

Oracle® Product Data Quality
Oracle DataLens Server Installation Guide
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Preface

The purpose of the Oracle DataLens Server Installation Guide is to describe the installation procedure for the Oracle DataLens Server on Windows and Linux platforms.

Audience

This document is intended for system administrators or application developers who are installing an Oracle DataLens Server. It is assumed that readers have a basic understanding of the DataLens technology and have a general understanding of Windows and Linux platforms.

Related Documents

For more information, see the following documents in the documentation set:

- The *Oracle Product Data Quality COM Interface Guide* provides information about installing and using the Oracle DataLens Server COM APIs.
- The *Oracle Product Data Quality Java Interface Guide* provides information about installing and using the Oracle DataLens Server Java APIs.
- The *Oracle Product Data Quality Oracle DataLens Server Administration Guide* provides information about installing and managing an Oracle DataLens Server.
- The *Oracle Product Data Quality Application Studio Reference Guide* provides information about creating and maintaining Data Service Applications (DSAs).
- The *Oracle Product Data Quality AutoBuild Reference Guide* provides information about creating initial data lens based on existing product information and data lens knowledge.
- The *Oracle Product Data Quality Knowledge Studio Reference Guide* provides information about creating and maintaining data lenses.
- The *Oracle Product Data Quality Glossary* provides definitions to commonly used Oracle Product Data Quality technology terms.
- The *Oracle Product Data Quality Services for Excel Reference Guide* provides information about creating a DSA based on data contained in a Microsoft Excel spreadsheet.
- The *Oracle Product Data Quality Task Manager Reference Guide* provides information about managing tasks created with the Task Manager or Governance Studio applications.

Conventions

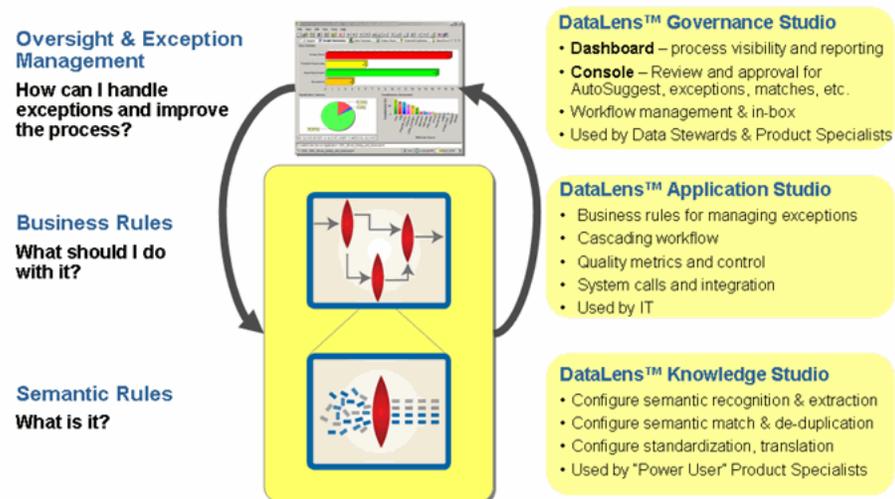
The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	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, text that you enter, or a file, directory, or path name.
monospace	Boldface, monospace type indicates commands or text that you enter.

Overview

Oracle DataLens Server is built on industry-leading DataLens™ Technology to standardize, match, enrich, and correct product data from different sources and systems. The core DataLens Technology uses patented semantic technology designed from the ground up to tackle the extreme variability typical of product data.

Oracle Product Data Quality uses three core DataLens Technology modules: Governance Studio, Knowledge Studio, and Application Studio. The following figure illustrates the process flow of these modules.



Overview

The Oracle DataLens Server can be configured to run with multiple servers:

- Oracle DataLens Administration Server
- Oracle DataLens Transform Server

The administration of all servers in a multi-server configuration is controlled with the **Oracle DataLens Administration Server**. The purpose of the Administration Server is to manage the various administrative tasks of the servers for the Server Groups (referred to as **Transform Servers**) and can itself serve as its own Transform Server when installed alone in a single node configuration. By spreading the data processing load across multiple servers the Oracle DataLens Server system provides scalability and configuration control over the various functional areas involved in developing, testing, and ultimately executing Oracle data lens jobs.

The type of **Oracle DataLens Server Group** that a Transform Server belongs to controls the individual server functionality. A Server Group may contain one or many physical servers. There are three types of Server Groups:

- Development Server Group
- Production Server Group
- Quality Assurance Server Group

The Server Groups contain individual Oracle DataLens Servers on physical machines that can load balance among servers within the group. The data lenses and DataLens Service Applications (DSAs) are deployed from one group to the next beginning with the development group, then migrating to the Quality Assurance Group for testing before arriving in the Production Group for deployment to production. This multiple group migration function facilitates an enterprise business process where multiple functional areas work on data lens objects in stages before releasing them to production.

Oracle DataLens Server Types

The following sections describe the types of Oracle DataLens Servers.

Oracle DataLens Administration Server

An Oracle DataLens Administration Server is used to:

- create and maintain users, and roles and responsibilities,
- security,
- configure servers, connections, and Web services,
- manage jobs, and
- manage the creation, maintenance, and testing of data lenses, and DSAs.

Knowledge Studio users connect to this server for archiving and versioning, locking for update, and sharing data lenses and DSAs with other Knowledge Studio users. Only one Oracle DataLens Administration Server is allowed per deployment.

Oracle DataLens Transform Servers

An Oracle DataLens Transform Server is used for running jobs and for deploying data lenses and DSAs in a production environment. They are also used for development and testing. Transform Servers do not have administrative privileges.

Server Configuration Example

A Oracle DataLens Server consists of two components: the Administration Server and one or more Transform Servers that reside in one or more Server Groups.

The Oracle DataLens Server loads all data lenses into memory that have been flagged as loaded in the `ServerProfiles` configuration file. This file should never need to be edited manually, but can be modified using the Oracle DataLens Server Administration Web pages.

Enterprise System: Production Configuration

One Administration/Development Server (1)

Administration Server with 8 Cores / 32 GB RAM

One Server Group with Two Production Servers (2)

Production Servers each with 8 Cores / 64 GB RAM

One Quality Assurance Server (1)

Development Server with 8 Cores / 64 GB RAM

Once Enterprise Customers begin production operations, Oracle recommends an upgrade to a multi-tiered server environment consisting of one Administration Server and two Transform Servers in the Production Group. The Transform Servers in the Production Group are recommended to be server class machines and are configured to share processes (multi-threading) with load balancing and failover capability. The recommended production environment provides reliable company wide operations for running Oracle DataLens Server jobs. Additionally, it is recommended to have a separate Development Group consisting of additional Transform Servers for isolated solution development and testing.

