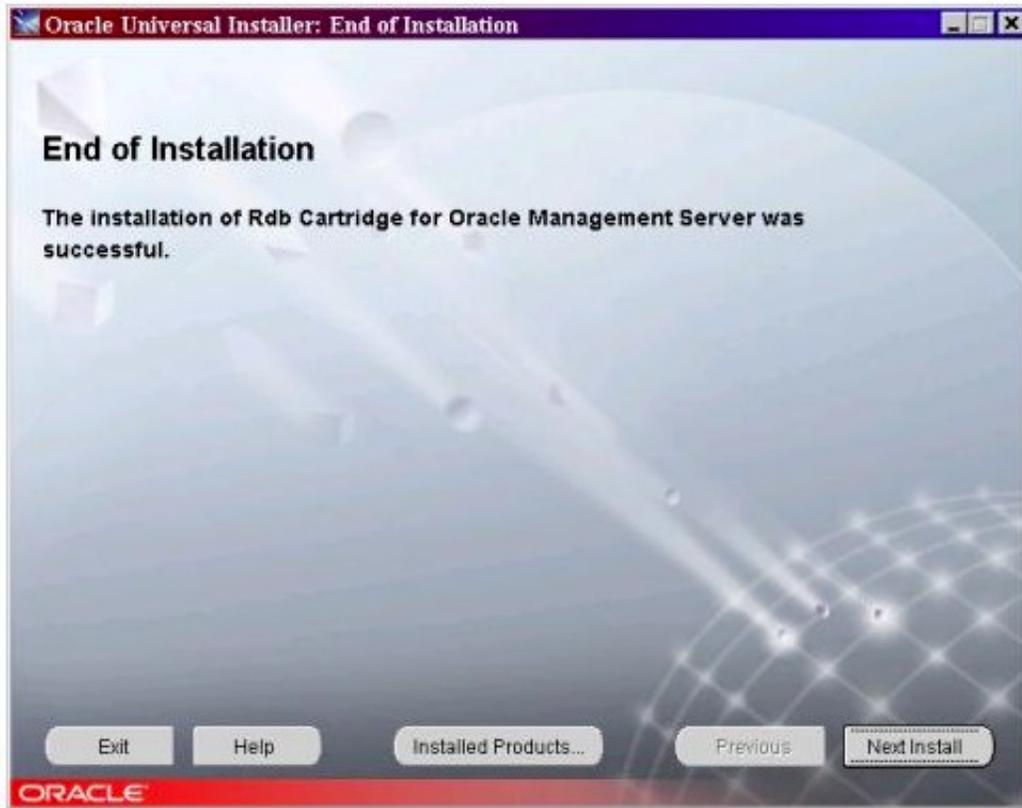


Figure 9 - Successful installation

Post Rdb-OEM Installation

Checking for Errors

If you installed the Rdb Extension for Oracle Management Server product, it is possible that an error could go undetected when updating the Oracle Management Server registry. Therefore, it is important that you check the installation error log file. This error file is normally located in the `C:\Program Files\Oracle\Inventory\logs\` folder on Windows NT and Windows 2000, and in the `<oui-home>/oraInventory/logs/` folder on Sun Solaris OS (SPARC).

Please refer to the *Oracle Rdb Extension for OEM 9i Error Guide* for possible solutions to errors.

Restarting the Oracle Management Server

If you installed the Rdb Extension for Oracle Management Server product, the Oracle Management Server needs to be restarted in order to pick up the new registry entries. You will be unable to schedule Oracle Rdb events and jobs until the Oracle Management Server has been restarted.

Windows NT, Windows 2000 Only

At your convenience, you may restart the Oracle Management Server via your system's Control Panel. From the Control Panel, select "Administrative Tools" then select "Services". From the [Services](#) window, find the Oracle Management Server in the list, stop it, and then restart it. In order to restart it, you will need to provide

the Oracle Enterprise Manager super credentials. These credentials are normally the username and password you use when entering the Oracle Enterprise Manager console.

