


# Oracle® Agile

# Engineering Data Management

## Enterprise Integration Platform Installation and Upgrade Guide for Agile e6.1.3.0

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# Preface

The Oracle documentation set includes Adobe® Acrobat™ PDF files. The Oracle Technology Network (OTN) Web site (http://www.oracle.com/technology/documentation/agile.html) contains the latest versions of the Oracle Agile EDM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Oracle Documentation folder available on your network from which you can access the documentation (PDF) files.

**Note** To read the PDF files, you must use the free Adobe Acrobat Reader™ version 7.0 or later. This program can be downloaded from the Adobe Web site (http://www.adobe.com).

**Note** Before calling Agile Support about a problem with an Oracle Agile EDM manual, please have the full part number, which is located on the title page.

## TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, 7 days a week. For TTY support, call 800.446.2398. Outside the United States, call +1.407.458.2479.

## Readme

Any last-minute information about Oracle Agile EDM can be found in the Release Notes file on the Oracle Technology Network (OTN) Web site (http://www.oracle.com/technology/documentation/agile.html)

## Agile Training Aids

Go to the Oracle University Web page (http://www.oracle.com/education/chooser/selectcountry_new.html) for more information on Agile Training offerings.

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Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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# Chapter 1

# Installation Overview

In order to install the Integration Platform, several steps have to be performed:

1. Install the software on the server machine, where the Integration Platform should run.
2. Install the application specific software required by the Integration Platform, e.g. loader files in Agile EDM.
3. Modify the configuration file in order to define the involved connectors, mappings and operations (Business Objects).
4. Modify the mapping files based on the requirements.
5. Test the Integration Platform with the new configuration.

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**Note** This document describes the installation of the Enterprise Integration Platform together with Agile EDM.

**Note** For detailed information about prerequisites please refer to the “Enterprise Integration Platform Installation Requirements for Agile e6.1.3.0” guide.

# Chapter 2

# Basic Installation

The software is provided as a distribution package, which includes all files and directories needed for successfully running the application.

## Installation Steps

1. Copy the installation package onto the dedicated server, which should be used for running the Integration Platform. The used server needs to be able to connect to the Agile EDM Java Daemon via ECI and to ERP system via RFC.

2. Uncompress the package into the install directory of the Integration Platform, e.g. into the directory c:\agile\eip on MS-Windows (this will be referred to as <eai.home> in the rest of the document).

Following directory structure will be created under <eai.home>:

- Archive: Directory for archived queue entries
- Bin: Contains the startup scripts for the applications
- Conf: Contains the configuration and mapping files
- Data: Contains the XDOs (data packages) when persistence is activated
- Docs: Contains the documentation/manuals
- Install: Contains all additional installation files, which are required for external applications, e.g. Agile EDM
- Libs: Contains all library files (except JRE files)
- Log: Contains all log/trace files, depending on setting in configuration file
- Tmp: Contains all temporary files, which are neither log files nor XDO data files

# Database Creation

Before using the Enterprise Integration Platform, the needed database tables must be created. Before doing this, the Configuration File must be modified (as described in Chapter Configuration and Customization). Especially, the configuration values for <queue> with its sub-values <type>, <host>, <port>, <user>, <password> and <name> must be set to the appropriate database parameters (please refer to the “EIP Administration Guide for Agile

e6.1.3.0" for further information).

**Note** Although it might be possible to create the EIP's database objects with same user as other applications (e.g. Agile EDM), we strongly recommend using a separate user (a schema in Oracle). This prevents data loss in case of a command that deletes the database objects (e.g. with the dbmaint's purge command). Please read carefully the chapter Tools in the "EIP Administration Guide for Agile e6.1.3.0" for further information.

**Note** It might be recommended to create the new database user with own database files (tablespace in Oracle, database in SQL Server). The advantages of separate database files are independent from other tables and users (e.g. from Agile EDM), and easier to backup and replicate. Because the tables are constantly growing in size, and if they are not cleaned up on a regular basis, the initial size of the database file should be considered big enough. The definitions for Agile EDM may be used as a guideline for specifying the initial database size and extends. Since this is only a recommendation, you may feel free to use the same database files as an existing Agile EDM installation or even the same database user, especially if you do not expect too much data load.

In order to create the database tables on MS Windows, please start the script dbmaint.cmd in the directory bin.

On UNIX servers, please start the script dbmaint.sh in the directory bin.

The following Oracle PL/SQL script needs to be run against the EIP's database:

```
$EP_ROOT/axalant/db_utils/oracle/sql/ddl_eip_plsql_cln_bpm_que.sql
```

The easiest way to create the database objects is to execute the script with the SQL Plus tool from the same machine where the Oracle instant client for EDM has been installed.