The Administration/Development Server is used as the development and Quality Assurance test platform. Data lenses, Transformation Maps, and DSAs can be deployed and loaded so that batch jobs and real-time application can access the Administration Server for testing without affecting the production Oracle DataLens Servers. Any problems can be resolved on the Administration Server without affecting the production data running on any of the Oracle DataLens Servers.

Preparing for Installation

This chapter describes the server requirements, installation path, and preparation steps that you must follow prior to installing an Oracle DataLens Server and data repository.

Hardware and Software Requirements

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

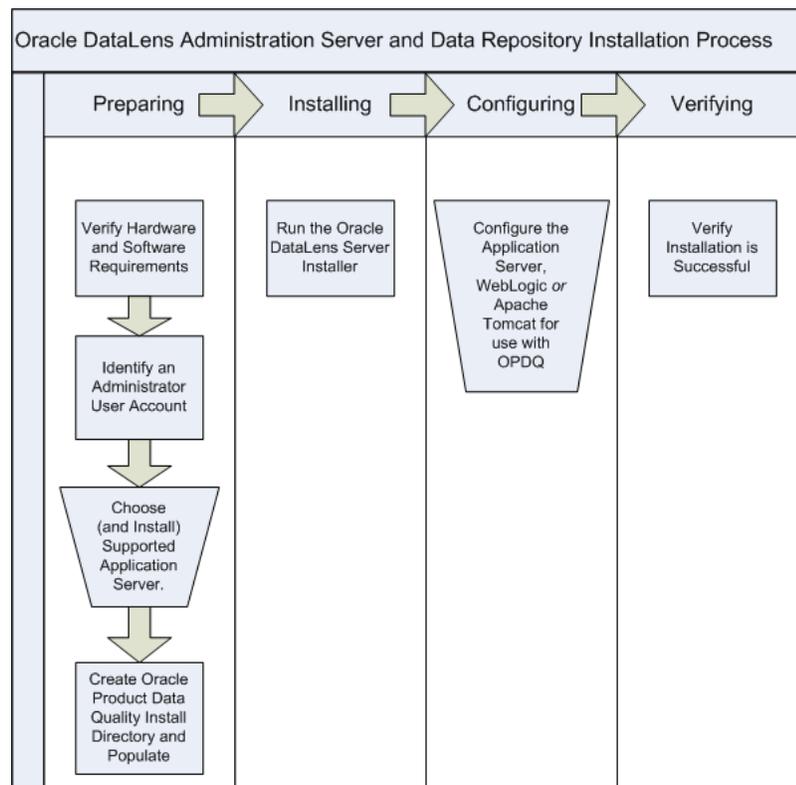
- **Hardware**
 - 4 Cores, 2-3 GHz Each (2 GHz minimum speed)
 - 4 GB RAM per Core, 500 MB Free
 - Standard Hard Drive, 100 GB Free
 - Optical Drive
 - Network Connectivity
- **Operating System**
 - Windows Server 2003 64-bit with SP2
 - Windows Server 2008 64-bit with SP1
 - Red Hat Enterprise Linux 4.0 Update 7 or greater (64-bit)
 - Red Hat Enterprise Linux 5.0 Update 3 or greater (64-bit)
- **Java Development Kit**
 - Java Development Kit (JDK) 6 Update 18 (1.6.0_18)
- **Application Servers**
 - Apache Tomcat version 6.0.18
 - Oracle WebLogic Suite 10g Release 3 (10.3) and 11g Release 1 (10.3.1 or 10.3.2)

Note: Oracle Product Data Quality has been certified with the preceding software versions. For an updated list of certified platforms and versions for this product prior to installation, refer to the Oracle Product Data Quality Certification Matrix at:

<http://www.oracle.com/technology/products/oracle-product-data-quality/oracleproductdataqualitycertificationmatrixfinal.xls>

Installation Path

The Oracle DataLens Administration Server and data repository installation involves four main stages as shown in the following figure.



The tasks included in each stage are found as follows:

- **Preparing:**
 - All preparation tasks are included in the sections in this chapter.
- **Installing:**
 - To install the Oracle DataLens Server and data repository, including the optional Tomcat Application Server, go to [Chapter 3, "Running the Installer."](#)
- **Configuring:**
 - To configure a WebLogic Application Server, go to [Chapter 4, "Configuring the Use of a WebLogic Server."](#)
 - To configure a Tomcat Application Server, go to [Chapter 5, "Configuring the Use of a Tomcat Server."](#)

- Verifying:
 - To verify the installation, go to [Chapter 6, "Verifying the Installation."](#)

Upgrading an Oracle DataLens Administration Server

There is no automated upgrade path from versions earlier than 5.5.03 to the newest version. An upgrade from a earlier version requires a migration plan and assistance from Oracle Professional Services. This ensures the retention of your Server Group topology, data repository, DSAs, data lenses, and data. For all product upgrades from an earlier version to version 5.5 and later, contact Oracle Professional Services for assistance.

You should always create a test environment for an upgrade before attempting to upgrade your production environment.

Identifying an Administrator User Account

Identify an administrator user account prior to installation for use in installing all Oracle DataLens Servers (Administration and Transform Servers). This user account must have *full* root (Linux) or administrator (Windows) privileges. Use of this administrator-privileged user ensures that there are no file access problems or communication errors between the Oracle DataLens Servers in the various Server Groups. For more information regarding creating an administrator user account, refer to the documentation for your OS.

Oracle recommends that you create an administrative user and domain named `dlsadmin` and `dls_domain` respectively. You then use this user and domain combination, or any other combination you configure, throughout your Oracle DataLens Server Topology. This is applicable to both Linux and Windows.

Always use this administrator user when logging into any of the Oracle DataLens Server machines to perform installation, upgrades, or maintenance.

Creating and Populating the Oracle Product Data Quality Installation Directory

To create an installation directory, download, and unzip the Oracle Product Data Quality product use the following steps:

1. Ensure that your server meets the software and hardware requirements, that you have created an administrative user, and that you have installed the JDK.
2. Create the appropriate installation directory as follows:

For Linux: `/opt/dls_install`

For Windows: `c:\dls_install\`

Note: Do not use spaces in the directory name as this causes an installation error.

Note: On some Linux systems, the root file system is configured with minimal disk space. Ensure that there is at least 250 MBs of disk space available in the `/opt/dls_install` file system. It is not recommended to install the Oracle DataLens Server in the root ("`/`") file system.

