Oracle® Enterprise Data Quality

Installation and Upgrade Guide

11g Release 1 (11.1.1.7)

E40040-07

January 2015

ORACLE®

Oracle Enterprise Data Quality Installation and Upgrade Guide, 11g Release 1 (11.1.1.7)

E40040-07

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Preface

This document describes how to install Oracle Enterprise Data Quality on Linux, UNIX, and Windows platforms.

Audience

This document is intended for system administrators or application developers who are installing Oracle Enterprise Data Quality. It is assumed that you have a basic understanding of application server and web technology and have a general understanding of Linux, UNIX, and Windows platforms. Throughout this guide, it is assumed that you are fully familiar with the components of the supported platform on which you want to install Oracle Enterprise Data Quality.

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Related Documents

For more information, see the following documents in the Oracle Enterprise Data Quality documentation set:

- *Oracle Enterprise Data Quality Release Notes Release 11g R1 (11.1.1.7)*

- *Oracle Enterprise Data Quality Architecture Guide Release 11g R1 (11.1.1.7)*

See the latest version of this and all documents in the Oracle Enterprise Data Quality Documentation website at

http://download.oracle.com/docs/cd/E48549_01/index.htm

See the latest version of the Oracle Database documents in the Oracle Database Documentation Library website at

http://www.oracle.com/pls/db112/homepage

See the latest version of the Oracle WebLogic Server 11g Release documents in the Oracle WebLogic Server Documentation Library website at

http://docs.oracle.com/cd/E23943_01/wls.htm

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Installation Overview

This chapter describes the compatible platform combinations that you can install Oracle Enterprise Data Quality (EDQ) on and includes the installation roadmap.

1.1 Overview

EDQ provides a comprehensive data quality management environment, used to understand, improve, protect and govern data quality. The software facilitates best practice master data management, data integration, business intelligence, and data migration initiatives, as well as, providing integrated data quality in customer relationship management (CRM) and other applications.

EDQ is a Java Web Application using a Java Servlet Engine, a Java Web Start graphical user interface and a Structured Query Language (SQL) relational database management system (RDBMS) system for data storage.

1.1.1 The EDQ Platform

EDQ requires a platform including the following components:

- An operating system,
- a Java Application Server, and
- a structured query language (SQL) relational database management system (RDBMS) system containing two schemas.

Installation of some platform components is a prerequisite to installing EDQ on any of the supported platforms. If you want to install and run EDQ on a custom platform, you must have the appropriate expertise to install and maintain the selected components.

1.2 Installation Roadmap

Table 1–1 describes the high-level tasks that are required to install EDQ.

Table 1–1   EDQ Product Installation Procedure Tasks

Task	Description	Documentation
Step 1 - Complete the installation planning requirements	Ensure that your system environment meets the requirements for the installation. Also, determine your Oracle Middleware home directory, product installation home directories. There are several application server and database combinations that you can choose from to install.	For installation requirements, see Section 2.2, "Installation Prerequisites." For information about installation home directories, see Section 2.1, "Selecting Directories for Installation." For information about installation modes, see Section 2.2.2, "Choosing an Installation Combination."
Step 2 - Install the prerequisite software.	Download and install the correct software prerequisites for your operating system and system processor.	For instructions, see .Section 2.2.4, "Installing the Java Development Kit", Section 2.2.5, "Installing the Application Server", and Section 2.2.6, "Installing the Database."
Step 3 - Obtain the generic installation file for your platform	The software is downloaded from the Oracle Software Delivery Cloud website.	For information about how to download the software, see Section 2.3, "Product Distribution."
Step 4 - Configure your database.	Create the database repository and schemas.	For instructions, see Section 3.1, "Configuring an Oracle Database" or Section 3.2, "Configuring a PostgreSQL Database."
Step 5 - Install the software.	Run the EDQ Oracle Universal Installer (OUI) installation program. You have the option to create a detailed installation log upon completion.	For installation instructions, see Section 4.1, "Starting the Installer On Linux and UNIX" or Section 4.2, "Starting the Installer On Windows."
Step 6 - Configure EDQ	Configure EDQ on your application server then configure various EDQ product options.	For instructions see, Section 5.2, "Configuring EDQ on WebLogic Server," or Section 5.3, "Configuring EDQ on Tomcat or WebSphere."
Step 7 - Get Started	Get started using EDQ.	For log in and basic use information, see Section 6, "Getting Started with EDQ."
(Optional)	Upgrade EDQ.	For instructions, see Section 7, "Upgrading EDQ."

2

Planning an EDQ Installation

This chapter describes how to plan and prepare to install EDQ and presents information that the you should consider and be familiar with before you begin the installation, including the following:

- Section 2.1, "Selecting Directories for Installation"
- Section 2.2, "Installation Prerequisites"
- Section 2.3, "Product Distribution"

2.1 Selecting Directories for Installation

During the installation process, you must specify locations for one or more of the following home directories:

- Oracle Fusion Middleware
- EDQ

Once installed, additional directories and files are located in the Oracle Fusion Middleware home directory for Fusion Middleware products, such as EDQ and WebLogic Server.

2.1.1 Choosing a Fusion Middleware Home Directory

The Fusion Middleware home directory serves as a repository for common files that are used by multiple Fusion Middleware products installed on the same machine. For this reason, the Middleware home directory can be considered a *central support directory* for all the Fusion Middleware products installed on your system.

The files in the Middleware home directory are essential to ensuring that Fusion Middleware products operate correctly on your system. They facilitate checking of cross-product dependencies during installation. The directories in the Middleware home directory vary depending on the installer that you are using and the products you selected for installation.

The default installation directory for the Middleware home directory is:

On Linux and UNIX: `/opt/Oracle/Middleware/`

On Windows: `C:\Oracle\Middleware\`

The Middleware home directory is referenced as `MW_HOME` in Fusion Middleware documentation and this guide.

2.1.2 Choosing the EDQ Installation Directory

When you are installing EDQ, you are prompted to choose an existing *MW_HOME* directory or specify a path to create a new one. If you choose to create a new directory, the installation program automatically creates it for you.

You are then prompted to enter a home directory for EDQ. This home directory contains the components necessary to installing and configuring the product. The default installation directory for EDQ is:

On Linux and UNIX: *MW_HOME*/Oracle_EDQ1

On Windows: *MW_HOME*\Oracle_EDQ1

This directory path is referenced as the *EDQ_HOME* directory in this document.

2.2 Installation Prerequisites

The following sections describe the installation prerequisites:

- Section 2.2.1, "Hardware and Software Requirements"
- Section 2.2.2, "Choosing an Installation Combination"
- Section 2.2.3, "Choosing User Accounts"
- Section 2.2.4, "Installing the Java Development Kit"
- Section 2.2.5, "Installing the Application Server"
- Section 2.2.6, "Installing the Database"
- Section 2.2.6.1.1, "Installing Repository Creation Utility"

2.2.1 Hardware and Software Requirements

You must ensure that the following hardware and software requirements are observed. These requirements represent the certified and supported server configurations.

Depending on the tasks that EDQ is required to perform, it can place heavy demands on the hardware used to run it. A recommended *minimum* hardware specification for an EDQ server is:

- 16GB physical memory, with 8GB allocated to the EDQ Java Virtual Machine (JVM)
- At least 4 logical CPUs
- At least 500GB of hard disk space on the database server

In order to allow the flexible use of EDQ to meet use cases, ensure that the EDQ Results Database has enough space for at least 20 times the volume of the data it is working with.

The preceding recommendations do not represent sizing advice for any specific deployment, where it may be appropriate to deploy a considerably larger machine or many machines, depending on the processing needs placed on EDQ.

Review the list of certified platforms and releases for EDQ prior to installation, see *Oracle Enterprise Data Quality Certification Matrix* at

http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html

Locate **Oracle Enterprise Data Quality** in the Product Area column and then click the **System Requirements and Supported Platforms for Oracle Enterprise Data Quality (11.1.1.7.N) Certification Matrix (xls)** link.

2.2.1.1 UNIX System Resource Limits

On UNIX systems, the operating system is configured with a default `ulimit` value (use the `ulimit -a` command to view the value). Depending on how you installed and configured UNIX, you may find that your application server user is unable to create files larger than 1 GB. This restricts your ability to work with large data sets if you are using files to transfer data. In this case, the hard `ulimit` on file size may need to be removed for your application server user.

2.2.1.2 Virtual Hardware

You can install EDQ on virtualized systems using a virtualization tool, such as Oracle VM Server. Both the virtual system and the physical system it is deployed on must fulfill the minimum hardware requirements.

If load balancing software is used to deploy multiple virtual systems onto a single physical system, care must be taken to ensure that the load balancing software is carefully tuned. In general, EDQ imposes a load similar to an extract, transform and load tool or data warehousing software. Between batches, very little load is imposed on the system. When processing a batch of data, EDQ rapidly drives hardware to be CPU or I/O bound. Unless the virtualized load balancing is correctly configured suboptimal performance results.

2.2.2 Choosing an Installation Combination

You can choose to install one the following combinations ensuring that it is supported on your installed operating system (see Section 2.2.1, "Hardware and Software Requirements"):

Application Server	Database
WebLogic	Oracle
WebSphere	Oracle
WebSphere	PostgreSQL
Tomcat	Oracle
Tomcat	PostgreSQL

2.2.3 Choosing User Accounts

An operating system user account is used to install and upgrade EDQ on your servers. This user *must* have full permissions (read, write and execute) to the directories that will contain the EDQ installation files, target installation directory, and all database directories; it is applicable to all operating systems. This operating system user account is referred to as the EDQ installation user in this document.

The EDQ installation user is used to install your application server and database.

> **Note:** When installing on UNIX or Linux operating systems, do *not* use the root user as your EDQ installation user account.

For Tomcat and WebSphere, an application server user is necessary to create EDQ user accounts, tables, and schemas. For WebLogic, a user is automatically created for your EDQ domain when you run the WebLogic Configuration Wizard and is used to administer your EDQ domain and to log into the EDQ application.

Similarly, a database administrator user account that has the privileges to access the database and ability to create schemas and run the database product is necessary. This database administrator user account is used during the installation and configuration processes to create the database accounts specific to EDQ. This is applicable to any supported database that you want to use with EDQ.

2.2.4 Installing the Java Development Kit

You must install a supported JDK since both the EDQ and application server products rely on it. The JDK provides the Java run-time environment (JRE) and tools for compiling and debugging Java applications.

Identify the EDQ supported JDK that you want to install using the following table and the *Oracle Enterprise Data Quality Certification Matrix* (see Section 2.2.1, "Hardware and Software Requirements").

If You Are Installing:	You must use the:
WebSphere	IBM JDK that is bundled with WebSphere.
on AIX	the IBM JDK is the only supported JDK so it is used for all application servers.
on HP-UX	the HP JDK.

Download and install the Oracle JDK using the instructions provided at

http://www.oracle.com/technetwork/java/javase/downloads/index.html

You will be required to specify the directory into which you installed the JDK during the installation of your application server so note them. For example, the directories may be:

On Linux and UNIX: /opt/jdk1.7.0_40

On Windows: C:\Program Files\Java\jdk1.7.0_40

This directory path to your installation is referenced as the *JDK_HOME* directory in this document.

> **Note:** On Solaris systems, you must install both the 32-bit and 64-bit JDKs in order to run java applications. Install these JDKs by following the instructions at the Oracle Java SE documentation website at
>
> http://docs.oracle.com/javase/7/docs/webnotes/install/solaris/solaris-jdk.html

2.2.5 Installing the Application Server

You must install one of the supported application servers, WebLogic, WebSphere, or Tomcat, see Section 2.2.1, "Hardware and Software Requirements". This section contains any information specific to the installation or configuration of these application servers.

2.2.5.1 Installing WebLogic Server

The installation instructions, including how to obtain the product, are found in the *Oracle WebLogic Server Installation Guide* at

http://docs.oracle.com/cd/E23943_01/wls.htm

The directory path to your installation is referenced as the `WL_HOME` directory in this document.

Oracle recommends the use of managed servers in your EDQ domain and that you use WebLogic Node Manager to administer the servers in your domain. For more information, see *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server 11g Release 1*.

2.2.5.2 Installing Tomcat

You can download the Tomcat Application Server, installation instructions, and all documentation, from the Apache Software Foundation Server web site at

http://tomcat.apache.org/

Configuring Tomcat

After you have installed Tomcat, you must ensure that you configure it to use an Oracle Java JDK (not OpenJDK). For example, `JAVA_HOME="/opt/java/jdk1.7.0_25"`. This path variable should be set in your `tomcat#.conf` file to specify that it is for Tomcat; alternatively, you can add it to your `setenv.sh` post-installation.

> **Note:** Oracle recommends that you configure Tomcat to start as a service.

2.2.5.3 Installing WebSphere

You can download the WebSphere Application Server and installation instructions from the IBM WebSphere web site at

http://www-03.ibm.com/software/products/us/en/appserv-was/

Configuring WebSphere

After you have installed WebSphere, you must create a new profile that describes your EDQ WebSphere server.

2.2.6 Installing the Database

You must install one of the supported databases, Oracle or PostgreSQL. This section contains any information specific to the installation or configuration of these databases.