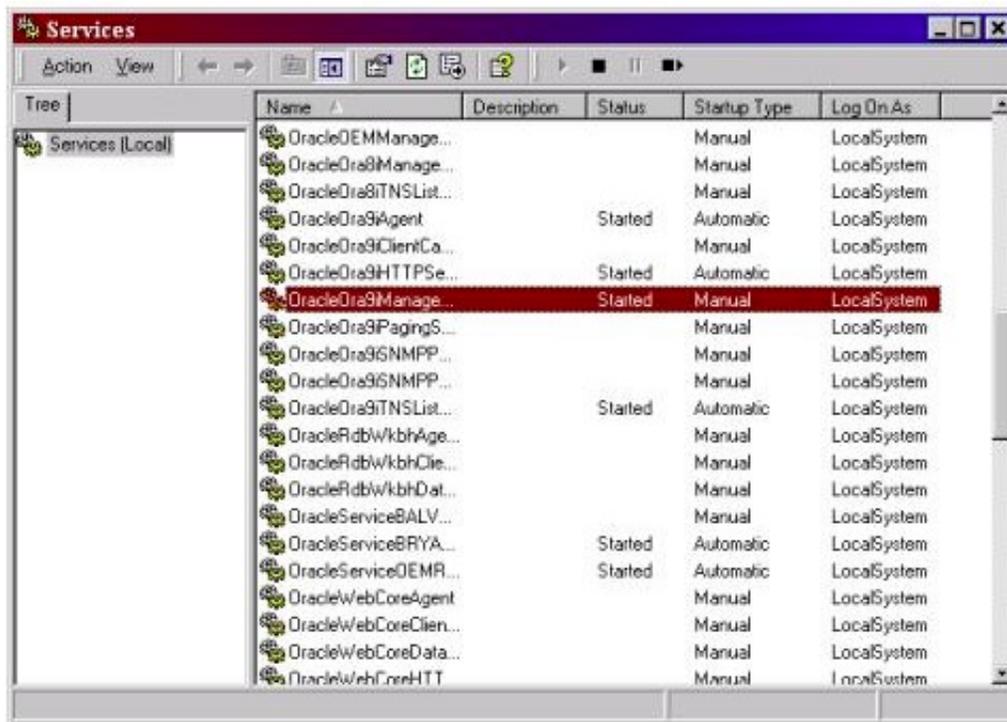


Figure 10 - Restarting the Oracle Management Server

Sun Solaris OS (SPARC) Only

At your convenience, you may restart the Oracle Management Server via the `oemctl` command:

```
% cd <oracle-home>/bin
% oemctl stop oms <EM Username>/<EM Password>
% oemctl start oms
```

Installing Rdb-OEM Agent Components

Installing the Oracle9i Intelligent Agent (9.0.1)

It is assumed that the basic Oracle Intelligent Agent has already been installed on the OpenVMS for Alpha system. Information on how to do that installation may be found in the [Oracle9i Installation Guide for Alpha OpenVMS](#).

If you have no need for a Oracle9i database on the OpenVMS system, the Oracle Intelligent Agent can be installed just by itself. To do so, you can use ORACLEINS to load and build the OEMAGENT, NETCONFIG, and UTIL components. Please see the above documentation link for further details.

Privileges and Rights Identifiers

As specified in the documentation link above, the account from which the Oracle Intelligent Agent is started

must be granted the `ORA_AGENT_ID` rights identifier. In addition, this account must be granted the appropriate privileges to access the operators console log so the pre-defined Rdb events and jobs that involve opcom messages will function properly.

Preparing to Install the Rdb-OEM Agent Kit

Once you have obtained the Rdb-OEM Agent installation kit, copy it to a temporary directory and extract its contents using the VMS Backup utility:

```
$ create/directory disk1:[temp]
$ backup/log rdbagent071.bck/save/select=[rdbagent...]*.* disk1:[temp...]
```

Running the Rdb-OEM Agent Installation

The Rdb-OEM Agent installation script is located in the `.[INSTALL]` directory created by the above VMS BACKUP command. This script checks to ensure that the Oracle Intelligent Agent is installed on the system, creates Rdb-OEM Agent required directories under the `ORA_ROOT:[NETWORK.AGENT]` directory tree, and copies Rdb TCL and DCL job and events scripts to their appropriate directories. The logical `ORA_ROOT` must be defined in order for the installation to complete successfully.

The installation script should run to completion in less than 1 minute.

To run the script:

```
$ set default disk1:[temp.install]
$ @rdbagent_install.com
```

Creating the RBCONFIG.DAT File

The Oracle Intelligent Agent must be manually informed of the Oracle Rdb databases on its system. This is accomplished by creating a `ORA_ROOT:[NETWORK.AGENT.CONFIG]RBCONFIG.DAT` text file with a one-line entry for each Oracle Rdb database on the node you wish to be discovered by Oracle Enterprise Manager Consoles. A template file `RBCONFIG_DAT.TEMPLATE` is created by the installation procedure and placed in the `ORA_ROOT:[NETWORK.AGENT.CONFIG]` directory to aid you in this effort.