3. Browse to the Oracle E-Delivery Web site at:
<http://edelivery.oracle.com>
4. Click the **Continue** link or click a language.
5. Enter the required information and select a country from the list.
6. Click both check boxes to accept the License Agreement and Export Restrictions.
7. Click **Continue**.
8. From the **Select a Product Pack** list, select **E-Business Suite**.
9. From the **Platform** list, select either **Linux x86-64** or **Microsoft Windows x64 (64-bit)** as appropriate for your OS.
10. Click **Go**.
11. Select the **Oracle Product Data Quality 5.5.nn Media Pack** option and click **Continue**.
12. Click the **Download** button.
13. Save the product zip file, *Vnnnnn.nn*, to the installation directory you created in Step 2.
14. Unzip *Vnnnnn.nn* in the same directory to extract `oracle_product_data_quality_n_n.zip`.
15. Unzip `oracle_product_data_quality_n_n.zip` in the same directory to extract all files.
16. Unzip `oracle_dataLens_server_n_n.zip` in the same directory to extract all files.

The installation directory now contains an `install` and a `server` directory, as well as several other files. You have all of the files necessary to install Oracle Product Data Quality.

Note: Do not locate any installation files in the `.../oracle/middleware` or `... \oracle\middleware\` directories as this will cause the Oracle DataLens Server installer to fail because it inspects this directory for open files.

Choosing an Application Server

You can choose from two supported application servers, Apache Tomcat or Oracle WebLogic Server. The Tomcat Application server is installed automatically by the Oracle DataLens Server installer though the WebLogic Application Server is installed manually. Either installation occurs prior to installing the Oracle DataLens Server and data repository.

Use one of the following sections to install your application server:

Setting the Tomcat Application Server to Be Installed

The Tomcat Application Server and service can be installed by the Oracle DataLens Server installer.

To obtain the Tomcat supported software and ensure that the installer can locate it for installation:

1. Browse to the Tomcat Web site at:

<http://archive.apache.org/dist/tomcat/tomcat-6/v6.0.18/bin/>

2. Download the Tomcat 6.0.18 zip file, `apache-tomcat-6.0.18.zip`, to the appropriate installation directory:

On Linux: `/opt/dls_install`

On Windows: `c:\dls_install\`

Note: You must ensure that the Tomcat zip file is not in the same directory as the installer script as this causes an error and Tomcat will not be installed. For example:

On Linux: Tomcat is located in `/opt/dls_install/apache-tomcat-6.0.18.zip` while the installer is located in `/opt/dls_install/install/dlsinstall.sh`.

On Windows: Tomcat in `c:\dls_install\apache-tomcat-6.0.18.zip` while the installer is located in `c:\dls_install\install\dlsinstall.bat`.

Installing a WebLogic Application Server

To use a WebLogic Application Server, you must install a supported WebLogic release using one of the following installation guides:

- *Installation Guide for Oracle WebLogic Server 11g Release 1 (10.3.1)*

http://download.oracle.com/docs/cd/E15523_01/doc.1111/e14142.pdf

Note: This is the correct installation guide for the 10.3.2 WebLogic version though the title of this document indicates the 10.3.1 version. This versioning issue is explained in the *Oracle® Fusion Middleware Release Notes 11g Release 1 (11.1.1)* for your platform.

- *Installation Guide for Oracle WebLogic Server 11g Release 1 (10.3.1)*

http://download.oracle.com/docs/cd/E12839_01/doc.1111/e14142.pdf

- *Oracle® WebLogic Server Installation Guide 10g Release 3 (10.3)*

http://download.oracle.com/docs/cd/E12840_01/common/docs103/pdf/install.pdf

Next Step

The next task in the installation process is to install the Oracle DataLens Administration Server and data repository. Continue to [Chapter 3, "Running the Installer."](#)

Running the Installer

This chapter describes how to run the Oracle DataLens Server installer on Linux and Windows.

You should observe the following before attempting this installation:

- Ensure that any firewall installations are not blocking port 2229 or the port you setup for the Oracle DataLens Server. The installation will not work if firewall is blocking the port that has been chosen for Oracle DataLens Server.
- A minimum of 512 MB of disk space and 1 GB of RAM for the installation.

Note: You can ensure that the Tomcat Application Server is installed and configured during this installation using the information in ["Setting the Tomcat Application Server to Be Installed"](#) on page 2-5.

Installing on Linux

To install an Oracle DataLens Administration Server on a Linux server:

1. Ensure that you have followed the instructions in ["Choosing an Application Server"](#) on page 2-4.

2. Log in to the server as an administrator user.

3. Go to the installation directory:

```
cd /opt/dls_install/install
```

4. Execute the Oracle DataLens Server install script from the `install` directory:

```
./dlsinstall.sh
```

Please enter your install directory:

5. Enter `/opt/datalens/server` where *server* is the name of your Oracle DataLens Server and press **Enter**.

If the directory path does not exist, the following is displayed:

```
(/opt/datalens/server) does not exist. Would you like to create the directory?
```

Enter **y** and press **Enter** so that the directory is created for use.

```
Will this be an Admin or Transform server [A/T]: ()
```

6. Enter **A** and press **Enter** to install an Oracle DataLens Administration Server.

Messages similar to the following are displayed:

```

Installing JDK...
.
.
.
Configuring the datalens.war file...
Finished the n.n.nn Oracle DataLens Server Installation.

```

If Tomcat was installed, the messages similar to the following are displayed:

```

Installing JDK...
Installing Tomcat...
.
.
.
Configuring the datalens.war file...
.
.
.
Copying the WAR file to /opt/datalens/server/datalens.war
Updating Tomcat with the 64-bit executables...
Starting the Tomcat6opdq service...
.
.
Finished the n.n.nn Oracle DataLens Server Installation. (Return to Exit)

```

The JDK is installed, if set to do so, Tomcat is installed, the Oracle DataLens Administration Server and data repository are created.

If Tomcat was installed, the Oracle Product Data Quality Web Archive (WAR) file has been automatically configured and deployed. The Tomcat service is running.

If WebLogic was installed, the OPDQ WAR file is now ready for deployment to a WebLogic Application Server.

Installing on Windows

To install an Oracle DataLens Administration Server on a Windows server:

1. Ensure that you have followed the instructions in "[Choosing an Application Server](#)" on page 2-4.
2. Log on to the server as an administrator user.
3. Locate the MS-DOS Command Prompt (`cmd.exe`), right-click on it, and then select **Run as administrator**.
4. Run the command:

```
c:\dls_install\install\dlsinstall.bat
```

```
Welcome to the DataLens n.n.nn Installation.
Please enter your DLS Server Home directory: (C:\datalens\server)
```

5. Press **Enter** to accept the default installation directory or enter the directory path to your server where *server* is the name of your Oracle DataLens Server.