2.2.6.1 Oracle Database

You can download the Oracle Database product and installation instructions from the Oracle Database Documentation web site at

http://www.oracle.com/pls/db112/

Installation and configuration considerations:

- Ensure that you select the **Create and configure a database** installation option.

- Oracle recommends the following Oracle Database Memory Structure and tablespace configuration:
  - 4GB Program Global Area (PGA)
  - 4GB System Global Area (SGA)
  - 20GB undo tablespace
  - 20GB temp tablespace
  - Separate user tablespaces for configuration and results schemas
- You may need to increase the values for the `SESSIONS` and `PROCESSES` parameters. The appropriate value for these parameters depends on your Oracle Database installation and intended use of EDQ though the suggested values are:

  `SESSIONS=500`

  `PROCESSES=500`

  If you are unsure of the appropriate settings for these parameters, or how the values should be set, see *Oracle Database Concepts 11g Release 1 (11.1)* or contact your database administrator. For more information about the integration of Oracle Database with EDQ, see *Oracle Enterprise Data Quality Architecture Guide*.
- You *must* configure your Oracle database to use a Unicode character set to ensure that EDQ is able to capture and process data in the widest range of character sets.
- If required, multiple EDQ servers may share the same Oracle Database; each server *must* have dedicated `Config` and `Results` schemas within the database.

2.2.6.1.1 Installing Repository Creation Utility

EDQ requires the existence of schemas in your installed Oracle Database prior to installation. These schemas are created and loaded in your database using the Repository Creation Utility (RCU).

> **Note:** Do not use RCU when upgrading EDQ; use the instructions in Section 7, "Upgrading EDQ."

You must obtain the RCU product using the instructions found in the *Oracle Fusion Middleware Repository Creation Utility User's Guide* at

http://docs.oracle.com/cd/E28280_01/doc.1111/e14259/toc.htm

> **Note:** On Windows operating systems, make sure that you do not unzip the RCU `.zip` file to a directory name containing spaces.

The directory you unzip the product into will be referred to as the *RCU_HOME* directory in this guide.

2.2.6.2 PostgreSQL

You can download the PostgreSQL product and installation instructions from the PostgreSQL website at

http://www.postgresql.org/

> **Note:** PostgreSQL may be distributed with your operating system so you must verify that the release is one of EDQ supported releases.

> **Note:** The EDQ RCU does not run on PostgreSQL databases so you must manually set up your users and databases as described in this section. Then you must configure PostgreSQL, install EDQ, and then run the EDQ Configuration Application to create the required tables as described in the remaining chapters.

Installation and configuration considerations:

- If you are installing on Windows, Oracle recommends that you use the graphical installer that you can download from the PostgreSQL web site at

  http://www.postgresql.org/download/windows/

- Allow a maximum connections of 403 by editing the `postgresql.conf` file in the PostgreSQL `data` directory (for example, `/var/lib/pgsql/data/postgresql.conf`).

- You *must* configure your PostgreSQL database to use a Unicode character set to ensure that EDQ is able to capture and process data in the widest range of character sets.

Configure your schema for installation as the EDQ repository as follows:

- Create two new PostgreSQL users, named `config` and `results`.

- Create a schema within your database, named `config` and owned by the `config` user.

- Create a second schema within your database, named `results` and owned by the `results` user.

On Linux systems, configure PostgreSQL to:

- Use password authentication by editing the `pg_hba.conf` file in the data directory PostgreSQL is installed (for example, `/var/lib/pgsql/data/pg_hba.conf`) and changing the `ident sameuser` entries to `md5`.

2.3 Product Distribution

The EDQ installation and configuration files are distributed by downloading the generic package installer from the Oracle Software Delivery Cloud web site as follows:

1. Enter the Oracle Software Delivery Cloud URL into a web browser:

   http://edelivery.oracle.com/

2. Click **Sign-in/Register**.

   > **Note:** If you are not already logged in, the Oracle Single Sign-On page appears. Enter your Oracle user id and password and click **Sign In**.

The Terms & Restrictions page appears

3. Click the Oracle Software Delivery Cloud Trial License Agreement and the Export Restrictions check boxes, and then click **Continue**.

The Media Pack Search page appears.

4. On the Media Pack Search page, do the following:

   a. Click the Select Product Pack drop-down list and elect **E-Business Suite** (if you purchased the product from the Application Price List) or **Oracle Fusion Middleware** (if you purchased the product from the Technology Price List) from the Select a Product Pack drop-down list.

   b. Click the Platform drop-down list and select the platform on which you are installing EDQ.

   c. Click **Go**.

   The Results list expands to show all available media packs that include your search criteria.

5. Locate and select **Oracle Enterprise Data Quality 11.0 Media Pack (11.1.1)** (E-Business Suite Product Pack) or **Oracle Enterprise Data Quality 11.1.1.7.# (11.1.1) Media Pack** (Oracle Fusion Middleware Product Pack) option and click **Continue**.

6. Click the **Download** button for Oracle Enterprise Data Quality 11.1.1.7.#.

7. Browse to the directory where you want to save the file then click **Save** to start the file download. A ZIP file is downloaded.

8. Extract the ZIP file to the following directory:

   On Linux and UNIX: `/opt/edq_install`

   On Windows: `C:\edq_install`

   The installation directory now contains the `edq` directory. The installers are in the `edq/Disk1/` directory. You have all of the files necessary to install EDQ though additional software may be required as described in the following section.

2.4 Next Step

Go to Section 3, "Configuring Your EDQ Database Schemas" to continue with the installation.

3

Configuring Your EDQ Database Schemas

This chapter describes how to create and configure your EDQ database schemas. Use one of the following sections to configure your database:

- Section 3.1, "Configuring an Oracle Database"
- Section 3.2, "Configuring a PostgreSQL Database"

3.1 Configuring an Oracle Database

To use an Oracle Database with EDQ, you must create the necessary database repository and schema using the following sections.

> **Note:** Do not use RCU when upgrading EDQ; use the instructions in Section 7, "Upgrading EDQ."

3.1.1 Starting RCU On Linux and UNIX

To start the RCU program on a Linux or UNIX system using a `.sh` installation file, follow these steps:

1. Log in to the target system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Go to the *RCU_HOME*/bin directory.

> **Note:** Ensure that all files in the directory have executable permissions for the user you logged in with before continuing.

3. Start the installation by entering the following command:

   ```
   ./rcu
   ```

   The RCU program is displayed.

4. Go to Section 3.1.3, "Completing the RCU Configuration" and complete the installation.

3.1.2 Starting RCU On Windows

To start the RCU program in on a Windows platform, follow these steps:

1. Log in to the target Windows system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

> **2.** Locate the MS-DOS Command Prompt (`cmd.exe`), and then double-click on it.
>
> **3.** Go to the *RCU_HOME*\bin directory.
>
> **4.** Start the installation by entering the following command:
>
> **rcu.bat**
>
> The RCU program is displayed.
>
> **5.** Go to Section 3.1.3, "Completing the RCU Configuration" and complete the installation.

3.1.3 Completing the RCU Configuration

Complete the RCU configuration using the instructions in Table 3–1, " Running the RCU Program"; some screens are displayed only in certain situations, as noted in the table.

To view any of the installation screens, see Section A.1, "RCU Screens."

Table 3–1   Running the RCU Program

Screen	Instructions and Action Required
Welcome	Click **Next** to proceed with the installation.
	You may cancel the installation at any time by clicking **Exit**.
Create Repository	Click **Next** to continue.
	This uses the default Create option.
Database Connection Details	Specify the host name where your Oracle database is running.
	Enter the port number for your database; the default port number is 1521.
	Specify the service name for the database. Typically, the service name is the same as the global database name. For example, oracle.example.com.
	Enter the user name for your database; the default user name is SYS.
	Enter the password for your database user.
	Select **SYSDBA** from the Role: list; this is automatically selected when the user is SYS.
	Click **Next** to continue.
Checking Global Prerequisites	When the prerequisites checking progress has reached completion, click **OK** to continue.
Select Components	Select the **Oracle Enterprise Data Quality**, **EDQ Config Repository**, and **EDQ Results Repository** check boxes.
	You can select other check boxes as required if you want to install any optional components. For example, if you intend to use WebLogic Policy Manager, then you may need to select additional corresponding schemas like Metadata Services. If you intend to install Oracle Platform Security Services for Audit, then you need the Audit Services schema.
	Click **Next** to continue.
Checking Component Prerequisites	When the prerequisites checking progress has reached completion, click **OK** to continue.
Schema Passwords	Enter the password you want to use for all database schemas in both password fields, then click **Next** to continue.

Table 3–1   (Cont.) Running the RCU Program

Screen	Instructions and Action Required
Map Tablespaces	The default EDQ tablespaces are displayed by component.
	You can change the tablespaces using the **Manage Tablespaces** button and modifying the information.
	Click **Next** to continue.
Map Tablespaces	Click **OK** to create any non-existent tablespaces in your schema, then click **OK** when the operation completes.
Summary	Review the database details then click **Create** to continue.
Completion Summary	Click **Close** to exit the RCU program.
Completion	

3.2 Configuring a PostgreSQL Database

To use a PostgreSQL Database with EDQ, you must ensure that database listening is turned on, create the necessary database repository, and schema using the following sections.

3.2.1 Starting PostgreSQL and Checking Local Connections On Linux and UNIX

To start the PostgreSQL program on a Linux or UNIX system and check that the local connections are properly configured, follow these steps:

1. Log in to the target system as your database user. See Section 2.2.3, "Choosing User Accounts".

2. Ensure your database server is running. For more information, see the PostgreSQL web site at

   http://www.postgresql.org/docs/9.1/static/server-start.html

3. Go to the PostgreSQL `data` directory. For example, `/var/lib/pgsql/data`.

4. Examine the `pg_hba.conf` file by entering the following command:

   tail pg_hba.conf

   The file contents are displayed and the following is an excerpt:

   ```
   # TYPE  DATABASE        USER            ADDRESS             METHOD
   # "local" is for Unix domain socket connnections only
   local  all             all                                 ident

   # IPv4 local connections:
   host   all             all             127.0.0.1/32        md5
   # IPv6 local connections:
   host   all             all             ::1/128             md5
   ```

5. Ensure that the IPv4 and IPv6 local connections are configured as in the code excerpt in the previous step to ensure database listening is on and that passwords are accepted for authentication.

6. Go to Section 3.2.3, "Configuring PostgreSQL" to complete the configuration.

3.2.2 Checking Local Connections PostgreSQL On Windows

To check that the local connections are properly configured on a Windows platform, follow these steps:

1. Log in to the target Windows system as your database user. See Section 2.2.3, "Choosing User Accounts".

2. Locate the MS-DOS Command Prompt (`cmd.exe`), and then double-click on it.

3. Ensure your database server is running. For more information, see the PostgreSQL web site at

    http://www.postgresql.org/docs/9.1/static/server-start.html

4. Go to the PostgreSQL `data` directory. For example, `C:\Program Files\PostgreSQL\9.3\data`.

5. Examine the `pg_hba.conf` file by entering the following command:

    TYPE pg_hba.conf

    The file contents are displayed and following is an excerpt:

    ```
    # TYPE  DATABASE        USER            ADDRESS                 METHOD

    # IPv4 local connections:
    host    all             all             127.0.0.1/32            md5
    # IPv6 local connections:
    host    all             all             ::1/128                 md5
    ```

6. Ensure that the IPv4 and IPv6 local connections are configured as in the code excerpt in the previous step to ensure database listening is on and that passwords are accepted for authentication.

7. Go to Section 3.2.3, "Configuring PostgreSQL" to complete the configuration.

3.2.3 Configuring PostgreSQL

This section describes how to configure remote connections, and creating the necessary EDQ users, database, and schemas.

3.2.3.1 Configuring Remote Connections

If your PostgreSQL database has been installed on a different system, then it must be configured to accept connections from other hosts. This is applicable to all PostgreSQL environments.

Configure remote database connections using these steps:

1. Locate the `data` directory for your PostgreSQL database.

2. Edit the `postgresql.conf` file.

3. Locate the following line:

    ```
    #listen_addresses = 'localhost'
    ```

4. Insert the following line to cause PostgreSQL to accept connections from remote hosts:

    ```
    listen_addresses = '*'
    ```

5. Edit the `pg_hba.conf` file then add the following line using *addr/mask* to identify the subnet of the host running EDQ:

```
host all all addr/mask md5
```

For example, `host all all 192.168.0.0/24 md5` allows connections from all hosts with the IP addresses 192.168.0.0 to 192.168.0.255 while `host all all 0.0.23.56/32 md5` accepts connections only from IP address 10.0.23.56.

3.2.3.2 Creating the EDQ Users, Database, and Schemas

> **Note:** The actual tables are created post-installation using the EDQ Configuration Application in Chapter 5, "Configuring EDQ Post-Installation."

1. Run `psql` for your PostgreSQL installation.

2. Enter your PostgreSQL credentials, that you configured during installation, when prompted.

3. Create the two necessary EDQ users with the following commands changing *password* to be the password you want to use for each user :

   create user config *password* 'config';

   create user results *password* 'results';

4. Create your EDQ database and the config user using this command:

   create database edq encoding 'UTF-8' owner config template template0;

5. Create the schema using the following:

   create schema authorization config;

   create schema authorization results;

6. Test your database configuration by logging out then back in using your new EDQ credentials.

3.3 Next Step

Go to Section 4, "Running the EDQ Installer" to continue with the installation.