This ensures that a new stored procedure will be created that will speed up the database cleanup tasks configured in eai_ini.xml.

For a further description of the Database Maintainer, please refer to the chapter Tools in the "EIP Administration Guide for Agile e6.1.3.0".

# Chapter 3

# Configuration and Customization

For more information about configuring and customizing the Enterprise Integration Platform, please refer to the “EIP Administration Guide for Agile e6.1.3.0”.

## Modifying the Configuration Files

The configuration has to be done in at least two files in the conf directory: run.conf and eai_ini.xml. Each one of them needs to be set up accordingly in order to have the Integration Platform start up and run properly.

The configuration file run.conf lists the classpaths used by the Integration Platform.

The configuration file eai_ini.xml consists of certain sections for the different modules of the Integration Platform, e.g. Controller, Connector and Mapping.

**Note** The password encryption had been changed due to be compliant with the Oracle Security Guidelines. It will now use the same method as Agile EDM 6.1 and higher uses (e.g. for the encryption of the database password). Therefore all passwords in the eai_ini.xml file needs to be re-generated.

For an Oracle non-RAC databases, it is advised to not use the OCI driver (which is enabled by default) but the JDBC thin driver. This behavior could be altered by the following line in the eip.conf file:

```
wrapper.java.additional.9=-Deip.oracle.thin=false
```

When set to false, the OCI driver is used that is required for RAC, otherwise the JDBC thin driver is used.

On AIX platform with an IBM Java Virtual Machine (JVM), the following line needs to be the first one in the corresponding section:

```
wrapper.java.additional.1=-Xbootclasspath/p:%EAI_HOME%/libs/xercesImpl-
2.10.0.jar
```

All other entries in this section should be renumbered accordingly, e.g.:

```
wrapper.java.additional.2=-Dcommons.home="%EAI_HOME%"
wrapper.java.additional.3=-Deai.home="%EAI_HOME%"
```

# Modifying the Mapping Files

As mentioned before, XSL files are used for mapping purposes. Since the connectors create and read XML data (i.e. the message XDO), converting the XDO to a specific format will be done by the XML Mapping engine.

The names of the XSL mapping files, which are used by the Integration Platform, are provided in the eai_ini.xml configuration file.

For more information about XSL tools, please refer to the chapter Frequently Asked Questions in the “EIP Administration Guide for Agile e6.1.3.0”.

# Configuring EIP on Linux

The EIP package for Linux x86 downloaded from Oracle Software Delivery Cloud does not contain the Oracle DB client library libclntsh.so.11.1. You have to use the Oracle DB client that is installed with Oracle Agile e6.1.3.0. If the EIP is installed on the same server as Agile e6.1.3.0, it will use the Oracle Client the Oracle Agile e6.1.3.0 installation. If not, the same Oracle Client installation as for Oracle Agile e6.1.3.0 needs to be executed on the EIP server.

The EIP's startup scripts and startup configuration files make references to the Oracle JDBC JARs and OCI shared libraries from the Oracle Client installation directories via the ORACLE_HOME environment variable. It supports both the Oracle Agile e6.1.3.0 Oracle Client installation and the Oracle Instant Client installation.

To run EIP, the Environment Variable ORACLE_HOME must be set to the root directory of an Oracle Client installation.

# Chapter 4

# Testing and Starting

For testing and starting the Enterprise Integration Platform, please refer to the chapter Running the Enterprise Integration Platform in the “EIP Administration Guide for Agile e6.1.3.0”.

Chapter 5

# Starting as a Windows Service

The EIP Daemon is a Java Service Wrapper for Windows Server 2008 R2 Enterprise Edition (64bit). It may be used to start and stop the Enterprise Integration Platform from the Service Control Panel.

## Installation Steps

1. The environment variables EAI_HOME and JAVA_HOME must be set!

2. Run the script daemon.cmd from the bin directory with the argument “install” to install the service:

   ```
   bin\daemon.cmd install
   ```

   The service may be removed by calling the script with the argument “remove”.

3. Open Start > Control Panel > Administrative Tools > Services and ensure that the service is running with the same user as the Agile EDM server instance (default is axalantrt).

4. Use the entry “EnterpriseIntegrationPlatform Daemon” to start or stop the Enterprise Integration Platform.

## Troubleshooting

If the service does not start or terminates unexpectedly, check the additional log file daemon.log that is located in logs. It contains service internal messages and should be reviewed for daemon configuration problems.

Chapter 6

# Starting as a UNIX Daemon

The EIP Daemon is a Java Daemon Wrapper for UNIX. It may be used to start and stop the Enterprise Integration Platform from the Service Control Panel.