If the directory path does not exist, the following is displayed:

```
(C:\datalens\server) does not exist. Would you like to create the directory?
```

Enter **y** so that the directory is created for use.

```
Will this be an Admin or Transform server [A/T]: ()
```

6. Enter A to install an Oracle DataLens Administration Server.

```
Please enter the path to the directory that contains DLS Data directory: ( )
```

7. Press Enter to use the default directory, which is the directory path and server name you identified in Step 5.**8. If you set the installer to install Tomcat, the following prompt is displayed:**

```
Please enter the Tomcat server port number: (2229)
```

Press **Enter** to use the standard 2229 port or enter the port number you want the Tomcat service to run on:

```
Copying the Server Files to c:\datalens\server...
Updating DbInfo.xml...
c:\datalens\server\data does not exist. Would you like to create the direct
ory? (c:\datalens\server\data)
```

9. Enter y to create the data directory.

Messages similar to the following are displayed:

```
Installing JDK...
.
.
.
Configuring the datalens.war file...
.
.
.
Copying the WAR file to C:\datalens\server\datalens.war
Finished the DataLens n.n.nm Installation. (Return to Exit)
```

If Tomcat was installed, the messages similar to the following are displayed:

```
Installing JDK...
Installing Tomcat...
.
.
.
Configuring the datalens.war file...
.
.
.
Copying the WAR file to C:\datalens\server\datalens.war
Updating Tomcat with the 64-bit executables...
Starting the Tomcat6opdq service...
.
.
Finished the n.n.nm Oracle DataLens Server Installation. (Return to Exit)
```

10. Press Enter to exit the installation script.

The JDK is installed, if set to do so, Tomcat is installed, the Oracle DataLens Administration Server and data repository are created.

If Tomcat was installed, the Oracle Product Data Quality Web Archive (WAR) file has been automatically configured and deployed. The Tomcat service is running.

If WebLogic was installed, the OPDQ WAR file is now ready for deployment to a WebLogic Application Server.

Next Step

The next task in the installation process is to configure your application server. Continue to the appropriate chapter, [Chapter 4, "Configuring the Use of a WebLogic Server"](#) or [Chapter 5, "Configuring the Use of a Tomcat Server"](#).

Configuring the Use of a WebLogic Server

The Oracle Product Data Quality WAR file is a fully integrated J2EE Application Server component compatible with WebLogic Application Servers. This chapter describes how to configure an to use a WebLogic Server and deploy the Oracle Product Data Quality WAR file to it for use on a Oracle DataLens Server.

Creating a WebLogic 11g Domain on Linux

Use the following steps to create an WebLogic 11g (10.3.1 or 10.3.2) domain:

1. Log in to the server as an administrator user.
2. Go to the `/common/bin` subdirectory of the WebLogic installation directory.
3. Start the Fusion Middleware Configuration Wizard:

```
./config.sh
```

The **Fusion Middleware Configuration Wizard Welcome** screen is displayed.

4. Enter **1** to select the **Create a new WebLogic domain** option.
The **Select Domain Source** screen is displayed.
5. Enter **next** to select **Choose Weblogic Platform components**.
The **Application Template Selection** screen is displayed.
6. Enter **next** to select the **Basic WebLogic Server Domain** option.
The **Edit Domain Information** screen is displayed.
7. Enter **dls_domain** as the domain name, and then enter **next**.

Note: A domain name must not start with a number.

The **target domain directory** screen is displayed.

8. Enter the domain directory or **next** to use the default directory displayed.
The **Configure Administrator User Name and Password** screen is displayed.
9. Enter **1**, and then **dlsadmin** as the user name.
10. Enter **2**, and then **dlsadmin1** as the password.

Note: The password is not displayed as you enter it.

11. Enter **3**, and then **dlsadmin1** to confirm the password.
12. Enter **4**, and then a description for this administrative user.
13. Enter **next** to save your changes.
The **Domain Mode Configuration** screen is displayed.
14. Enter **next** to select the **Development Mode** option.
The **Java SDK Selection** screen is displayed.
15. Enter the number for JDK 6 Update 18 (1.6.0_18) that you installed on your Oracle DataLens Server.

Important: *Never* select the JRockit JDK because the Oracle DataLens Server does not support it.

The **Select Optional Configuration** screen is displayed.

16. Enter **1** to select **Administration Server**, and then enter **next**.
The **Configure the Administration Server** screen is displayed.
17. Enter **1**, and then the name of your Oracle DataLens Administration Server. For example, `dlserver`.

Note: The default **Listen address** and **SSL enabled** settings should not be changed.

18. Enter **3**, and then **2229** as the listen port or the port number for your Oracle DataLens Administration Server if you installed it on a different port.
19. Enter **next** to modify the domain information and continue creating the domain.
The domain is created and a progress indicator is displayed. Upon completion the configuration wizard exits.

Any errors encountered during the domain creation are displayed. You must resolve any errors prior to continuing with the domain configuration. For information, see *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard 11g Release 1 (10.3.1)* or *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard 11g Release 1 (10.3.2)*.

Creating a WebLogic 10g Domain on Linux

Use the following steps to create a WebLogic 10g (10.3) domain:

1. Log in to the server as an administrator user.
2. Go to the `/common/bin` subdirectory of the WebLogic installation directory.
3. Start the Fusion Middleware Configuration Wizard:

```
./config.sh
```

The **Oracle WebLogic Configuration Wizard Welcome** screen is displayed.

4. Enter **1** to select the **Create a new WebLogic domain** option.
The **Select Domain Source** screen is displayed.

5. Enter **1** to select **Choose Weblogic Platform components**.
The **Application Template Selection** screen is displayed.
6. Enter **next** to select the default **WebLogic Server** option.
The **Configure Administrator User Name and Password** screen is displayed.
7. Enter **1**, and then **dlsadmin** as the user name.
8. Enter **2**, and then **dlsadmin1** as the password.

Note: The password is not displayed as you enter it.

9. Enter **3**, and then **dlsadmin1** to confirm the password.
10. Enter **4**, and then a description for this administrative user.
11. Enter **next** to save your changes.
The **Domain Mode Configuration** screen is displayed.
12. Enter **1** to select the **Development Mode** option.
The **Java SDK Selection** screen is displayed.
13. Enter the number for JDK 6 Update 18 (1.6.0_18) that you installed on your Oracle DataLens Server.

Important: *Never* select the JRockit JDK because the Oracle DataLens Server does not support it.

- The **Choose Configuration Option** screen is displayed.
14. Enter **1** to select **Yes**.
The **Configure RDBMS Security Store Options** screen is displayed.
 15. Enter **1** to select no changes.
The **Configure the Administration Server** screen is displayed.
 16. Enter **1**, and then the name of your Oracle DataLens Administration Server. For example, `dlserver`.