4

Running the EDQ Installer

This chapter describes how to install EDQ on Linux, UNIX, and Windows and includes the following topics:

- Section 4.1, "Starting the Installer On Linux and UNIX"
- Section 4.2, "Starting the Installer On Windows"
- Section 4.3, "Completing the Installation"

4.1 Starting the Installer On Linux and UNIX

To start the installation program on a Linux or UNIX system using a `.sh` installation file, follow these steps:

1. Log in to the target system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Go to the installation directory, `/opt/edq_install/edq/Disk1`.

   > **Note:** Ensure that all files in the directory have executable permissions for the user you logged in with before continuing.

3. Start the installation by entering the following command:

   `./runInstaller -jreLoc `*`JDK_HOME`*

4. Enter your *JDK_HOME* directory and press **Enter**.

   The EDQ OUI program is displayed.

5. Go to Section 4.3, "Completing the Installation" and complete the installation.

4.2 Starting the Installer On Windows

To start the installation program on a Windows platform using a `.exe` file, follow these steps:

1. Log in to the target Windows system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Locate the MS-DOS Command Prompt (`cmd.exe`), right-click on it, and then select **Run as administrator**.

3. Go to the installation directory `C:\edq_install\edq\Disk1`.

4. Start the installation by entering the following command:

```
setup.exe -jreLoc JDK_HOME
```

> **Note:** If your *JDK_HOME* directory contains spaces as in the default installation directory, `C:\Program Files\Java\jdk1.7.0_25`, then you must use the following directory syntax:
>
> `C:\Progra~1\Java\jdk1.7.0_25`
>
> For more information, see *Oracle Fusion Middleware Release Notes 11g Release 1 for Microsoft Windows*.

The EDQ OUI program is displayed.

5. Go to Section 4.3, "Completing the Installation" and complete the installation.

4.3 Completing the Installation

Complete the installation using the instructions in Table 4–1, " Running the Installation Program"; some screens are displayed only in certain situations, as noted in the table.

To view any of the installation screens, see Appendix A.2, "OUI Installation Screens,".

Table 4–1   Running the Installation Program

Screen	Instructions and Action Required
Welcome	Click **Next** to proceed with the installation.
	You may cancel the installation at any time by clicking **Exit**.
Install Software Updates	Specify any software updates to install before you install Oracle Enterprise Data Quality.
	To get updates from My Oracle Support, you can select **Search My Oracle Support for Updates**, specify a user name and password, and then click **Search for Update**s. Before you search, you can click **Proxy Settings** to change the settings for the proxy server and **Test Connection** to test the credentials.
	To get updates that you have saved to your computer, you can select **Search Local Directory for Updates**, specify a directory, and then click **Search for Updates**.
	If you do not want to update any software, select **Skip Software Update**s, and then click **Next** to continue the installation.
Select Installation Type	Use the default **Installation for WebLogic Server** if this is your installed application server or select **Installation for Other Platforms** if your application server is Tomcat or WebSphere.
	Click **Next** to continue.
Prerequisite Checks	Click **Next** to continue.
Installation Location	Specify the Middleware home directory that will serve as the central support directory for all Fusion Middleware products installed on the target system, including EDQ and WebLogic Server.
	Specify the home directory for EDQ where the product will be installed and used. For example, Oracle_EDQ1.
	If EDQ exists in the specified directory, you can select **Yes** to upgrade your existing installation or **No** to create another EDQ instance.
	Click **Next** to continue.
Installation Summary	Click **Install** to continue.

Table 4–1 (Cont.) Running the Installation Program

Screen	Instructions and Action Required
Installation Progress	When the installation program progress has reached 100%, click **Next** to continue.
Installation Complete	Click **Finish** to exit the installation program.

4.4 Next Step

Go to Section 5, "Configuring EDQ Post-Installation" to continue with the post-installation tasks.

5

Configuring EDQ Post-Installation

This chapter describes how to set the Java Virtual Machine Parameters (JVM) for EDQ and how to configure EDQ on your application server.

Begin the post-installation configuration with Section 5.1, "Setting Java Virtual Machine Parameters for EDQ", then use one of the following sections to configure your application server:

- Section 5.2, "Configuring EDQ on WebLogic Server"
- Section 5.3, "Configuring EDQ on Tomcat or WebSphere"

5.1 Setting Java Virtual Machine Parameters for EDQ

For all application servers including WebLogic, you must set the JVM parameters as follows:

- Maximum heap memory, `-Xmx,` should normally be set to approximately 50% of available physical memory on the host server. For example, on a server with 32GB of RAM, start by setting it to 16GB with `-Xmx16384m`. Depending on the relative usage of memory between the JVM and native processing, you may need to be adjust this setting.

- Maximum Permgen space should be set to 512m, `-XX:MaxPermSize=512m`, unless otherwise advised

- Reserved Code Cache size should be set to 128m, `-XX:ReservedCodeCacheSize=128m`, unless otherwise advised.

  If you increase the `MaxPermSize` parameter value, you should increase the `ReservedCodeCacheSize` value proportionally.

- Oracle JDBC Maximum Cached Buffer Size should always be set to 0, `-Doracle.jdbc.maxCachedBufferSize=0`.

- Soft Reference Flush Interval should always be set to 1, `-XX:SoftRefLRUPolicyMSPerMB=1`.

For example, the full set of recommended JVM options for a typical server with 32GB of RAM is as follows:

```
-Xmx16384m -XX:MaxPermSize=512m -XX:ReservedCodeCacheSize=128m
-Doracle.jdbc.maxCachedBufferSize=0 -XX:SoftRefLRUPolicyMSPerMB=1
```

> **Note:**
>
> On systems that are not running on the Oracle JDK, the `MaxPermSize`, `ReservedCodeCacheSize`, and `SoftRefLRUPolicyMSPerMB` options do not apply.

> **Note:** For default Tomcat installations, these JVM parameters may not exist in any configuration files so you must add them to the `setenv.sh` file. For specific information, see the Tomcat documentation in the Apache Software Foundation Server web site at
>
> http://tomcat.apache.org/

5.2 Configuring EDQ on WebLogic Server

Use this section to create your EDQ WebLogic domain, start your WebLogic Server, and configure WebLogic for EDQ web services.

The process in this section automatically creates and populates the following two EDQ configuration directories:

```
oedq.home
oedq.local.home
```

5.2.1 Starting the Configuration Wizard On Linux and UNIX

To start the installation program on a Linux or UNIX system using a `.sh` installation file, follow these steps:

1. Log in to the target system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Go to your WebLogic Server installation directory. For example, *MW_HOME*/oracle_common/common/bin.

3. Start the wizard by entering the following command:

   ./config.sh

   The WebLogic Server Configuration Wizard is displayed.

4. Go to Section 5.2.3, "Creating the EDQ Domain" and complete the configuration.

5.2.2 Starting the Configuration Wizard On Windows

To start the installation program on a Windows platform using a `.exe` file, follow these steps:

1. Log in to the target Windows system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Locate the MS-DOS Command Prompt (`cmd.exe`), right-click on it, and then select **Run as administrator**.

3. Go to your WebLogic Server installation directory. For example, *MW_HOME*/oracle_common/common/bin.

4. Start the wizard by entering the following command:

   config.exe

The WebLogic Server Configuration Wizard is displayed.

5. Go to Section 5.2.3, "Creating the EDQ Domain" and complete the configuration.

5.2.3 Creating the EDQ Domain

Use Table 5–1, " Running the WebLogic Configuration Wizard" to create the EDQ domain (see Section A.3, "WebLogic Configuration Wizard Screens" to review the screens):

Table 5–1   Running the WebLogic Configuration Wizard

Screen	When Does This Screen Appear	Instructions and Action Required
Configuration Wizard Welcome	Always	Click **Next** to proceed with the configuration and accept the Create a new WebLogic domain default.
		You may cancel the installation at any time by clicking **Exit**.
Select Domain Source	Always	Select the correct EDQ Domain generation option for the type of server you are installing, **Oracle Enterprise Data Quality -11.1.1.7.# [Oracle_EDQ1]**.
		The Oracle JRF - 11.1.1.0 [oracle_common] check box is automatically selected.
		By default, the Basic WebLogic Server Domain - 10.3.6.0 [wlserver_10_3] option is always selected.
		You can select any of the following options if needed in your environment:
		■ Oracle Enterprise Manager — Use for domain monitoring and control.
		■ Oracle WSL Policy Manager — Use with Oracle Web Services Manager to use global policy sets.
		■ Oracle Platform Security Services for Audit —Use the FMW auditing feature.
		Click **Next** to continue.
Specify Domain Name and Location	Always	Enter a name for your domain in the Domain Name field or use the default.
		The default *MW_HOME*/user_projects/domains directory is displayed.
		Click **Next** to continue.
Configure Administrator User Name and Password	Always	Enter your WebLogic administration user name and password credentials. See Section 2.2.3, "Choosing User Accounts".
		Click **Next** to continue.

Table 5–1   (Cont.) Running the WebLogic Configuration Wizard

Screen	When Does This Screen Appear	Instructions and Action Required
Configure Server Start Mode and JDK	Always	Select the startup operation mode for your domain from the following options:
		■ **Development Mode**—In this mode, the security configuration is relatively relaxed, allowing you to auto-deploy applications.
		■ **Production Mode**—In this mode, the security configuration is relatively stringent, requiring a username and password to deploy applications. Before putting a domain into production, familiarize yourself with procedures for securing a production environment. For more information, see *Securing a Production Environment for Oracle WebLogic Server*.
		Select the 64-bit JDK that you want to use from the Available JDKs list. Oracle recommends that you use the latest 64-bit JDK.
		Click **Next** to continue.
Configure JDBC Data Sources	Always	Select the **EDQConfigDS** and **EDQResultsDS** data source check boxes and other data sources as required if you selected any optional components in previous wizard steps. The Vendor, Driver, DBMS/Service, Host Name, and Port options are automatically populated.
		Enter your host name, database user credentials, and change the port if necessary.
		Click **Next** to continue.
Test JDBC Data Sources	Always	Ensure that both the EDQConfigDS and EDQResultsDS data sources test successfully. Return to the previous screen to alter the connection configuration if necessary.
		Click **Next** to continue.
Select Optional Configuration	Always	Oracle recommends using Managed Servers.
		Select the check box for each category (if any) for which you want to perform advanced configuration tasks.
		Click **Next** to continue.
Configure Administration Server	Only if you selected **Administration Server** on the Select Optional Configuration screen	Change the settings for the Administration Server as needed. Click **Next** to continue.
Configure Managed Servers	Only if you selected **Managed Servers, Clusters, and Machines** on the Select Optional Configuration screen	Add, delete, or reconfigure Managed Servers as needed. Click **Next** to continue.

Table 5–1 (Cont.) Running the WebLogic Configuration Wizard

Screen	When Does This Screen Appear	Instructions and Action Required
Complete the Wizard	Always	Use the instructions for the remainder of the wizard in "Creating a WebLogic Domain in Graphical Mode" in the *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard 11g Release 1* to complete the creation of the EDQ domain.

After you have configured your WebLogic Server, you must ensure that the StartScriptEnabled property in the nodemanager.properties file is set to true so that your EDQ domain is correctly configured, see *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server 11g Release 1*.

5.2.4 Starting Your WebLogic Server

You must start your EDQ WebLogic Managed Servers to complete the installation in the following two ways:

5.2.4.1 Using the WebLogic Administration Console

To start your EDQ WebLogic Managed Servers from the WebLogic Administration Console, the Node Manager must be running.

Configuration settings including the server's JVM settings and the path to the server configuration directories for the managed server are pre-defined by the WebLogic Configuration Wizard as Server Startup Arguments. If you are starting the server using the WebLogic Administration Console, these arguments are applied, so you will only need to change them to apply different settings. For example to tune the JVM parameters to the recommended settings for your server - see Section X (Recommended JVM parameters).

For information about starting WebLogic Servers, see *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server 11g Release 1*.

5.2.4.2 Using a Startup Script

If you choose to start your EDQ WebLogic Managed Servers using a startup script, the Server Startup Arguments defined for the server in the WebLogic Administration Console are ignored so these settings must set for the domain by editing the setDomainEnv script.

If you have configured WebLogic Managed Servers in your domain and installed EDQ Release 11*g* R1 (11.1.1.7.4) and greater, then the configuration template applies changes to your EDQ domain setDomainEnv (.cmd on Windows and .sh on all other operating systems) script during your domain configuration in the previous section. By default, an edq_server1 Managed Server is created that contains the default JVM settings. You may need to edit your setDomainEnv script so that it contains your Managed Server name (if you used a different name) and to apply the recommended JVM settings for your environment, see Section 5.2.5, "Clustering with WebLogic and Running Multiple EDQ Servers in the Same Domain."

For information about starting Managed Servers using Node Manager and Administration Servers, see *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server 11g Release 1*

5.2.5 Clustering with WebLogic and Running Multiple EDQ Servers in the Same Domain

To support high availability scenarios, Oracle recommends that you configure a cluster of multiple EDQ servers to share the incoming load (for example, from a large number of simultaneous web service requests), and to provide continuous service in the event of failure of an individual server. This section provides some basic guidance about how to configure EDQ to support such a model using WebLogic.