## Installation Steps

1. The environment variables EAI_HOME and JAVA_HOME must be set!
2. Run the script daemon.sh from the bin directory with the argument “start” to install the service:

   ```
   bin/daemon.sh start
   ```

   The service may be stopped by calling the script with the argument “stop”.
3. Check if the daemon is running by calling:

   ```
   bin/daemon.sh status
   ```

## Troubleshooting

If the service does not start or terminates unexpectedly, you may check the additional log file daemon.log that is located in logs. It contains service internal messages and should be reviewed for daemon configuration problems.

# Chapter 7

# Upgrade Tool

**Note** This chapter described the upgrade from one major version to the next one. For changes in minor versions please refer to the respective Release Notes document.

The Upgrade tool allows upgrading previous versions of the eai_ini.xml file to the current EIP version.

The tool can be started with the script upgrade.cmd (Windows) and upgrade.sh (UNIX) in the bin directory.

The following startup options are available (you will get this by adding the --help option to the startup script):

```
Usage: Enterprise Integration Platform Upgrade [-c <conf-dir> ] [-h] -i
<in> -o <out> [-p <props-file> ] [-x <xsl> ]

Options:
   -c | --conf-dir     Specifies the configuration directory
   -h | --help         Shows this help
   -i | --in           Input file (REQUIRED)
   -o | --out          Output file (REQUIRED)
   -p | --props-file   Specifies the properties file
   -x | --xsl          XSL file (default: upgrade.xsl)
```

This is an example on how the tools might be called on Windows:

```
bin\upgrade.cmd –i C:\eigner\eip-old\conf\eai_ini.xml –o C:\eigner\eip-
new\conf\eai_ini.xml
```

The Upgrade tool may provide the following output:

```
[<date>] FORCE (Upgrade) - Input file (2.1.1) : C:\eigner\eip-
old\conf\eai_ini.xml
[<date>] FORCE (Upgrade) - Transformation file: C:\eigner\eip-
new\conf\upgrade.xsl
[<date>] FORCE (Upgrade) - Output file (2.1.2): C:\eigner\eip-
new\conf\eai_ini.xml
[<date>] FORCE (Upgrade) - Transformation done in 0 h 00 min 00 s 297
ms
```

# EIP 2.1 to 2.2

## General Information

Here you can find information about the installation of the Enterprise Integration Platform

Version 2.2 (EIP for Agile e6.1.3.0) on top of EIP 2.1.

**Note** Please keep in mind, that additional customizing of the Enterprise Integration Platform (e.g. XSL Mapping) and Agile EDM (e.g. additional Query Forms) will not be upgraded automatically.

# Installation

Due to the fact that libraries and configuration files changed between the versions EIP 2.1 and EIP 2.2, we recommend installing EIP 2.2 in a directory separate from EIP 2.1. Additional mapping files and configuration should be incorporated into the EIP 2.2 installation one by one.

# Configuration and Customizing

## Configuration Settings

The structure of the configuration file eai_ini.xml has changed. Therefore, please copy your 2.1 configuration settings carefully one by one to the 2.2 eai_ini.xml file.

**Note** The usage of the Upgrade tool is highly recommended. Some manual work might also be required.

Following portions of the eai_ini.xml file have changed:

The webserver configuration in the controller area is now deactivated by default. If a network connector is used it must be activated and the port needs to be configured properly to not conflict with another process already running on the same port (e.g. a Tomcat installation).

For an Oracle non-RAC databases, it is advised to not use the OCI driver (which is enabled by default) but the JDBC thin driver. This behavior could be altered by the following line in the eip.conf file:

```
wrapper.java.additional.9=-Deip.oracle.thin=false
```

When set to "false", the OCI driver is used that is required for RAC, otherwise the JDBC thin driver is used.

## Password Encryption

The password encryption had been changed to be compliant with the Oracle Security Guidelines. It will now use the same method as Agile EDM uses (e.g. for the encryption of the database password). Therefore, all passwords in the eai_ini.xml file need to be re-generated.

**Note** New passwords are now prefixed with {PLM-AES-128}. And there will be different passwords generated from the same input to make it harder to guess or recognize previously used passwords. It is therefore advised to generate separate encrypted passwords for the same input.

The command line tool “encrypt” does not allow specifying the password to be encrypted on the command line anymore. It is recommended to paste the plain password into the system’s clipboard before running the tool. The encrypted password will be stored into the clipboard again. Or you may choose to use the UI tool named “crypt”.

## Database Creation

The following Oracle PL/SQL script needs to be run against the EIP’s database:

```
$EP_ROOT/axalant/db_utils/oracle/sql/ddl_eip_plsql_cln_bpm_que.sql
```

The easiest way to create the database objects is to execute the script with the SQL Plus tool from the same machine where the Oracle instant client for Agile EDM has been installed.

This ensures that a new stored procedure will be created that will speed up the database cleanup tasks configured in eai_ini.xml.