Note: The default **Listen address** and **SSL enabled** settings should not be changed.

17. Enter **3**, and then **2229** as the listen port or the port number for your Oracle DataLens Administration Server if you installed it on a different port.
18. Enter **next** to save the changes.
The **Configure Clusters** screen is displayed.
19. Enter **next** to advance to the next screen.
The **Configure Machines** screen is displayed.
20. Enter **next** to advance to the next screen.
The **Configure Unix Machines** screen is displayed.

21. Enter **next** to advance to the next screen.

The **target domain directory** screen is displayed.

22. Enter **next** to use the default target directory value or enter the directory that you want the domain created in.
23. Enter **1** and **dls_domain** as the domain name.

Note: A domain name must not start with a number.

24. Enter **next** to modify the name and continue creating the domain.

The domain is created and a progress indicator is displayed. Upon completion the wizard exits.

Any errors encountered during the domain creation are displayed. You must resolve any errors prior to continuing with the domain configuration. For information, see *Oracle WebLogic Server Creating WebLogic Domains Using the Configuration Wizard 10g Release 3 (10.3)*.

Creating a WebLogic 11g Domain on Windows

Use the following steps to create a WebLogic domain on a Windows platform:

1. Click **Start > Programs > Oracle WebLogic > WebLogic Server 11gR3 > Tools > Configuration Wizard** to start the WebLogic Configuration Wizard.

The **Fusion Middleware Configuration Wizard Welcome** screen is displayed.

2. Select **Create a new WebLogic domain** option, and then click **Next**.

The **Select Domain Source** screen is displayed.

3. Click **Next** to retain the default selection.

The **Specify Domain Name and Location** screen is displayed.

4. Enter **dls_domain** as the domain name, retain the default domain location, and then click **Next**.

Note: A domain name must not start with a number.

The **Configure Administrator User Name and Password** screen is displayed.

5. Enter **dlsadmin** as the user name
6. Enter **dlsadmin1** as the password and confirm this password.
7. Enter a description for this administrative user.
8. Click **Next**.

The **Configure Server Start Mode and JDK** screen is displayed.

9. Select the **Development Mode** option.
10. Ensure that **Development Mode** option is selected.
11. Select the JDK 6 Update 18 (1.6.0_18) that you installed on your Oracle DataLens Server.

Important: *Never* select the JRockit JDK because the Oracle DataLens Server does not support it.

12. Click Next.

The **Select Optional Configuration** screen is displayed.

13. Select Administration Server, and then click Next.

The **Configure the Administration Server** screen is displayed.

14. Enter the name of your Oracle DataLens Administration Server. For example, dlsserver.

15. Enter 2229 as the listen port or the port number for you Oracle DataLens Administration Server if you installed it on a different port.

Note: The default **Listen address** and **SSL enabled** settings should not be changed.

16. Click Next.

The **Configuration Summary** screen is displayed.

17. Retain all the domain defaults and click Create.

The domain is created and a progress indicator is displayed.

Any errors encountered during the domain creation are displayed. You must resolve any errors prior to continuing with the domain configuration. For information, see *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard 11g Release 1 (10.3.1)* or *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard 11g Release 1 (10.3.2)*.

18. Ensure that the Start Admin Server check box is not selected, and click Done.

Creating a WebLogic 10g Domain on Windows

Use the following steps to create a WebLogic domain on a Windows platform:

1. Click Start > Programs > Oracle WebLogic > WebLogic Server 10gR3 > Tools > Configuration Wizard to start the Fusion Middleware Configuration Wizard.

The **Oracle WebLogic Configuration Wizard Welcome** screen is displayed.

2. Select Create a new WebLogic domain option, and then click Next.

The **Select Domain Source** screen is displayed.

3. Click Next to retain the default selection.

The **Configure Administrator User Name and Password** screen is displayed.

4. Enter dlsadmin as the user name

5. Enter dlsadmin1 as the password and confirm this password.

6. Enter a description for this administrative user.

7. Click Next.

The **Configure Server Start Mode and JDK** screen is displayed.

8. Select the JDK 6 Update 18 (1.6.0_18) that you installed on your Oracle DataLens Server.

Important: *Never* select the JRockit JDK because the Oracle DataLens Server does not support it.

9. Click **Next**.

The **Customize Environment and Services Settings** screen is displayed.

10. Select **Yes**, and then click **Next** to configure your domain.

The **Configure RDBMS Security Store Database** screen is displayed.

11. Click **Next** to retain the default selection and advance to the next screen.

The **Configure the Administration Server** screen is displayed.

12. Enter the name of your Oracle DataLens Administration Server. For example, `dlserver`.

13. Enter **2229** as the listen port or the port number for your Oracle DataLens Administration Server if you installed it on a different port.

Note: The default **Listen address** and **SSL enabled** settings should not be changed.

14. Click **Next**.

The **Configure Managed Servers** screen is displayed.

15. Click **Next** to advance to the next screen.

The **Configure Machines** screen is displayed.

16. Click **Next** to advance to the next screen.

The **Review WebLogic Domain** screen is displayed.

17. Ensure that **Deployment** is selected in the **Summary View** list, and then click **Next** to advance to the next screen.

The **Create WebLogic Domain** screen is displayed.

18. Enter `dl_domain` as the domain name, retain the default domain location, and then click **Create**.

Note: A domain name must not start with a number.

The domain is created and a progress indicator is displayed.

Any errors encountered during the domain creation are displayed. You must resolve any errors prior to continuing with the domain configuration. For information, see *Oracle WebLogic Server Creating WebLogic Domains Using the Configuration Wizard 10g Release 3 (10.3)*.

19. Ensure that the **Start Admin Server** check box is not selected, and click **Done**.

Configure the Domain Memory Variables

You must configure the memory variables for the `dls_domain` server to operate properly as follows:

1. Go to the appropriate subdirectory of the WebLogic installation directory:

On Linux: `/user_projects/domains/dls_domain/bin/`

On Windows: `\user_projects\domains\dls_domain\bin\`

2. Edit the WebLogic environment script:

On Linux: `setDomainEnv.sh`

On Windows: `setDomainEnv.cmd`

3. Change the memory variable to the recommended 80% of the server's total available memory or to the minimum using one of the following:

For 11g (Linux or Windows):

Recommended: `WLS_MEM_ARGS_64BIT="-Xms1024m -Xmx26624m`

where the `-Xmx26624` value is set to 80% of the total amount of memory of 32GB.

Minimum: `WLS_MEM_ARGS_64BIT="-Xms1024m -Xmx2048m`

For 10g (Linux and Windows):

Recommended: `MEM_ARGS="-Xms1024m -Xmx26624m`

where the `-Xmx26624` value is set to 80% of the total amount of memory of 32GB.