Multiple EDQ managed servers can be configured to run in the same WebLogic domain either in a cluster or not provided that *each* server has a separate, dedicated:

- `EDQCONFIG` and `EDQRESULTS` schemas and corresponding separate JDBC data sources with different JNDI names

- configuration directories

- server listening port; each server must listen on a different ports

Separate schemas can be created for further EDQ instances by re-running the RCU and using different prefixes for the schema names (for example, `DEV2` and so on). The corresponding JDBC data sources for these new schemas must be created manually using the WebLogic Administration Console as described in the remainder of this section.

Multiple EDQ managed servers can either be created as part of the initial single run of the WebLogic Configuration Wizard, or manually after the fact by using the WebLogic Administration Console. Similarly, a cluster can also be created using either of these mechanisms. The JRF Template *must* be applied to any managed servers that have been created manually using the WebLogic Administration Console (this is equivalent to the library targeting performed automatically by the WebLogic Configuration Wizard).

Even when the WebLogic Configuration Wizard is used to create multiple EDQ managed servers, it only creates the JDBC data sources for the first server so you must always use the WebLogic Administration Console to create the additional data sources and target them at the relevant managed server. Each new data source must be given a different and unique JNDI name in order for the corresponding EDQ server to access it.

Similarly, the WebLogic Configuration Wizard only creates the configuration directories for the first EDQ server so you must manually create them for the additional servers. You do this using standard operating system commands to copy the first server's configuration directories and their contents to a different path in the file system.

> **Note:** Only the 'local' configuration directory (by default, `oedq_local_home`) needs to be copied; the 'base' directory (by default, `oedq_home`) can be shared across all managed servers because it only contains defaults and other common configuration settings.

Once copied, the `director.properties` file in each subsequent EDQ servers new configuration directory must be edited to reflect the new JDBC data sources that you created (point to the new JNDI names). You must also assign different management, FTP, and SSHD ports since unlike the 'listen' ports, these are not defined in the managed server settings.

The final step is to use the WebLogic Administration Console to modify the managed server settings for the additional EDQ servers, to update the `edq.config.path` by configuring the server startup Arguments option in the Server Start tab to point to the

relevant new configuration directories. For more information, see this topic of the WebLogic Server Administration Console Online Help at

http://docs.oracle.com/cd/E23943_
01/apirefs.1111/e13952/taskhelp/startstop/ConfigureStartupArgumentsForMana
gedServers.html

Once multiple EDQ servers have been configured in this way, you can leave them un-clustered and accessed directly using their respective Launchpad URLs using the relevant port, or setup as part of a cluster using standard WebLogic mechanisms with a separate front-end load balancer to handle incoming web service requests through a single cluster URL. Do not attempt to access the EDQ Launchpad using a load balanced cluster URL because it will be unclear which EDQ server is actually being accessed. Instead, log in to one of the servers directly using its dedicated port, and use the Director or Server Console to connect to all servers in the cluster.

5.3 Configuring EDQ on Tomcat or WebSphere

Use this section to configure EDQ on a Tomcat or WebSphere Application Server.

5.3.1 Creating the Necessary Shared Library

Create the necessary Oracle Application Development Framework (ADF) shared library necessary to EDQ:

1. Create a `lib.adf` ADF shared directory. For Tomcat, create this directory in your Tomcat home directory.

2. Unzip the `adf-essentials.zip` file, delivered with the EDQ product, into the `lib.adf` directory.The JAR files in this ZIP file must be in `lib.adf` directory, not the `adf-essentials` that it unzips to by default.

3. Complete the library creation:

   On Tomcat
   Configure the Tomcat `common.loader` property (typically located in the `catalina.properties` file) to load Oracle ADF and Apache HTTP from their respective shared library paths. For example:

   ```
   common.loader=${catalina.base}/lib,${catalina.base}/lib/*.jar,${catalina.home}/
   lib,${catalina.home}/lib/*.jar,${catalina.home}/lib.adf/*.jar
   ```

   On WebSphere
1. Start the **WebSphere Administrative Console**.

2. Click **Environment** then **Shared Libraries** to begin creating the EDQ shared library.

3. Create a shared library named `ADFessentials` specifying the `lib.adf` directory as the Classpath.

5.3.2 Configuring EDQ

Use this section with Tomcat and WebSphere installation combinations to configure the EDQ product after you have used one of the preceding sections to configure your application server. Additionally, you may use this section to reconfigure the EDQ Functional Packs with your WebLogic Server.

You must create two empty directories to contain your EDQ configuration files. For example:

On Windows: `C:\edqconfig\edqhome` and `C:\edqconfig\edqlocalhome`

On Linux and UNIX: `/opt/edqconfig/edqhome` and `/opt/edqconfig/edqlocalhome`

The first directory (`edqhome`) will contain the files that should not be changed post-installation while the second directory (`edqlocalhome`) will contain any custom settings that you create. Ensure that your application server user has read and write access to the two directories you create.

5.3.2.1 Starting the EDQ Configuration Application On Linux and UNIX

To start the EDQ Configuration Application on a Linux or UNIX system, follow these steps:

1. Log in to the target system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Go to your *EDQ_HOME*/`oracle.edq` directory.

3. Start the wizard by entering the following command:

   java -jar configapp.jar

   The EDQ Configuration Wizard is displayed.

4. Go to Section 5.3.2.3, "Configuring EDQ" and complete the configuration.

5.3.2.2 Starting the EDQ Configuration Application On Windows

To start the EDQ Configuration Application on a Windows platform, follow these steps:

1. Log in to the target Windows system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Locate the MS-DOS Command Prompt (`cmd.exe`), right-click on it, and then select **Run as administrator**.

3. Go to your *EDQ_HOME*\`oracle.edq` directory.

4. Start the wizard by entering the following command:

   java -jar configapp.jar

   The EDQ Configuration Wizard is displayed.

5. Go to Section 5.3.2.3, "Configuring EDQ" and complete the configuration.

5.3.2.3 Configuring EDQ

Use Table 5–2, " Running the EDQ Configuration Application" to configure EDQ (see Section A.4, "EDQ Configuration Application Screens" to review the screens):

Table 5–2   Running the EDQ Configuration Application

Screen	Instructions and Action Required
EDQ Configuration Application Completion	Click **Begin** to proceed with the configuration.
	You may cancel the installation at any time by clicking **Cancel**.

Table 5–2 (Cont.) Running the EDQ Configuration Application

Screen	Instructions and Action Required
Configuration Directory	Enter the two empty directories, that you created at the beginning of this section, to contain your EDQ configuration files. Click **Next** to continue.
Functional Packs	Select the functional packs you want and are licensed to use. Click **Next** to continue.
Configure Config Repository Database	Select the correct option for your database from the Selection Type list. ■ If you are using Tomcat, do not use the JNDI Connection option. ■ If you are using WebSphere, you may want to use the JNDI Connection option. ■ For PostgreSQL, you may want to use the Properties option. Enter your database user name and password. Select the option for the type of database you created, Oracle or Postgres. Enter the hostname for the system containing your database, its port number, and the database unique id. Ensure that you have configured the connection correctly by clicking **Test**. Click **Next** to continue.
Configure Results Repository Database	Select the correct option for your database from the Selection Type list. ■ If your using Tomcat, do not use the JNDI Connection option. ■ If your using WebSphere, you may want to use the JNDI Connection option. ■ For PostgreSQL, you may want to use the Properties option. Enter your database user name and password. Select the option for the type of database you created, **Oracle** or **Postgres**. Enter the hostname for the system containing your database, its port number, and the database unique id. Ensure that you have configured the connection correctly by clicking **Test**. Click **Next** to continue.
Selected Options	Review the summary of your selections. Use Back to modify any of your selections. Click **Finish** to complete the configuration and continue.
EDQ Configuration Application Completion	Click **Done** to exit the installation program.

5.3.2.4 Verifying EDQ Functional Packs

You can verify which EDQ functional packs have been installed using the EDQ Configuration Application as described in the preceding sections. Additionally, you should be aware of the following:

■ All Functional Packs are needed if you want to install the EDQ Customer Data Services Pack on your EDQ server. For example, for integration with Siebel Customer Relationship Management or Universal Customer Master.

■ All Functional Packs are needed if you want to install Oracle Watchlist Screening on your EDQ server.

5.3.3 Deploying the EDQ Application on Tomcat and WebSphere Application Servers

The EDQ application must be manually deployed on Tomcat and WebSphere Application Servers unlike the automatic deployment on a WebLogic Application Server.

Use the following steps to deploy the application on Tomcat and WebSphere:

1. For Tomcat, stop your server.

2. Deploy the `edq.war` file on your application server.

   On WebSphere, ensure that the `edq.war` file is referenced by the ADF shared library you created in Section 2.2.5.3, "Installing WebSphere."

   For deployment on Tomcat, see the *Tomcat Web Application Deployment* web page at

   `http://tomcat.apache.org/tomcat-6.0-doc/deployer-howto.html`

   For deployment on WebSphere, see the *IBM Deploying a WAR module* web page at

   `http://pic.dhe.ibm.com/infocenter/wchelp/v7r0m0/index.jsp?topic=%2Fcom.ibm.commerce.developer.doc%2Ftasks%2Ftdpdeploying_war_assets_entire.htm`

3. To link EDQ to your new configuration directories, use a new Java property named, `edq.config.path` that specifies the paths to the new directories that you created in Part 5.3.2, "Configuring EDQ" (for example, `oedq.home` and `oedq.local.home`.) This path should be separated by a colon on Linux and UNIX and a semi-colon on Windows.

   Alternatively, you can link EDQ to the configuration directories using an environment variable by appending an environment variable named, `EDQ_CONFIG_PATH`, to your `JAVA_OPTS` environment variable as follows replacing *Path to base EDQ config directory (EDQ Home)* and *Path to local EDQ config directory (EDQ Local Home)* with the paths to the new directories that you created in Part 5.3.2, "Configuring EDQ":

Operating System	Tomcat	WebSphere
Linux and UNIX	Set Java options for the EDQ server as follows: `-Dedq.config.path=`*`[Path to base EDQ config directory (EDQ Home)]:[Path to local EDQ config directory (EDQ Local Home)]`* `-Doracle.mds.cache=simple`	Set Java options for the EDQ server as follows: `-Dedq.config.path=`*`[Path to base EDQ config directory (EDQ Home)]:[Path to local EDQ config directory (EDQ Local Home)]`* `-Doracle.mds.cache=simple`

Operating System	Tomcat	WebSphere
Windows	Append EDQ_CONFIG_PATH="*[Path to base EDQ config directory (EDQ Home)]*;*[Path to local EDQ config directory (EDQ Local Home)]*" to the JAVA_OPTS environment variable. Or Set Java options for the EDQ application service as follows: -Dedq.config.path=*[Path to base EDQ config directory (EDQ Home)]*;*[Path to local EDQ config directory (EDQ Local Home)]* -Doracle.mds.cache=simple For more information about setting Java parameters, see the Apache Tomcat Documentation web site at http://tomcat.apache.org/	Set Java options for the EDQ server as follows: -Dedq.config.path=*[Path to base EDQ config directory (EDQ Home)]*;*[Path to local EDQ config directory (EDQ Local Home)]* -Doracle.mds.cache=simple For more information about setting generic JVM parameters, see the IBM WebSphere Documentation web site at http://www-01.ibm.com/support/docview.wss?uid=swg21417365#v51

4. Restart your application server service and ensure that edq.war is successfully deployed.

5.4 Next Step

Go to Section 6, "Getting Started with EDQ" to verify a successful installation and configuration.

6

Getting Started with EDQ

This chapter describes how to start using EDQ and is intended to help you become familiar with the main components of EDQ.

6.1 Logging Into EDQ

You can access the EDQ Launchpad and client applications by starting a supported browser and enter the following URL:

```
http://server name:port number/edq
```

where *server name* is the name of the server onto which you installed EDQ and *port number* is the HTTP or HTTPS port that your application server is running against. If you have deployed the application server to run against a different port, you should use your port number.

Enter your login credentials for the appropriate application server:

WebLogic
Your WebLogic user as described in Section 2.2.3, "Choosing User Accounts."

Tomcat or WebSphere
Use the default EDQ administrator account, `dnadmin`, using the password, `dnadmin`, to log in. You are prompted to change the password the first time you log in. This password must meet the default security standards.

6.2 The EDQ Launchpad

The Launchpad provides access to the EDQ client applications, services, and system management. The following may be displayed on the Launchpad when EDQ is installed:

Director	Starts the Director client application, which is the main configuration application.
Server Console	Allows you to perform the following tasks:
	■ Schedule jobs
	■ View current tasks
	■ View the event log
	■ View job results
Dashboard	Starts the Dashboard, where published data quality metrics are displayed.