At startup time, the Oracle Intelligent Agent will use the contents of the `RBCONFIG.DAT` file in the construction of its `ORA_ROOT:[NETWORK.AGENT]SERVICES.ORA` file. The contents of the `SERVICES.ORA` file are given to Oracle Enterprise Manager Consoles at node discovery time.

Each entry in the `RBCONFIG.DAT` file has the format of:

```
DatabaseName Transport SQL/ServicesService DatabasePath Version Port JdbcDriver
```

where

- `DatabaseName` - is the name of the database as it will appear on the OEM console. It should be unique (example "MFPersonnel").
- `Transport` - is the protocol used for communication as specified in the console's `TNSNAMES.ORA` file

- (example "TCP").
- SQL/ServicesService - is the name of an OCI protocol SQL/Service service attached to the Oracle Rdb database (example "MFPER").
- DatabasePath - is the full directory specification of the Oracle Rdb database including the file extension (example "DISK1:[DATA]MF_PERSONNEL.RDB").
- Version - is the version of the Oracle Rdb database (example "71")
- Port - is the communication port number used for JDBC connections and as specified in the console's TNSNAMES.ORA file (example "1526").
- JdbcDriver is the JDBC driver to be used for JDBC connections (example "jdbc:oracle:thin").

The following is an example of a RDCONFIG.DAT file with two entries:

```
$ TYPE ORA_ROOT:[NETWORK.AGENT.CONFIG]RDCONFIG.DAT
MFPersonnel TCP MFPER DISK1:[DATA]MF_PERSONNEL.RDB 71 1526 jdbc:oracle:thin
Petstore TCP PETSTORE DISK1:[DATA]PETSTORE.RDB 71 1526 jdbc:oracle:thin
$
```

Updating the NMICONF.LST File

The Oracle Intelligent Agent must be manually informed that the RDCONFIG.DAT file exists and must be given instructions on how to interpret it. This is accomplished by adding an entry to the Agent's ORA_ROOT:[NETWORK.AGENT.CONFIG]NMICONF.LST file. This will be completed automatically by the Rdb-OEM Agent installation procedure. If the NMICONF.LST does not exist, one will be created with single line of:

```
rblstsvc.tcl
```

If this file does exist and that line is not found in the file, the above line will be appended as a new line to this file.

The RBLSTSRVC.TCL file was provided by the Rdb-OEM Agent installation. It provides required procedures to the Agent on how to find and interpret the RDCONFIG.DAT file.

Restarting the Oracle Intelligent Agent

Once you have created the RDCONFIG.DAT file and the installation script has updated or created the NMICONF.LST file, you must restart the Oracle Intelligent Agent. This is accomplished by stopping and then starting the Agent using the AGENTCTL command as follows:

```
$ agentctl stop

DBSNMP for VMS: Version 9.0.1.0.0 - Production on 07-AUG-2002 18:14:52

Copyright (c) 2001 Oracle Corporation. All rights reserved.

      Db SubAgent stopped at PID 0006EA9C
$
$ agentctl start

DBSNMP for VMS: Version 9.0.1.0.0 - Production on 07-AUG-2002 18:15:00

Copyright (c) 2001 Oracle Corporation. All rights reserved.
```

```
$
```

Verifying the Setup

If everything has been setup correctly, the entries from the `RBCONFIG.DAT` file will have been transformed and placed into the `ORA_ROOT:[NETWORK.AGENT]SERVICES.ORA`. Using the sample `RBCONFIG.DAT` file from above, the `SERVICES.ORA` generated would be as follows (Note: the display is wrapped at 80 characters):

```
$ TYPE ORA_ROOT:[NETWORK.AGENT]SERVICES.ORA
myexp.us.oracle.com = (ORACLE_NODE, myexp.us.oracle.com, myexp.us.oracle.com, (
PLATFORM=(osName=VMS) (osVersion=V7.2-2  ) (oracleHomes=))

MFPersonnel.myexp = (oracle_rdb_database, myexp, (DESCRIPTION=(ADDRESS=(PROTOCOL
=TCP) (HOST=myexp) (PORT=1526)) (CONNECT_DATA=(SERVICE_NAME=MFPER) (RDB_DATABASE=DIS
K1:[DATA]MF_PERSONNEL.RDB))), JDBC=jdbc:oracle:thin|PROTOCOL=TCP|FILE=DISK1:[DAT
A]MF_PERSONNEL.RDB|VERSION=71)

PETSTORE.myexp = (oracle_rdb_database, myexp, (DESCRIPTION=(ADDRESS=(PROTOCOL=TC
P) (HOST=myexp) (PORT=1526)) (CONNECT_DATA=(SERVICE_NAME=PETSTORE) (RDB_DATABASE=DIS
K1:[DATA]PETSTORE.RDB))), JDBC=jdbc:oracle:thin|PROTOCOL=TCP|FILE=DISK1:[DATA]PE
TSTORE.RDB|VERSION=71)
$
```