Minimum: `MEM_ARGS="-Xms1024m -Xmx2048m`

4. Set the permanent memory size variables to one of the following:

For 11g (Linux and Windows):

`MEM_PERM_SIZE_64BIT="-XX:PermSize=1024m"`

`MEM_MAX_PERM_SIZE_64BIT="-XX:MaxPermSize=2048m"`

For 10g (Linux and Windows):

`MEM_PERM_SIZE="-XX:PermSize=512m"`

`MEM_MAX_PERM_SIZE="-XX:MaxPermSize=512m"`

These are the lowest settings that will allow the `dls_domain` to operate properly. You can set these variables higher if additional memory is available on the server.

5. Save and close the file.

Starting the WebLogic Domain

The WebLogic domain must be started. To start the domain:

On Linux

1. Go to the `/user_projects/domains/dls_domain/bin/` subdirectory of the WebLogic installation directory.

2. Start the domain:

`./startWebLogic.sh`

On Windows

Click **Start > Programs > Oracle WebLogic > User Projects > dls_domain > Start Admin Server for Weblogic Server Domain**.

Deploying the WAR File into the WebLogic Domain

You must modify the `dls_domain` domain to set the deployment location of the Oracle Product Data Quality WAR file.

1. Start the WebLogic Server Administration Console by browsing to `http://server:2229/console` where *server* is the name of your Oracle DataLens Server.
The **WebLogic Server Administration Console Log in** Web page is displayed.
2. Enter the `dls_domain` user name and password, and then click **Log In**.
The **Oracle WebLogic Server Administration Console** home page is displayed.
3. Click **Deployments** from the Domain Structure tree.
The **Summary of Deployments** page is displayed.
4. Click the **Install** button.
The **Install Application Assistant** screen is displayed.
5. Enter or locate the path to the WAR file.
By default, the WAR file is located in:
On Linux: `/opt/datalens/server/datalens.war`.
On Windows: `c:\datalens\server\datalens.war`.
where *server* is the name of your Oracle DataLens Server.
6. Select the **datalens.war** option, and click **Next**.
7. Click **Next** to install the deployment as an application.
The optional settings are displayed in the **Install Application Assistant** screen.
8. Retain the page defaults, and click **Finish**.
The WAR file is deployed and confirmation message that the deployment was successful is displayed in the Summary of Deployments page, which can take several minutes.
The **Summary of Deployments** page is displayed.
9. Select the checkbox adjacent to **datalens**.
10. Click **Start** and select **Servicing all requests** to ensure that all requests are sent to the `datalens` WAR deployment.

Next Step

The final step in the installation process is to verify the installation. Continue to [Chapter 6, "Verifying the Installation"](#).

Configuring the Use of a Tomcat Server

The Oracle Product Data Quality WAR file is a fully integrated J2EE Application Server component compatible with Tomcat Application Servers. This chapter describes how to configure an Oracle DataLens Administration Server to use an Tomcat Server and deploy the Oracle Product Data Quality file to it.

The Tomcat installation creates a service for starting the Tomcat service.

Linux Configuration

When the Oracle DataLens Server installer is used to install Tomcat, no additional configuration is necessary.

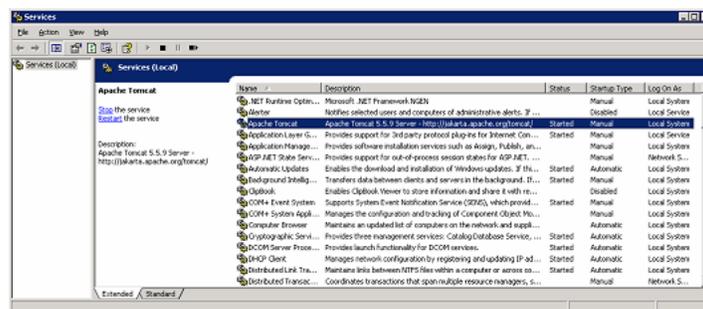
Windows Configuration

This section verifies and further configures the Tomcat Server on a Windows server.

Verifying the Tomcat Service

Ensure that the server is installed by checking that the Tomcat service appears in the list of Windows Services and can be started and stopped.

Verify this by clicking **Start > Control Panel > Administrative Tools > Services**. Locate the Tomcat service in the Services list.



You may need to change the Startup Type to Automatic if you want the service started automatically on a server machine reboot.

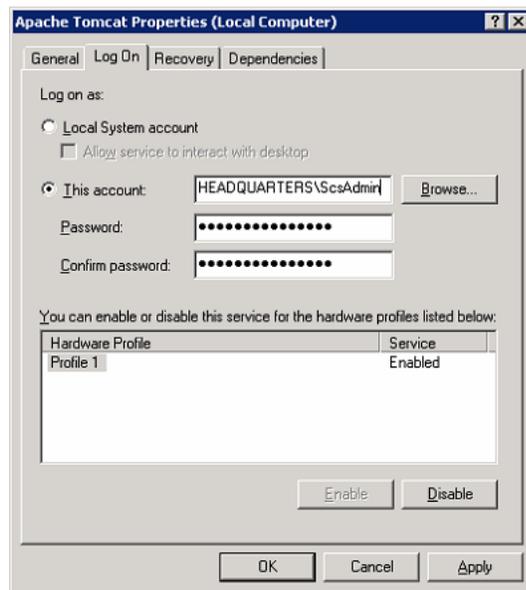
Setting Up the Server to Use a System Account

The server needs to be setup as a system account so that the server can access remote data directories, used for the repository and for storing the output of batch jobs.

Important: Even if the servers seem to be communicating correctly with the remote data directory, do *not* skip this procedure. Without the following system account being setup for use by Tomcat, there can be file permission problems with different users (on the network, accessing the server using a VPN connection, or special user accounts) when checking in data lenses and DSAs.

To set up a system account:

1. In the **Services** dialog box, right-click the Tomcat service.
2. Select **Properties**, and then click the **Log On** tab.



3. Select the **This account:** option.
4. Enter the name of an account that has network privileges and the associated password.
5. Click **Apply**, and then **OK** to update the server to use this new account.

Note: The user account used for the Tomcat Log On must be the same administration account that was used to install the server and setup the shared permissions on the Oracle DataLens Server shared data directory. Remember that the data directory is locked down to just this single administration user prior to installing the Oracle DataLens Server software.

Starting the Tomcat Service Using the Windows Services Tool

If the Tomcat service is configured with an Automatic Startup Type, the service is automatically started when the server machine is rebooted. If the Tomcat Server service is not started, as previously described, then click the **Start** link to start the service.