Match Review	Starts the Match Review application, which allows users to view an overview of the reviews assigned to them and to launch the review application.
Case Management	Case Management is an application designed to support the manual investigation of results from data quality processes. It is also used as the main investigation application in Oracle Watchlist Screening, for both batch and real time screening results. Using Case Management, privileged users can manage and review matching results using highly configurable workflows with a comprehensive audit history of all investigation work.
Case Management Administration	Case Management Administration provides the following areas of functionality: ■ Workflow Administration—allows you to create, edit, copy, import, export and delete workflows. ■ Case Source Administration—allows you to import, export and delete case source definitions. ■ Permission Administration—allows you to define and manage the data that users have permission to access.
Administration	This application allows a sufficiently privileged user to configure EDQ users, permission groups, password and security rules, extensions, the applications that appear on the launchpad, and the ability to view and monitor sessions.
Web Services	Displays details of the web services configured in the EDQ server.
Change Password	Allows a user to change their password. The user must log in using their own password, then provide and confirm their new password. This option is not available when using a WebLogic Server.
Help	Allows you to retrieve information about how to use each EDQ application.

An Administrator can reconfigure the Launchpad to define the user applications and links that are displayed to users using the Administration pages. For more information, see the *EDQ Online Help*.

6.3 EDQ Documentation

In addition to the EDQ documentation set (see Section , "Related Documents,") it is delivered with an extensive set of online documentation that is accessed as follows:

Online Help
Online help is provided for all user applications. It is accessed in each application by pressing the **F1** key or by clicking the Help icons.

Project Browser Context-Sensitive Help
All of the main nodes in the Director project browser, such as projects, snapshots, issues and so on, have integrated links to help pages that explain the terms used and the purposes of the object. This context-sensitive help can be accessed by right-clicking on an object in the Project Browser and selecting **Help** from the context menu or by left-clicking on the node and pressing **F1**.

Processor-Specific Context-Sensitive Help
Each of the supplied data quality processors in the Director Tool Palette has associated help documentation, explaining what the processor does, which data types it can handle, its inputs and outputs and examples of how you might use the processor. This

help can be accessed by right-clicking on a processor on the canvas and selecting **Processor Help** from the context-sensitive menu or by left-clicking on a processor, either on the canvas or in the tool palette, and pressing **F1**.

7

Upgrading EDQ

This chapter describes how to upgrade EDQ from previous releases to the 11g (11.1.1.7) release using the includes the following sections:

- Section 7.1, "Preparing to Upgrade"
- Section 7.2, "Upgrading EDQ"

7.1 Preparing to Upgrade

Use the following sections to prepare to upgrade EDQ on your server:

- Section 7.1.1, "Upgrading Considerations"
- Section 7.1.2, "Upgrading Prerequisites"

7.1.1 Upgrading Considerations

The EDQ Release 11g R1 (11.1.1.7) has fully refactored results tables so all process tasks in jobs that have previous results (upgraded from an earlier version of EDQ) must be run with Intelligent Execution turned off to generate new results tables in the correct format. Process tasks that run with Intelligent Execution turned on will generate an error. This does not affect any processes that do not have results generated from previous versions.

After upgrading to EDQ Release 11g R1 (11.1.1.7), make sure that all jobs that have existing results (in the upgraded EDQ results database) are run with Intelligent Execution turned off on all process tasks, in order to generate new results tables.

Process tasks that run with Intelligent Execution turned on will generate an error if results tables already exist.

7.1.2 Upgrading Prerequisites

You must ensure that your EDQ installation is one of the supported configurations, see Section 2.2.1, "Hardware and Software Requirements."

If you are not upgrading from EDQ Release 11g R1 (11.1.1.7.#), you must gather and note the following information:

- The location of your existing `config` directory is in the `configdir.txt` file in the `WEB-INF` directory of the deployed application. Any custom configuration in this directory will later be copied into new directories supporting EDQ 11g.

- The connection details to the EDQ Release 11g R1 (11.1.1.7) repository database schemas (`DIRECTOR` and `RESULTS`); this information is located in your `director.properties` file. These schemas will be upgraded to support EDQ.

7.2 Upgrading EDQ

Use one of the following sections to upgrade EDQ:

- Section 7.2.1, "Upgrading From EDQ Release 11g R1 (11.1.1.7.3)"
- Section 7.2.2, "Upgrading EDQ From Releases Prior to the Release 11g R1 (11.1.1.7.3)"

7.2.1 Upgrading From EDQ Release 11g R1 (11.1.1.7.3)

All of the files in the new EDQ Release 11g R1 (11.1.1.7) must be installed on your system before attempting an upgrade so you must run the EDQ Release 11g R1 (11.1.1.7.4) OUI installer, specifying the current EDQ home directory where you installed the files for EDQ 11.1.1.7.3 so that these files are overwritten with the EDQ 11.1.1.7.4 files, as described in Chapter 4, "Running the EDQ Installer."

Note: With the 11.1.1.7.3 release EDQ was deployed `staged`, this meant that a copy of the executable was taken into the domain and the application run from there.

In 11.1.1.7.4 the default is changed to `nostaged`, thus a copy of the executable is not taken. This means that when a patch is applied to the Oracle Home directory then you simply need to restart the server to activate the patch. With the staged deployment, you must update the application through the admin console and then restart the server.

When upgrading a domain from 11.1.1.7.3 to 11.1.1.7.4 the staging does not change, although the default for new domains does.

Then you use the following steps to upgrade your server from EDQ Release 11g R1 (11.1.1.7.3) to the EDQ Release 11g R1 (11.1.1.7.4).

1. Stop your EDQ Application Server (Tomcat, WebLogic Server, or WebSphere).

2. Remove the previous application deployment:

   On Tomcat
   Delete the existing EDQ WAR file and expanded directory of the same name in the Tomcat `webapps` directory. Copy the new EDQ Release 11g R1 (11.1.1.7.4) WAR file to the Tomcat `webapps` directory.

   On WebLogic Server
   Update your EDQ deployment to use the new EDQ Release 11g R1 (11.1.1.7.4) `edq.ear` file. The new file replaced the old file in the same location when you installed the new EDQ files so you can updating your deployment using the WebLogic Server Administration Console. For more information, see *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server 11g Release 1 (10.3.6)*.

   On WebSphere
   Undeploy the existing EDQ WAR file then deploy the new EDQ Release 11g R1 (11.1.1.7.4) WAR file using the WebSphere Administration Console.

3. Start your EDQ Application Server.

7.2.2 Upgrading EDQ From Releases Prior to the Release 11g R1 (11.1.1.7.3)

You begin the upgrade process by running the EDQ Release 11g R1 (11.1.1.7.4) OUI installer as described in Chapter 4, "Running the EDQ Installer."

All of the files in the new EDQ Release 11g R1 (11.1.1.7) must be installed on your system before attempting an upgrade so you must run the EDQ Release 11g R1 (11.1.1.7.4) OUI installer as described in Chapter 4, "Running the EDQ Installer."

Next, you use the pre-migration and migration scripts that are Java Archive (JAR) files and part of the EDQ distribution installed by the EDQ Release 11g R1 (11.1.1.7.4) OUI installer. These scripts are packaged into and executed using the `migration.jar` file. If any migration issues exist, a report is produced detailing the problems so that you can correct them.

1. Navigate to the directory containing `migration.jar` that you installed in the preceding section.

2. Stop your application server.

3. Ensure that your `PATH` variable includes the location of your JDK/JRE executable.

4. If you are using Case Management, run the pre-migration report by running the following command with *db_connection* specifying how to connect to your Director database schema:

   java -jar migration.jar premigrate *db_connection*

   For example, your database connection might be similar to the following:

   dbtype:*dbid*@*host*:port/*user*/*password*

   The previous example syntax is explained as follows:

   - *dbtype* should be set to `pgsql` for PostgreSQL databases or `oracle` for Oracle Databases.

   - *dbid* should be set to the database name for PostgreSQL databases or the SID for Oracle Databases.

   - *host* should be set to the name of the RDBMS host machine.

   - *port* is optional. If no value is specified, the default port for the database type is assumed. If the database is running on a non-default port number, the value of the database port number should be specified.

   - *user* should be set to the user ID that EDQ uses to connect to the Director data base.

   - *password* should be set to the database user's password and defaults to the user name if no password is provided.

5. Examine the pre-migration report. If any issues are noted in the output from the pre-migration report, they should be addressed before proceeding to the next step.

6. Upgrade your Case Management schema by running the following command with *db_connection* specifying how to connect to your Case Management schema:

   java -jar migration.jar cm *db_connection*

   The syntax for the database connection, *db_connection*, is explained in step 4.

   For example, to upgrade an Oracle instance on a locally deployed Oracle Database with the SID of `orcl` and a user name of `director`, then the command is as follows with *password* specifying the password for the `director` user:

```
java -jar migration.jar cm oracle:orcl@localhost:1521/director/password
```

> **Note:** RCU should *not* be used to create the EDQ schemas.

7. Upgrade your Director database schema by running the following command with *db_connection* specifying how to connect to your Director database schema:

java -jar migration.jar migrate *db_connection*

The syntax for the database connection, *db_connection*, is explained in step 4.

For example, to upgrade an Oracle instance on a locally deployed Oracle Database with the SID of orcl and a user name of director, then the command is as follows with *password* specifying the password for the director user:

```
java -jar migration.jar migrate oracle:orcl@localhost:1521/director/password
```

> **Note:** RCU should *not* be used to create the EDQ schemas.

Completing the Upgrade

Finally, you use one of the following sections to upgrade your server from all EDQ releases prior to Release 11g R1 (11.1.1.7.3) as appropriate for your application server:

- Section 7.2.2.1, "Upgrading On WebLogic Server"
- Section 7.2.2.2, "Upgrading On Tomcat or WebSphere Server"

7.2.2.1 Upgrading On WebLogic Server

Use the following steps to upgrade EDQ in a WebLogic Server environment.

1. Run the WebLogic Server Configuration Wizard and provide your existing EDQ domain information. The new EDQ configuration directories, oedq.home and oedq.local.home are created in the edq directory of your EDQ domain.

2. Copy the contents of your existing (pre-upgrade) EDQ config directory, that you previously noted, to the new oedq.local.home directory, with the exception of:

   The logs subdirectory
   The director.properties file

3. Copy in any override settings from your existing director.properties file to the new director.properties file in your new oedq.local.home directory, taking care to retain the database connections settings in the new file.

   For example, you may have modified director.properties file to set a custom path to a file landing area, set the number of processing threads for your server to use, or adjusted the path to the server that is sent in email notifications.

4. Ensure that startscriptenabled parameter is set to true in your nodemanager.properties file.

5. Start your WebLogic Servers.

7.2.2.2 Upgrading On Tomcat or WebSphere Server

Use the following sections to upgrade EDQ in a Tomcat or WebSphere Server environment.

1. Remove the previous application deployment.

   On Tomcat
   Delete the existing EDQ WAR file and expanded directory of the same name in the Tomcat `webapps` directory.

   On WebSphere
   Undeploy EDQ using the WebSphere Administration Console.

2. Follow the instructions in Section 5.3.1, "Creating the Necessary Shared Library" to create the ADF shared library necessary to EDQ.

3. Create two new configuration directories named `oedq.home` and `oedq.local.home`, because they are necessary to the EDQ Release 11g R1 (11.1.1.7).

4. Run the EDQ Configuration Application to configure the EDQ Release 11g R1 (11.1.1.7) product specifying the connections to your database and to the `oedq.home` and `oedq.local.home` configuration directories, see Section 5.3.2, "Configuring EDQ."

5. Copy the contents of your existing (pre-upgrade) EDQ `config` directory, that you previously noted, to the new `oedq.local.home` directory, with the exception of:

   The `logs` subdirectory
   The `director.properties` file

6. To link EDQ to your new configuration directories, use a new Java property named, `edq.config.path` that specifies the paths to the new directories that you created in Section 5.3.2, "Configuring EDQ" (for example, `edq.home` and `edq.local.home`.) This path should be separated by a colon on Linux and UNIX and a semi-colon on Windows.

   Alternatively, you can link EDQ to the configuration directories using an environment variable by appending an environment variable named, `EDQ_CONFIG_PATH`, to your `JAVA_OPTS` environment variable as follows replacing *Path to base EDQ config directory (EDQ Home)* and *Path to local EDQ config directory (EDQ Local Home)* with the paths to the new directories that you created in Part 5.3.2, "Configuring EDQ":

Operating System	Tomcat	WebSphere

Linux and UNIX	Set Java options for the EDQ server as follows:
	
	`-Dedq.config.path=`*`[Path to base EDQ config directory (EDQ Home)]`*`:`*`[Path to local EDQ config directory (EDQ Local Home)]`
	`-Doracle.mds.cache=simple`
		Set Java options for the EDQ server as follows:
		
		`-Dedq.config.path=`*`[Path to base EDQ config directory (EDQ Home)]`*`:`*`[Path to local EDQ config directory (EDQ Local Home)]`
		`-Doracle.mds.cache=simple`

Operating System	Tomcat	WebSphere
Windows	Append `EDQ_CONFIG_PATH="`*`[Path to base EDQ config directory (EDQ Home)]`*`;`*`[Path to local EDQ config directory (EDQ Local Home)]`*`"` to the JAVA_OPTS environment variable. Or Set Java options for the EDQ application service as follows: `-Dedq.config.path=`*`[Path to base EDQ config directory (EDQ Home)]`*`;`*`[Path to local EDQ config directory (EDQ Local Home)]`*`-Doracle.mds.cache=simple` For more information about setting Java parameters, see the Apache Tomcat Documentation web site at http://tomcat.apache.org/	Set Java options for the EDQ server as follows: `-Dedq.config.path=`*`[Path to base EDQ config directory (EDQ Home)]`*`;`*`[Path to local EDQ config directory (EDQ Local Home)]`*`-Doracle.mds.cache=simple` For more information about setting generic JVM parameters, see the IBM WebSphere Documentation web site at http://www-01.ibm.com/support/docview.wss?uid=swg21417365#v51

7. Deploy the ADF libraries using the steps in Section , "Configuring Tomcat" or Section , "Configuring WebSphere."

8. Deploy the edq.war file.

   On Tomcat
   Copy the WAR file to the Tomcat webapps directory.

