



**edocs® Upgrading eaDirect and eaPay  
3.4 from Oracle8i to Oracle9i**

**Sun Solaris Operating Environment™ Software**

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# Preface

## About This Guide

This guide describes the tasks required to upgrade eaDirect 3.4 software and migrate eaDirect 3.4 databases from **Oracle 8i** to **Oracle 9i** on **Solaris**.

Intended for Oracle database administrators, the guide assumes familiarity with database administration tasks including:

- making database backups
- running the **exp** and **imp** utilities
- creating databases
- creating database users
- dropping and creating tablespaces
- installing and configuring eaSuite on a database server

If you need help with any of these topics, see the appropriate [Related Documentation](#) for details.

## Related Documentation

You will need a user name and password to access Oracle documentation on the web.

Software Requirements

Document/URL	Description/Doc ID
Oracle9i Installation Guide Release 2 (9.2.0.1.0) for UNIX Systems: AIX-Based Systems, Compaq Tru64 UNIX, HP 9000 Series HP-UX, Linux Intel, and Sun Solaris	How to install Oracle 9i. Part No. A96167-01
<a href="http://download-west.oracle.com/docs/html/A96167_01/toc.htm">http://download-west.oracle.com/docs/html/A96167_01/toc.htm</a>	
Oracle9i Database Administrator's Guide Release 2 (9.2)	How to create a new database, etc. Part No. A96521-01
<a href="http://technet.oracle.com/docs/products/oracle9i/doc_library/release2/server.920/a96521/toc.htm">http://technet.oracle.com/docs/products/oracle9i/doc_library/release2/server.920/a96521/toc.htm</a>	
Oracle8i Utilities Release 2 (8.1.6)	How to use <b>imp</b> , <b>exp</b> and other utilities. Part No. A76955-01
<a href="http://download-west.oracle.com/docs/cd/A87860_01/doc/server.817/a76955/toc.htm">http://download-west.oracle.com/docs/cd/A87860_01/doc/server.817/a76955/toc.htm</a>	
Oracle9i Database Utilities Release 2 (9.2)	How to use <b>imp</b> , <b>exp</b> and other utilities. Part No. A96652-01
<a href="http://technet.oracle.com/docs/products/oracle9i/doc_library/release2/server.920/a96652/toc.htm">http://technet.oracle.com/docs/products/oracle9i/doc_library/release2/server.920/a96652/toc.htm</a>	
Oracle9i Net Services Administrator's Guide Release 2 (9.2)	How to configure <b>tnsnames.ora</b> , etc. Part No. A96580-01
<a href="http://technet.oracle.com/docs/products/oracle9i/doc_library/release2/network.920/a96580/toc.htm">http://technet.oracle.com/docs/products/oracle9i/doc_library/release2/network.920/a96580/toc.htm</a>	
eaDirect Installation and Configuration Guide v3.4	How to install eaDirect 3.4, migrate existing databases Document ID: DISO-03-3.4-02

# Software Requirements



## Oracle9i Database Software

Preparation guidelines, hardware and software requirements, and recommendations for installing Oracle 9i are defined in the *Oracle 9i Installation Guide*. Review the first few chapters of this guide before installing Oracle 9i, and ensure that your systems are properly set up and configured.

## eaDirect Software

If necessary, upgrade eaDirect and migrate your eaDirect database to **release 3.4**. See the *eaDirect Installation and Configuration Guide V3.4* for instructions.

## eaPay Software

If eaPay software exists, upgrade eaPay and migrate your eaPay database to **release 3.4**. See the *eaPay Installation and Configuration Guide V3.4* for instructions.

## eaDirect Database

Ensure that your eaDirect database is in good working order by:

- inspecting the eaDirect database logs for errors
- validating the status of all user objects

Correct any errors or INVALID status before attempting the database upgrade.

## **eaPay Database**

If eaPay database exists and needs to be migrated, no extra task is required since all eaPay-related objects reside in the same database as that of eaDirect and belong to the same schema. That means the eaPay data are exported/imported along with the eaDirect data. Hence, when the eaDirect database is migrated, eaPay database will be automatically migrated as well.

From this point on, any description about the migration of eaDirect database should imply that the migration of eaPay also occurs at the same time if it exists.



# Upgrading to Oracle 9i

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This guide uses the term **upgrade** to describe changing installed software to a newer release. Changing a database instance to *use* new software is defined as **migration**.

## Overview

Upgrading your eaSuite database from Oracle8i to Oracle9i involves the following steps:

1. Ensure your environment meets system requirements.
2. Export your eaDirect database from Oracle8i.
3. Install Oracle9i to upgrade your database software.
4. Create a new Oracle9i database to migrate your database instance.
5. Create tablespaces in the new database.
6. Create a new user for the new database.
7. Import your Oracle8i database into the new database.
8. Update Oracle administrative files to refer to the new SID.
9. Update your application server environment with `edx_config.sh` to refer to the correct Oracle home directory and database instance.
10. Update your application server configuration file to refer to the new SID.

## Meet System Requirements

Review and comply with the Requirements section of this guide.