Starting and Stopping the Tomcat Server Using the Command Line

The Tomcat server can be started from the command line prompt as follows:

1. Go to the appropriate subdirectory of the Tomcat installation directory:

On Linux: `/opt/datalens/server/tomcat/bin`

On Windows: `c:\DataLens\server\tomcat\bin`

where *server* is the name of your Oracle DataLens Server.

2. Run the startup command:

On Linux: `./startup.sh`

On Windows: `% startup.bat`

Verify that the service was started correctly by looking for the final server startup messages.

Likewise, the Tomcat Server can be stopped from the command line with the following command:

On Linux: `./shutdown.sh`

On Windows: `% shutdown.bat`

This command line service directly corresponds to the Tomcat Server service that is used in the Services Tool. Any combination of dialog and command line commands can be used to start and stop the service. This service can be further controlled (stopped or started) using the Services tool as described in "[Verifying the Tomcat Service](#)" on page 5-1.

Next Step

The final task in the installation process is to verify the installation. Continue to [Chapter 6, "Verifying the Installation"](#).

Verifying the Installation

This chapter describes how to verify the Oracle DataLens Server installation on either Linux or Windows servers.

Verifying the Installation

Verify that the server is up and running correctly by browsing to the Oracle DataLens Server Administration Web site at:

<http://server:2229/datalens>

Where *server* is the name of the host where the Oracle DataLens Server was installed.



If your browser displays, “The page cannot be displayed”, then the problem could be one of the following:

- The Tomcat Server service or the WebLogic domain has not been started.
- The Oracle DataLens Server repository was removed or corrupted.

After logging in for the first time using admin/admin1 you will be prompted to change the login password for the Administration Web pages. Change the password and login. After logging in, the Oracle Product Data Quality Administration home page is displayed and is similar to the following:

- Install Oracle Product Data Quality Services for Excel including AutoBuild application. For more information, see the *Oracle Product Data Quality Services for Excel Reference Guide* and the *Oracle Product Data Quality AutoBuild Reference Guide*.

Installing the Client Software

This chapter describes how to install the Oracle Data Product Quality client software on your client machines. You must have an Oracle DataLens Server installed and running.

You must ensure that the following prerequisites are observed including any software that must be preinstalled.

Oracle DataLens Client Software and Hardware Requirements

You must ensure that the following Oracle Product Data Quality client machine hardware and software requirements are observed. These requirements represent the certified and supported server configurations.

- **Hardware**
 - Intel Pentium IV or newer
 - 2.8 - 3.0 GHz (recommended)
 - 1 GB RAM
 - Hard Drive - 1 GB free
 - Network connectivity
- **32-bit Operating System**
 - Windows XP SP2 or newer
 - Windows Vista
 - Windows 7
- **64-bit Operating System**
 - Windows Vista
 - Windows 7
- **Java Runtime Environment**
 - Java Runtime Environment (JRE) 6 Update 18 (1.6.0_18)
- **Internet Browser**
 - Microsoft Internet Explorer 6 or newer

Client Software

Once you have deployed the Oracle Product Data Quality WAR file to your application server (as described in [Chapter 4](#) or [Chapter 5](#) as appropriate), you or other users are ready to download and install the Oracle Product Data Quality client software that contains the various client applications. Oracle Product Data Quality uses Java Web Start technology to install and maintain the current version of the client applications.

Oracle recommends that you provide the information (using e-mail or other medium) in the "[Installing the Client Applications](#)" section to users who want to use Oracle Product Data Quality to ensure a standard, successful installation process.

Note: Ensure that your Oracle DataLens Server is running before any attempts to download and install the client applications occurs to avoid errors.

Installing the Client Applications

Oracle Product Data Quality uses a concept called Java Web Start to initially install and maintain the current version of the software on your client desktop. The process requires you to access the Oracle DataLens Server to initiate the connection and download the software.

You download and install the Oracle Product Data Quality client applications using Java Web Start by browsing to the installation page for your Oracle DataLens Server as follows:

1. Using Microsoft Internet Explorer, browse to one of the following URLs as appropriate for your server:

Note: If you have setup a different port number for your application server other than 2229, you must use that port number in the following URL when browsing to the Oracle DataLens Server to download the client applications.

- **32-bit**

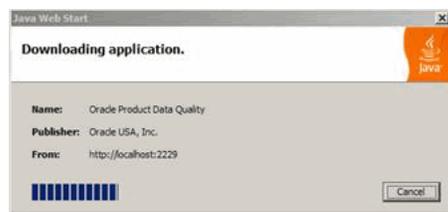
<http://<server>:2229/datalens/datalens.html>

- **64-bit**

<http://<server>:2229/datalens/datalens64.html>

Where *<server>* is the hostname of the Oracle DataLens Server

The application download and installation begins. If you do not have a supported Java environment on the target installation machine the Java Web Start program automatically redirects you to a Java download site and begins a Java Runtime installation.



2. If the preceding Java Web Start message is not displayed, you must initiate a connection and download the software by browsing to:

<http://<server>:2229/datalens/datalens.jnlp>

Oracle Product Data Quality files are digitally signed by a trusted source so the following security warning is displayed.



3. To avoid the security dialogue in the future you can select the **Always trust content from this publisher** check box.
4. Click **Run** to continue and complete the installation.

The Oracle Product Data Quality log on dialog is displayed.



Next Steps

The Oracle Data Product Quality Knowledge Studio, Governance Studio, and Task Manager applications are ready for use. For more information about how to use each application, see "[Related Documents](#)" on page -vii.

Create users and perform other administrative tasks. For more information, see the *Oracle Product Data Quality Oracle DataLens Server Administration Guide*.

Create an Oracle DataLens Transform Server as described in [Chapter 8, "Installing an Oracle DataLens Transform Server."](#)

Installing an Oracle DataLens Transform Server

This chapter describes how to install an Oracle DataLens Transform Server in Development, Production, or QA environments on Windows and Linux.

Transform Servers are also installed using the OPDQ installer by using a different option to specify the you are installing a Transform Server.

For a description of Oracle DataLens Administration and Transform Servers, see ["Oracle DataLens Server Types"](#) on page 1-2.

Preparing to Install

Before you start the installation process, ensure that the following prerequisites are met:

- You have installed an Oracle DataLens Administration Server on another server in the OPDQ Server Topology. For more information about how to install an Oracle DataLens Administration Server, see [Chapter 2](#) through [Chapter 6](#).
- Obtain Oracle Product Data Quality as described in ["Creating and Populating the Oracle Product Data Quality Installation Directory"](#) on page 2-3 as appropriate for the OS on your Transform Server.
- Identify the hostname or IP address and the port number of your Transform Server.
- Select a unique Oracle DataLens Transform Server number that you will use as the Server ID (also called the Profile ID) number for this Transform Server (Server ID 1 cannot be used as it is reserved for the Administration Server).
- Identify the location of the Data Directory. For example, on a Linux server using the default installation paths it would be `/opt/datalens/server`.