   On WebSphere
   Deploy the EDQ application using the WebSphere Administration Console.

9. Start your EDQ Application Server.

8

Deinstalling EDQ

This chapter describes how to deinstall EDQ on Linux, UNIX, and Windows and includes the following topics:

- Section 8.1, "Deinstalling On Linux and UNIX"
- Section 8.2, "Deinstalling On Windows"

8.1 Deinstalling On Linux and UNIX

To deinstall EDQ on a Linux or UNIX system using a `.sh` installation file, follow these steps:

1. Log in to the target system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Go to the directory, *EDQ_HOME*/oui/bin.

    > **Note:** Ensure that all files in the directory have executable permissions for the user you logged in with before continuing.

3. Start the installation by entering the following command:

    ./uninstall.sh

4. Click **Next** to advance the program.

5. Click **Deinstall**, and then click **Finish** to complete the deinstallation.

8.2 Deinstalling On Windows

To deinstall EDQ on a Windows platform using a `.exe` file, follow these steps:

1. Log in to the target Windows system as your EDQ installation user. See Section 2.2.3, "Choosing User Accounts".

2. Locate the MS-DOS Command Prompt (`cmd.exe`), right-click on it, and then select **Run as administrator**.

3. Go to the installation directory *EDQ_HOME*\oui\bin.

4. Start the installation by entering the following command:

    setup.exe -deinstall

    The EDQ OUI deinstallation program is displayed.

5. Click **Next** to advance the program.

6. Click **Deinstall**, and then click **Finish** to complete the deinstallation.

A

Installation Screens

This appendix contains screenshots and descriptions for all of the EDQ configuration and installation screens.

This chapter contains the following sections:

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-
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A.1 RCU Screens

This section contains screenshots and descriptions for all of the EDQ RCU screens.

A.1.1 Welcome

The Welcome screen is displayed each time you start the installer. You can skip this screen in future by selecting the **Skip this Page Next Time** check box.

A.1.2 Create Repository
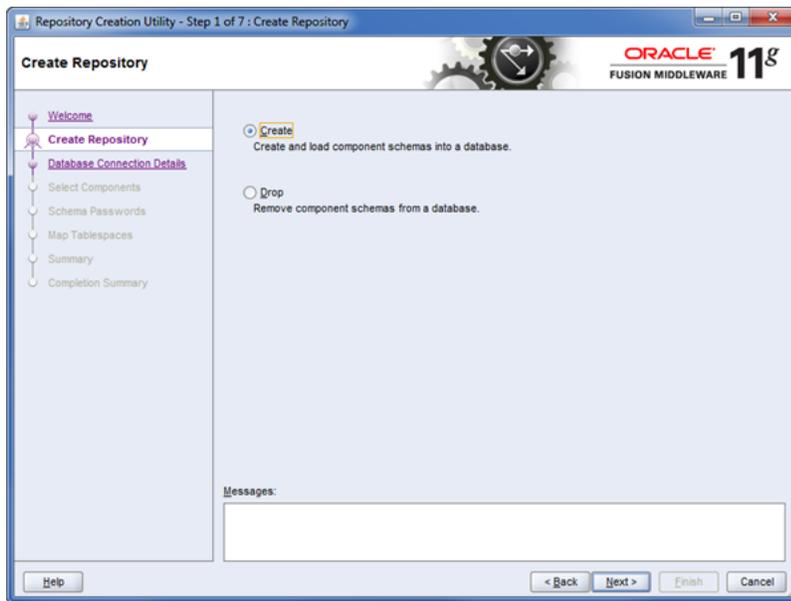
Specify to create a new schema or drop a schema in your database.

A.1.3 Database Connection Details

Specify the details to connect to your Oracle database.

A.1.4 Checking Global Prerequisites
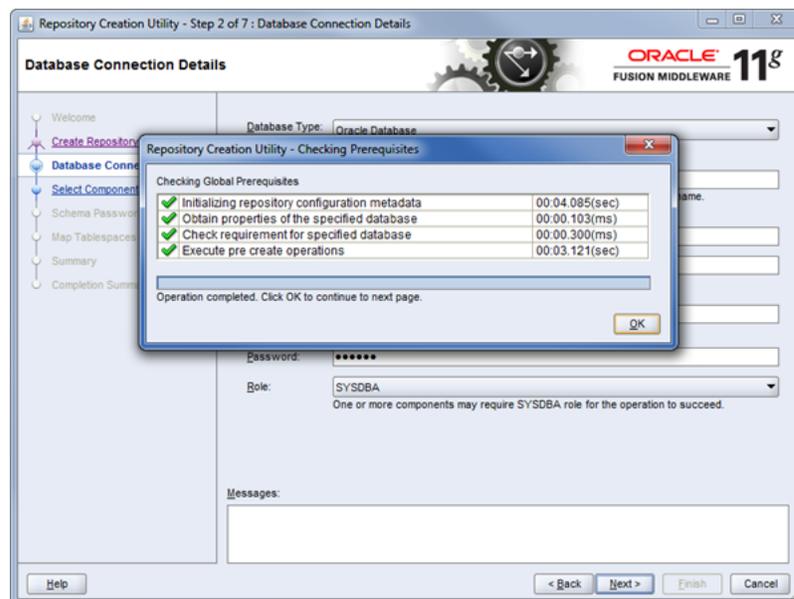
Review the prerequisites that were verified.

A.1.5 Select Components
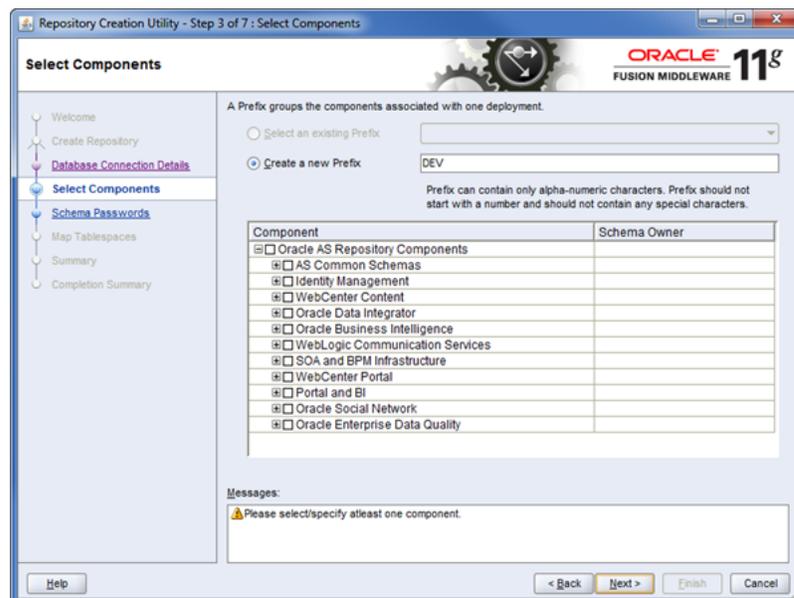
Specify which EDQ components you want to install by selecting or clearing the **Oracle Enterprise Data Quality** check boxes.

A.1.6 Checking Component Prerequisites
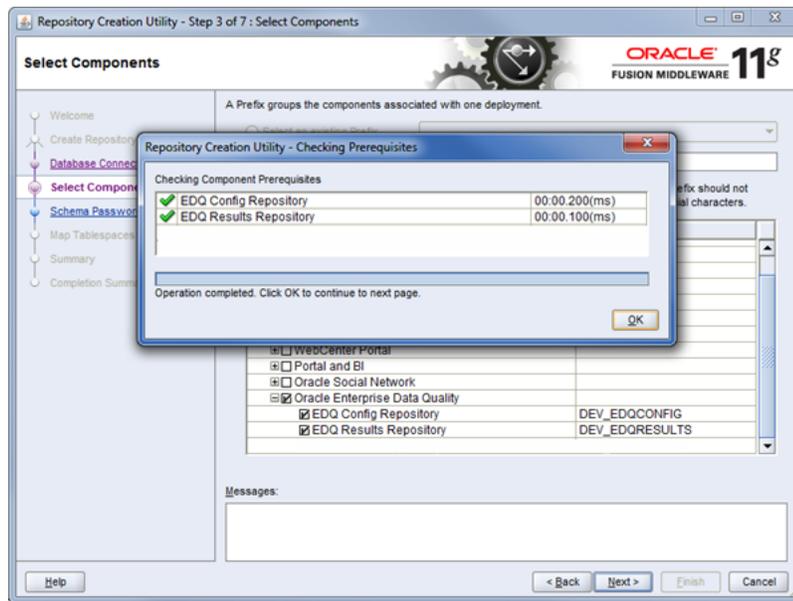
Review the repository prerequisites that were verified.

A.1.7 Schema Passwords
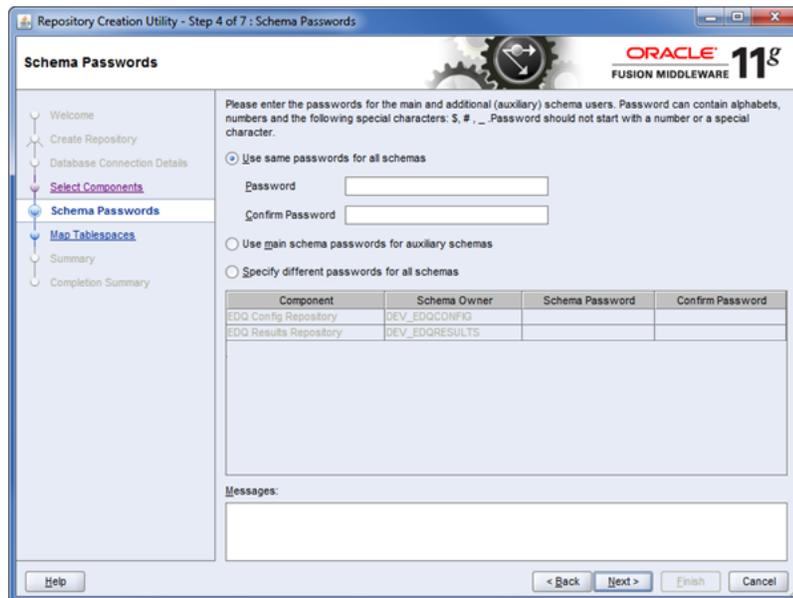
Specify the passwords to use for all of the schemas in your database using the default option.

A.1.8 Map Tablespaces
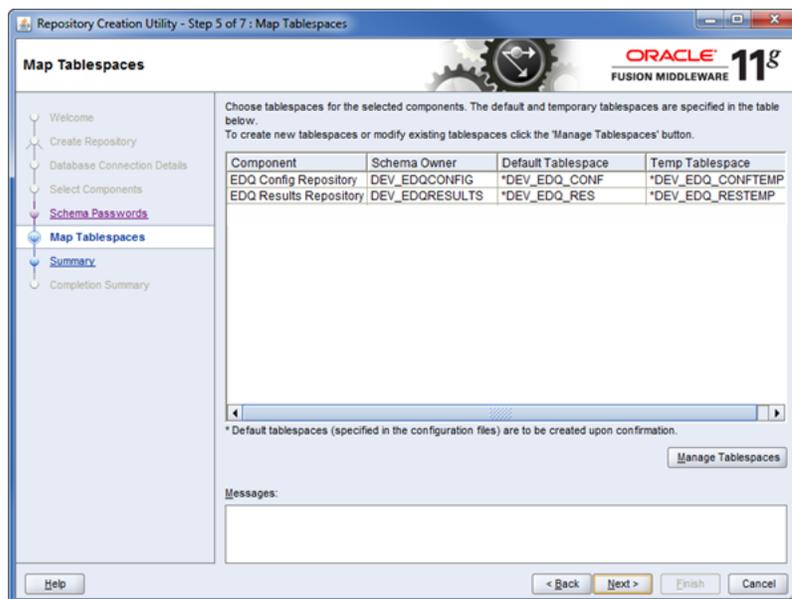
This screen allows you to create tablespaces or modify existing tablespaces; the EDQ default tablespaces are automatically specified.
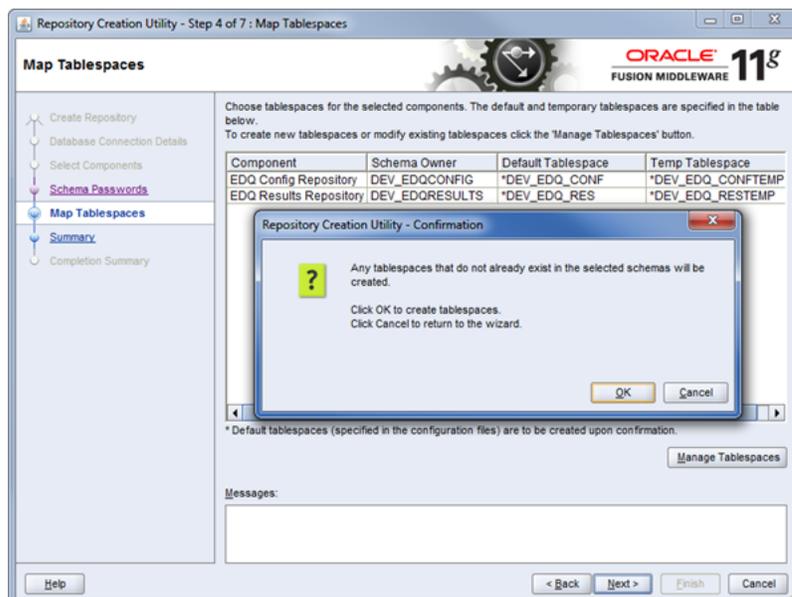
Review the tablespace confirmation.