Creating a SQL/Services Service

Every Oracle Rdb database viewable within the Oracle Enterprise Manager Console must have its own OCI protocol SQL/Service service. If an Rdb database does not have its own SQL/Service service, the Oracle Enterprise Manager Console will not be able to connect to it. An OCI protocol SQL/Service service may be created and started by using the `SYS$SYSTEM:SQLSRV_MANAGE` utility. Using the above example again:

```
$ run sys$system:sqlsrv_manage71
SQLSRV> connect server;
Connecting to server ...
Connected
SQLSRV> create service MFPER
  sql version 7.1
  protocol OCI
  attach 'filename DISK1:[DATA]MF_PERSONNEL.RDB'
  autostart on
  idle_user_timeout 300
  idle_executor_timeout 300
  min_executors 0
  max_executors 20
  owner 'bryan';
SQLSRV> create service PETSTORE
  sql version 7.1
  protocol OCI
  attach 'filename DISK1:[DATA]PETSTORE.RDB'
  autostart on
  idle_user_timeout 300
  idle_executor_timeout 300
  min_executors 0
  max_executors 20
  owner 'bryan';
```

```
SQLSRV> start service MFPER ;
SQLSRV> start service PETSTORE ;
SQLSRV>
```

If you find that the OCI services are "locking" your database and preventing backups, etc., you may want to adjust the various idle time values. Please refer to the Rdb SQL/Services manuals for more information.

Creating Rdb Information Tables

The Rdb Extension for Oracle Enterprise Manager will utilize the Oracle Rdb "Information tables" if they have been created in the database. The Extension will also display a warning message if it is unable to access these tables.

The Information tables can be created by executing the following sql script:

```
$ SQL
SQL> attach 'file DISK1:[DATA]MF_PERSONNEL.RDB';
SQL> @sql$sample:info_tables.sql
SQL> commit;
```

The `sql$sample:info_tables.sql` script that is included with the Oracle Rdb 7.1 installation creates the Information tables. Information tables are special read-only tables that can be created in an Oracle Rdb database and used to retrieve database attributes that are not stored in the existing relational tables. Information tables allow interesting database information, which is currently stored in an internal format, to be displayed as a relational table.

More information can be found at:

```
$ help oracle_rdb71 information_tables
```

Sample Rdb-OEM Agent Installation

```
$ create/directory disk1:[temp]
$ backup/log rdbagent071.bck/save/select=[rdbagent...]*.* disk1:[temp...]
$
$ set default disk1:[temp.install]
$ @rdbagent_install.com
```

```
Oracle Rdb Extension for Oracle Agent 9i, Release 7.1.0.0 Installation
Copyright © 1999,2003, Oracle Corporation. All Rights Reserved.
```

```
Creating directories...
Copying TCL and DCL scripts...
```

```
The ORA_ROOT:[NETWORK.AGENT.CONFIG]RBCONFIG.DAT file must be created
and updated with a list of the Oracle Rdb databases you wish to be discovered
by Oracle Enterprise Manager consoles. A RBCONFIG_DAT.TEMPLATE has
been provided in that directory to aid you in this step.
```

```
Please see the Enterprise Manager for Rdb documentation for additional
information.
```

```
Installation completed.
```

§

Configuring Enterprise Manager for a Web Browser

With Oracle Enterprise Manager, an administrator is not limited to managing targets from a particular machine where the product has been installed. Instead, administrators can deploy the Enterprise Manager Web Site in order to run Enterprise Manager from any supported web browser. But, several of the Oracle Enterprise Manager products and applications have not been web-enabled.

At this time, the Oracle Rdb Extension has NOT been web-enabled.

Other Information

Usage Notes

- If you are in a cluster, each node on which you want to either discover or execute jobs and events will need its own Intelligent Agent and directory tree.
- Only multiversion Oracle Rdb installations are supported. The standard installation is not supported.

Software Versions

- Windows NT, Windows 2000, Sun Solaris OS (SPARC)
- Oracle Enterprise Manager 9.0.1 or 9.2
- Oracle Rdb Release 7.1 or later
- OpenVMS for Alpha 7.2 or later
- Oracle9i Intelligent Agent 9.0.1 or 9.2 on OpenVMS for Alpha
- Oracle Universal Installer 2.2.0.12.0 or later (included in Rdb-OEM Installation kit)

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