## Export Your eaDirect Database

As the Oracle DBA, export a copy of your existing Oracle8i database with the **exp** utility in **full** mode, for example:

```
exp system/manager file=edx0_export FULL=Y
```



### Caution

You will need to export the edocs (e.g. *edx0*) database. If WebSphere (instead of WebLogic) is used, then its database (e.g. *was*) needs to be exported as well in the same manner as that of the edocs database. When performing the export, ensure the Oracle 8.1.7 database and listener are running in order to perform the export successfully.

This will create a flat file version of your database that you will import later. Do not use the database user username/password, for example **edx\_dba/edxadmin**, as only the Oracle DBA user supports **full** mode for export.

For details about the **exp** utility, see the *Oracle8i Utilities* guide.



### Caution

Be sure to export any **custom** tablespaces you have added to your eaDirect database.

## Install Oracle9i

Follow the instructions in the *Oracle9i Installation Guide*. During the install, the Oracle Universal Installer will prompt for several values. Respond as noted in the following table.

Value	Notes
Database Configuration	Select “Software Only” to avoid creating a new database during installation. You will create your eaDirect database separately.

Value	Notes
Global Database Name	Name your global database according to Oracle recommendations.
SID	Enter a SID that is different from the existing Oracle 8i database SID.

As the database user, navigate to your Oracle home directory and change the Oracle profile (`.profile`) to refer to the 9i version of the Oracle home directory.

**Tip**

The Oracle8i client will support eaDirect for **conventional load** indexing. To use **direct load**, you must install the Oracle9i client on your application server. For details, see the eaDirect *Installation and Configuration* and *Production* guides.

## Create A New Oracle9i Database

Using the Oracle Database Configuration Assistant (DBCA) or a manual script, create a new Oracle9i database, for example `edx1`, containing:

- A LOGFILE made up of 3 groups
- A system DATAFILE
- An UNDO tablespace
- A TEMPORARY tablespace
- The character set WE8ISO8859P1
- The national character set AL16UTF16

Be sure that database creation is successful before proceeding to the next step.

**Caution**

You cannot migrate an existing Oracle 8i database directly for eaDirect. You must create a new Oracle9i database and export/import your data.

For details, see the *Oracle9i Database Administrator's Guide*.

## Create Tablespaces In The New Database

Create the following tablespaces in the new database:

```
edx_data
edx_data_idx
edx_app_data
edx_app_data_idx
edx_cda_data
edx_cda_data_idx
edx_fs_data
edx_fs_data_idx
edx_load_data
edx_load_data_idx
edx_oc_data
edx_oc_data_idx
edx_pwc_data
edx_pwc_data_idx
```



**Caution** Be sure to create any **custom** tablespaces you have added to your eaDirect database.

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Be sure that tablespace creation is successful before proceeding to the next step.

For details, see the *Oracle9i Database Administrator's Guide*.

## Create A New User For The New Database

1. Create a new DBA user for the new database, for example **edx\_dba**.
2. Execute the CREATE USER command using the appropriate values for your database, for example:

```
CREATE USER DEFAULT TABLESPACE edx_data TEMPORARY
TABLESPACE temp PROFILE DEFAULT
```

3. Grant this user the following roles:

```
ALTER SESSION
CREATE PROCEDURE
CREATE SEQUENCE
CREATE SESSION
CREATE TABLE
CREATE ANY TRIGGER
CREATE VIEW
EXECUTE ANY LIBRARY
EXECUTE ANY PROCEDURE
SELECT ANY TABLE
SELECT ANY DICTIONARY
UNLIMITED TABLESPACE
```

For details, see the *Oracle9i Database Administrator's Guide*.

## Import Your Oracle8i Database

As the Oracle DBA, import your existing Oracle8i database with the **imp** utility under Oracle9i. For example:

```
imp system/manager fromuser=edx_dba touser=edx_dba
file=edx0_export
```

Do not use the database user username/password, for example **edx\_dba/edxadmin**, as only the Oracle DBA user supports **full** mode for import. This will import the flat file version of your database into your new database. For details about the **imp** utility, see the *Oracle9i Utilities* guide.



Be sure to import any **custom** tablespaces you have added to your eaDirect database. The WebSphere database needs to be imported as well into this new 9i instance.

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## Update Oracle Administrative Files

Update the files `tnsnames.ora` and `listener.ora` to refer to the new SID. For details, see the *Oracle9i Net Services Administrator's Guide*.



Be sure to restart the Oracle listener process after updating these files.

---

## Update Your Application Server Environment

Working with your application server administrator, run the eaDirect environment script `$EDX_HOME/bin/edx_config` on the application server as the application server owner. As prompted, enter the new values for your eaDirect environment to refer to your new Oracle9i home directory (`$ORACLE_HOME`), database username and password, and SID, for example `edx1`. For details, see the *eaDirect Installation and Configuration Guide*.

## Update Your Application Server JDBC Resources

### WebSphere

Working with your WebSphere application server administrator through the WebSphere administrative console, update the resources for **each** JDBC data source in your application server configuration to refer to the new SID, for example `edx1`, and database username and password (if you changed these). You will also need to update the database name in the **URL** setting for each JDBC data source, for example `jdbc:oracle:thin:@localhost:1521:edx1`.

### WebLogic

Working with the WebLogic Server administrator, update the `config.xml` file to refer to the new SID and the new DBA username and password.

For details, see the *eaDirect Installation and Configuration Guide*.