A.1.9 Summary
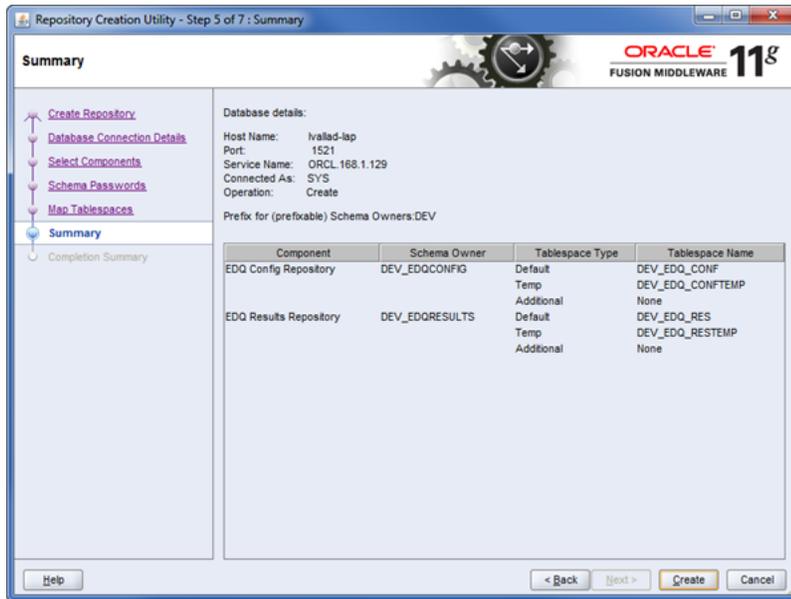
This screen displays your database details and schemas for you to review prior to creating the new EDQ schemas.

A.1.10 Completion Summary
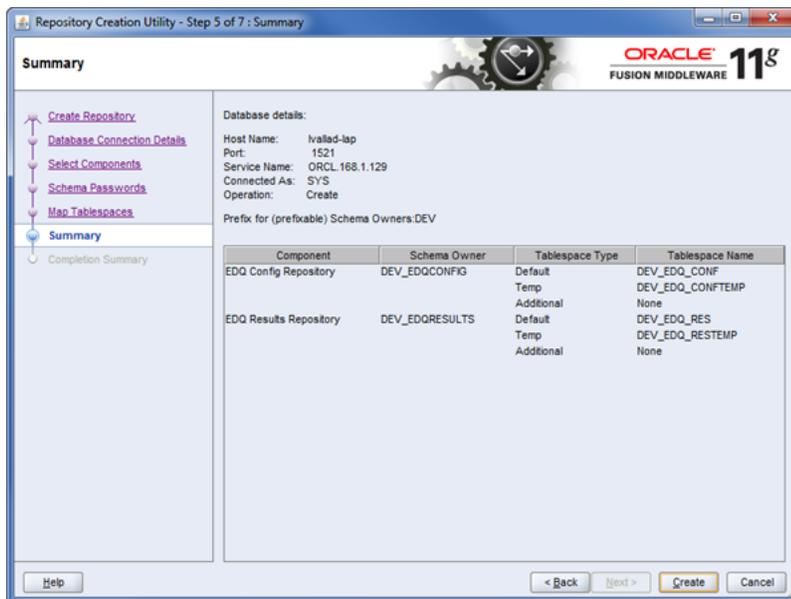
This screen displays your database details and new EDQ schemas status with the location of the creation log files.

A.1.11 Completion

This screen displays the completion details.

A.2 OUI Installation Screens

This section contains screenshots and descriptions for all of the EDQ installation screens.

A.2.1 Welcome
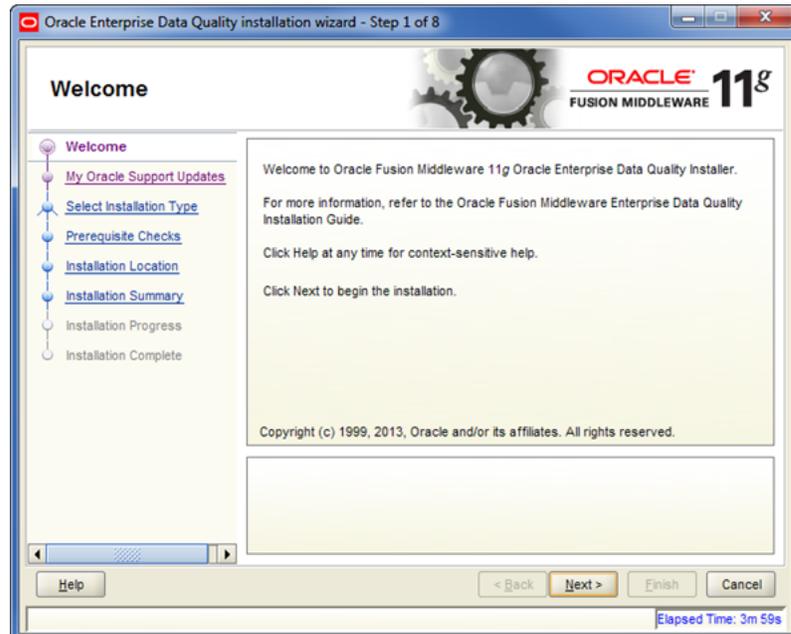
The Welcome screen is displayed each time you start the installer.

A.2.2 Install Software Updates

This screen helps to quickly and easily search for the latest software updates, including important security updates, using your My Oracle Support account.

A.2.3 Select Installation Type

Use the default **Installation for WebLogic Server** if this is your installed application server or select **Installation for Other Platforms** if your application server is Tomcat or WebSphere.

A.2.4 Prerequisite Checks
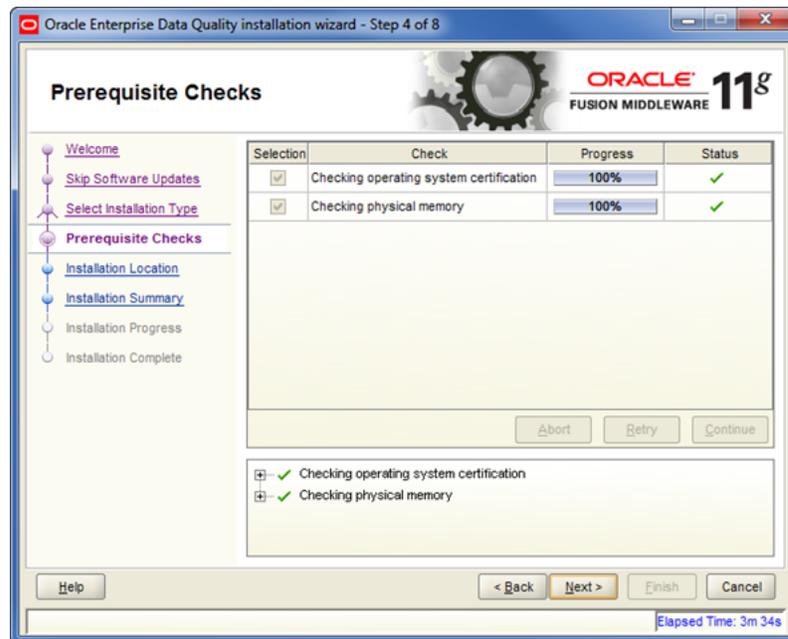
This screen displays a tree view of the operating system and physical memory checks and the status for each.

A.2.5 Installation Location

Specify the *MW_HOME* directory and the EDQ home directory. You must already have a Middleware home directory on your system, see Section 2.1.1, "Choosing a Fusion Middleware Home Directory" and Section 2.1.2, "Choosing the EDQ Installation Directory."

A.2.6 Installation Summary

This screen displays a list of directory details, disk space (required and available), and the product components to be installed.

A.2.7 Installation Progress
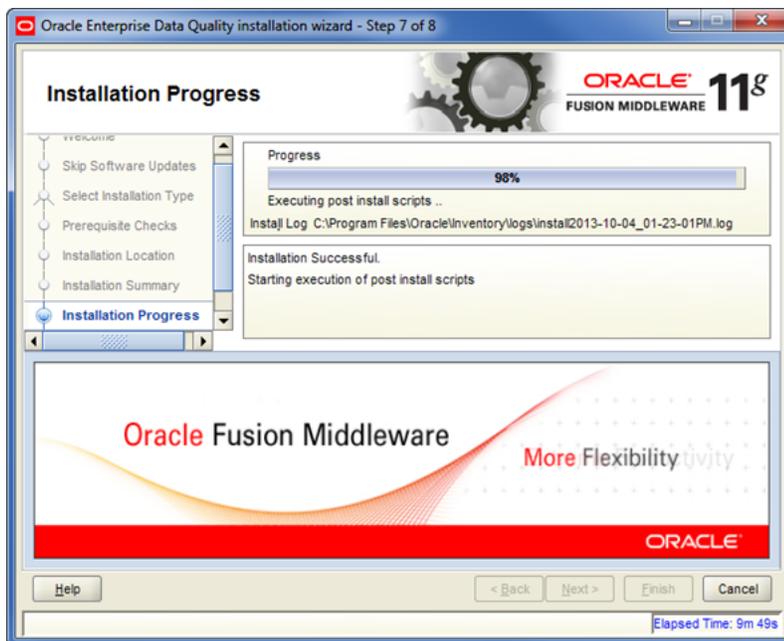
This screen shows the progress of the installation. When the progress bar reaches 100%, the installation is complete.

A.2.8 Installation Complete
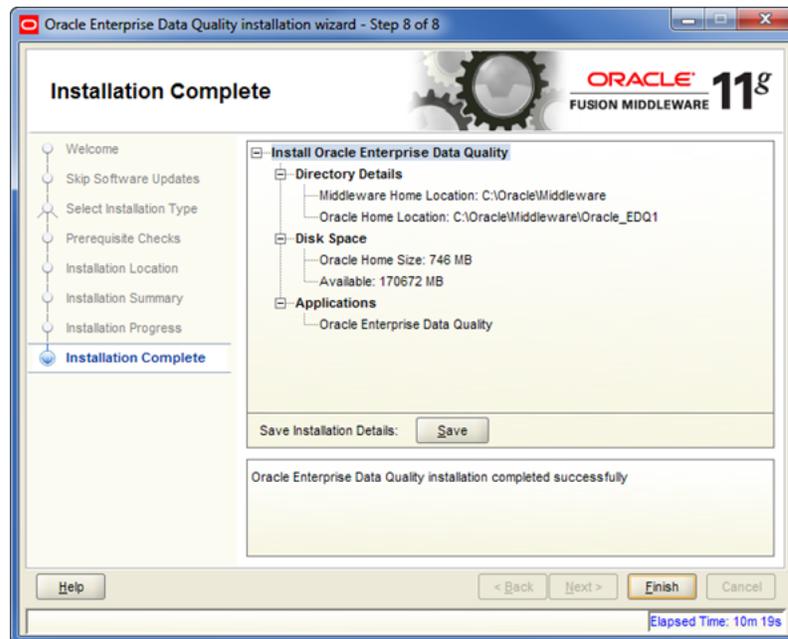
This screen shows the results of the completed installation. You can click **Save** to save the displayed details to a text file.

A.3 WebLogic Configuration Wizard Screens

This section contains screenshots and descriptions for all of the WebLogic Configuration Wizard screens.

A.3.1 Configuration Wizard Welcome
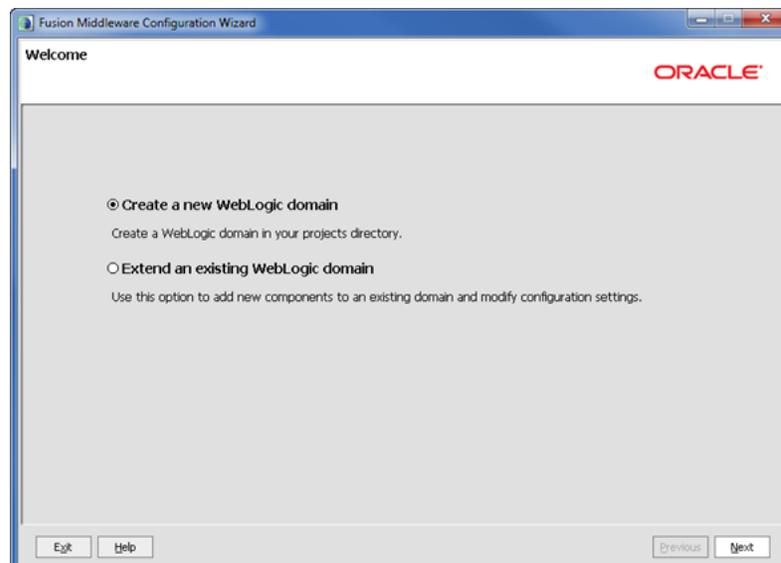
The Welcome screen is displayed each time you start the configuration wizard.

A.3.2 Select Domain Source
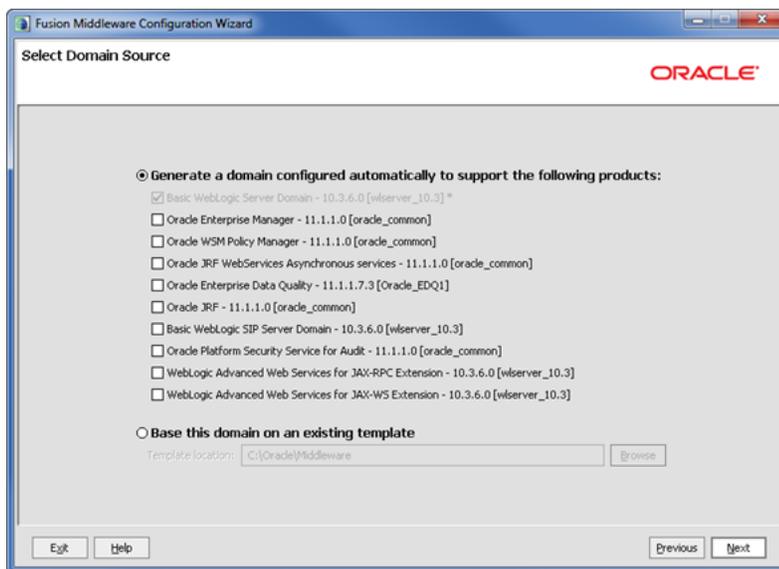
By default, the Basic WebLogic Server Domain - 10.3.6.0 [wlserver_10_3] option is always selected.

Select **Oracle Enterprise Data Quality -11.1.1.7.# [Oracle_EDQ1]** check box. The **Oracle JRF - 11.1.1.0 [oracle_common]** check box is automatically selected.

A.3.3 Specify Domain Name and Location
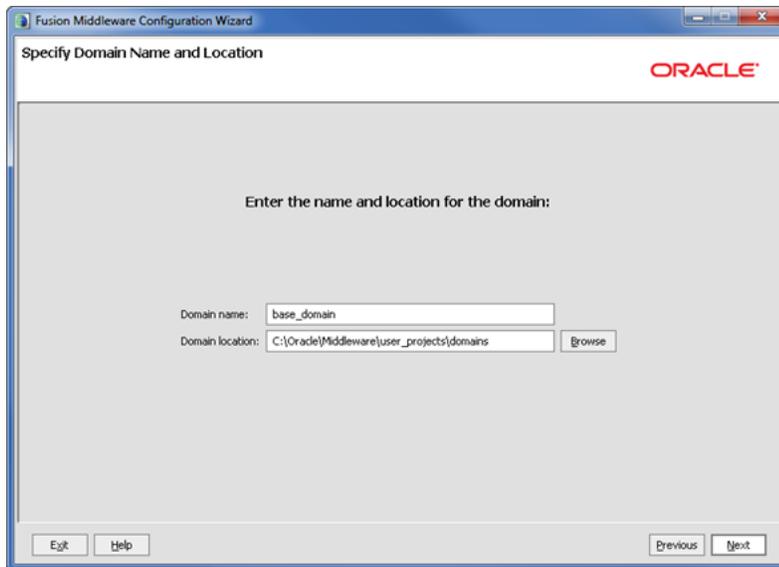
Specify your domain name and location. Oracle recommends that you use edqdomain as your domain name.

A.3.4 Configure Administrator User Name and Password
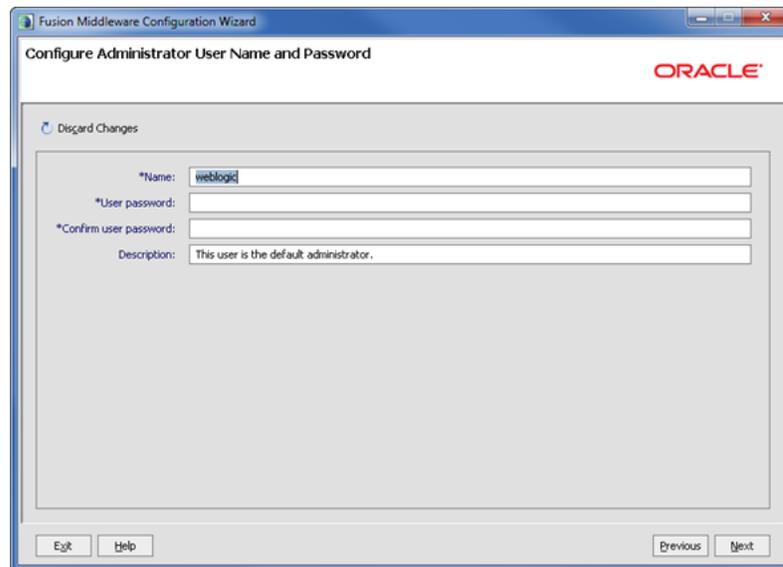
Specify your WebLogic administration user credentials.

A.3.5 Configure Server Start Mode and JDK

Select the Development Mode for your domain startup operation mode and the JDK release you want to use. Oracle recommends that you use the most current 64-bit JDK.

A.3.6 Configure JDBC Data Sources
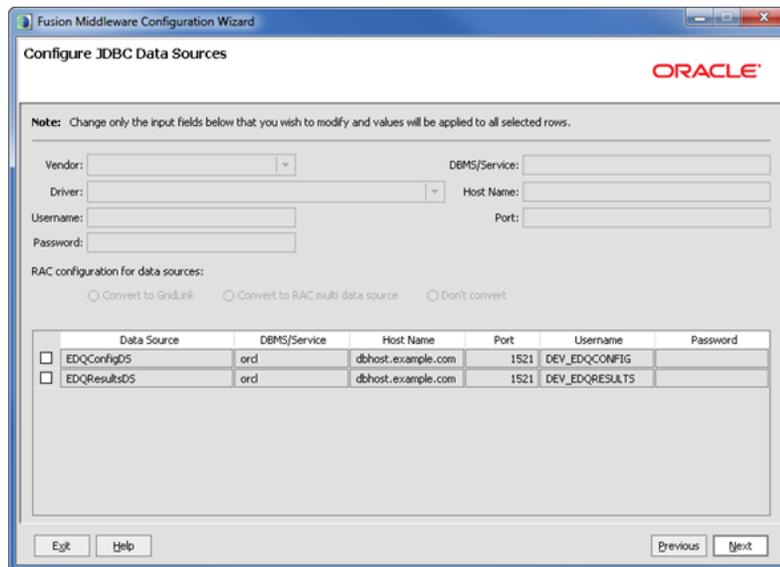
Specify the JDBC data source details.

A.3.7 Test JDBC Data Sources
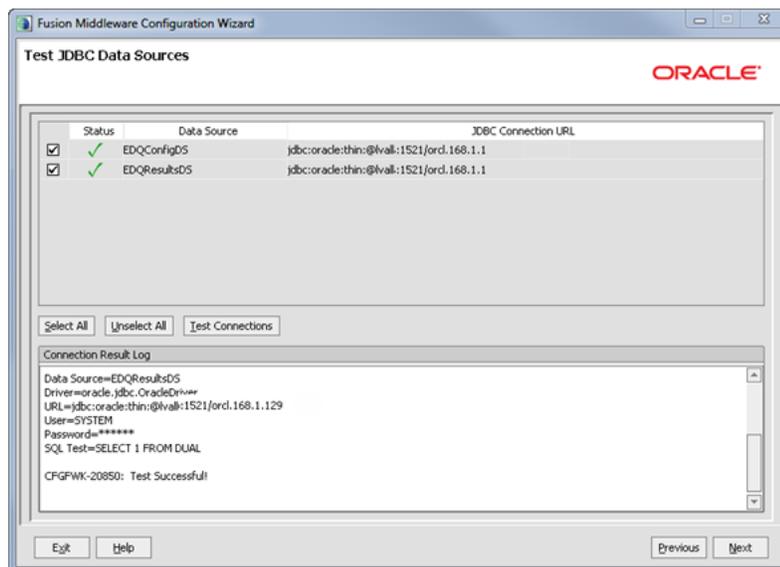
Select the JDBC data sources you want to test, then click **Test Connections**. If your data sources fail, use the **Previous** button to return to the previous screen to correct the configuration.

A.3.8 Select Optional Configuration
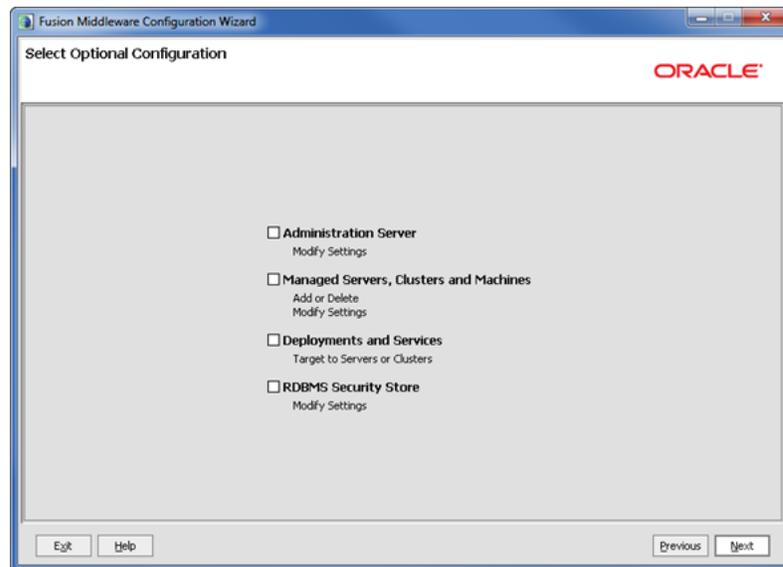
No selections are necessary though Oracle recommends the use of **Managed Servers, Clusters, and Machines** and **Deployments and Services**.

A.4 EDQ Configuration Application Screens

This section contains screenshots and descriptions for all of the EDQ Configuration Application screens.

A.4.1 EDQ Configuration Application Begin

This screen begins the application.

A.4.2 Configuration Directory

Specify a directory to store your EDQ configuration files.

A.4.3 Functional Packs

Select the Function and Interface configurations using the check boxes.

EDQ Configuration Application Screens

A.4.4 Configure Config Repository Database

Specify your Config database repository details.

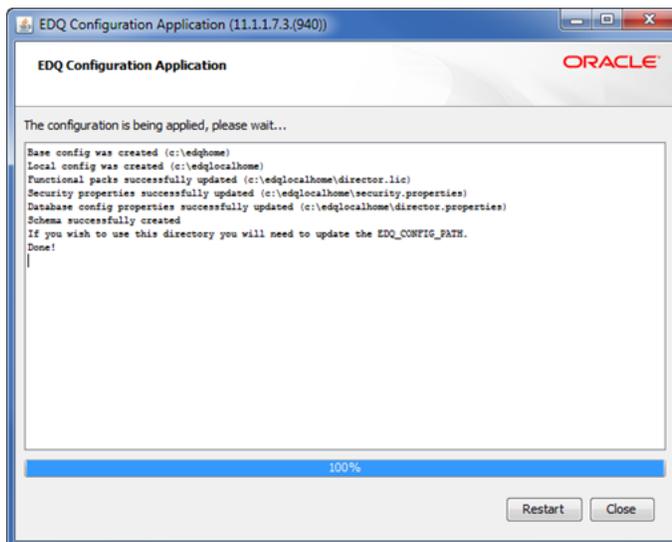## A.4.5 Configure Results Repository Database

Specify your Results database repository details.

A.4.6 Selected Options
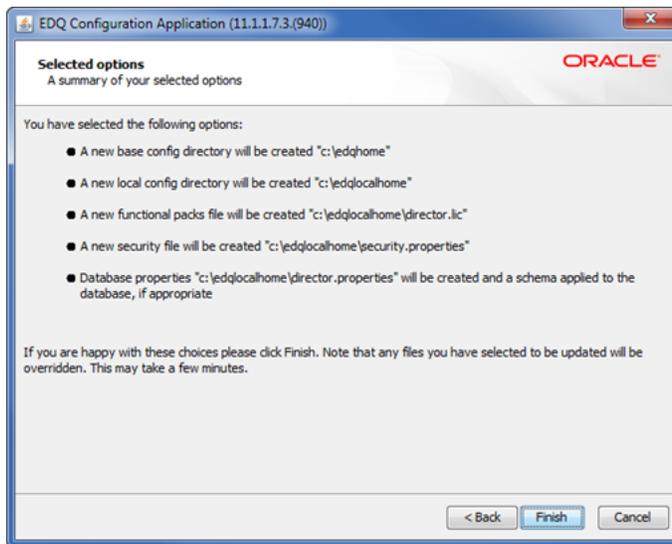
This screen shows you a summary of your selections.

A.4.7 EDQ Configuration Application Completion

Select **Restart** or **Close** to exit the configuration application.