Installation Path

The Oracle DataLens Transform Server configuration and installation involves three stages as follows:

1. Configuring the Oracle DataLens Administration Server to integrate with Transform Servers thus augmenting the OPDQ Server Topology.
2. Configuring the Data Directory of the Oracle DataLens Administration Server to become shared so that Transform Servers can access it.
3. Installing an Oracle DataLens Transform Server.

Configuring the OPDQ Server Topology

The OPDQ Server Topology defines one of three server group types, Development, QA, and Production. It depicts the Oracle DataLens Transform Servers assigned to each server group. You can run OPDQ jobs on just one Oracle DataLens Transform Server in one server group or multiple server groups with multiple Oracle DataLens Transform Servers in each.

Complete the following tasks to configure your OPDQ Server Topology in preparation for installing your Transform Server:

1. Go to your Oracle DataLens Administration Server Web page and login.
2. View your OPDQ Server Groups by clicking **Server Groups**.
3. Create a new Server Group by clicking **Create a New Server Group**.
4. Enter the appropriate information for the server group (Development, Production, or QA), and then click **Save**.
5. Return to the Server Groups page.
6. Add your Transform Server to your Server Group by clicking **Add a new Oracle DataLens Server**.
7. Enter the appropriate information including hostname, port number, and Server ID you identified in "[Preparing to Install](#)" on page 8-1, and then select the server group from the **Oracle DataLens Server Group** list.

Note: It is very important that the Server ID entered here match the Profile ID entered during the installation. If these IDs do not match, then the Transform Server will *not* be able to authenticate itself with the OPDQ Oracle DataLens Administration Server.

Additionally, the hostname, port number, and server alias must be consistent with the information that you provide during the installation.

8. Click **Submit**.
This new Transform Server is immediately added to the selected Server Group.
9. View your OPDQ Server Groups by clicking **Server Groups**.
10. View your new Server Group by clicking on its icon.

The topology for the selected Server Group is displayed. The Transform Server that you added with the preceding tasks is displayed as "DOWN" because it has not been installed so it cannot respond to the queries from the Oracle DataLens Administration Server.

Configure and Install an Oracle DataLens Transform Server

This section explains how to configure and install an Oracle DataLens Transform Server on Linux or Windows.

Configuring and Installing on Linux

This section describes how to install an Oracle DataLens Transform Server on a Linux server.

Note: Throughout this section the `/server_directory` is used to indicate the directory path to the Oracle DataLens Server. For example, `/opt/datalens/server` is the default directory created by the OPDQ installer.

Confirming Consistent Administrator Privileges for Access to the Data Directory

The administrator user account, `dlsadmin` for example, is used for all of the servers in the OPDQ Server Topology and was configured as part of the Oracle DataLens Administration Server installation.

Contact your system administrator for assistance in setting up and configuring `dlsadmin` or other administrator user accounts on your other servers that you want to use in the OPDQ Server Topology.

Ensure that the UIDs for all of the administrator user accounts match on the Oracle DataLens Administration Server and machines that you want to use as Oracle DataLens Transform Servers. NFS tracks users by the UID, so these *must* match on all servers.

Issuing the `ls -l` command followed by the `ls -n` command on one of the directories in the OPDQ installation hierarchy lists the group and user IDs that own the files as in the following example:

```
[root@datalens server]# ls -l
total 40
drwxr-xr-x 2 dlsadmin dlsadmin 4096 Jun 23 05:59 config
drwxr-xr-x 5 dlsadmin dlsadmin 4096 Jun 23 05:59 data
drwxr-xr-x 3 dlsadmin dlsadmin 4096 Feb 24 22:36 locale
drwxr-xr-x 2 dlsadmin dlsadmin 4096 Jun 23 05:59 log
drwxr-xr-x 6 dlsadmin dlsadmin 4096 Feb 24 22:36 system
[root@datalens server]# ls -n
total 40
drwxr-xr-x 2 500 500 4096 Jun 23 05:59 config
drwxr-xr-x 5 500 500 4096 Jun 23 05:59 data
drwxr-xr-x 3 500 500 4096 Feb 24 22:36 locale
drwxr-xr-x 2 500 500 4096 Jun 23 05:59 log
drwxr-xr-x 6 500 500 4096 Feb 24 22:36 system
[root@datalens server]#
```

The administrator user account owns the files and both the UID and GID values are 500. These settings must be the same on all servers in the OPDQ Server Topology for NFS file sharing to be configured properly.

Configuring the Oracle DataLens Administration Server Mount

This section describes how to configure the necessary shared file system using the `root` user and NFS as an example file sharing method.

Note: Other network file sharing configurations can be used as long as the shared data directory on the Oracle DataLens Administration Server is accessible by the Transform Servers.

Additionally, other user accounts with full `root` user permissions can be used.

The NFS daemon must be running prior to setting up NFS mount points.

1. On the Oracle DataLens Administration Server, execute:

```
/etc/init.d/nfs status
```

The response shows whether the `nfs` daemon is running.

2. If no results are returned, you must add the `nfs` binary manually by executing the following command:

```
chkconfig --add nfs
```

If `nfs` is stopped or you just added the binary, you must start the `nfs` daemon by executing the following command:

```
/etc/init.d/nfs start
```

Once `nfs` is running, the `/server_directory/data/shared` directory can be shared.

3. Edit the `/etc/exports` file and add the `/server_directory/data/shared` directory to the list of exports, and then add the following line:

```
/server_directory/data/shared 192.168.0.0/16(ro)
```

Where the IP address shown is the IP address or hostname of your Oracle DataLens Administration Server.

If the hostname of the Oracle DataLens Administration Server does not resolve on the Transform Server, use the IP address. Contact your system administrator for assistance in setting up a domain name server on your Transform Servers or finding the IP address of the Oracle DataLens Administration Server.

In this case, the file system is mounted in read-only mode for the shared data files in the Oracle DataLens Administration Server file repository to make it available to the Transform Servers. The Transform Servers need access to this directory to load data lenses and DSAs that have been deployed. Transform Servers do not write to this directory so it should be mounted read only.

4. Export the shared file system using the following command:

```
exportfs -a
```

5. Verify that the `/etc/exports` file was edited correctly by executing the **exportfs** command.

The following should be displayed:

```
/server_directory/data/shared 192.168.0.0/16
```

Configure the Oracle DataLens Transform Server Mount

The Transform Servers must mount the Oracle DataLens Administration Server shared directory.

1. Edit `/etc/fstab`.
2. Add the following line to the end of the file:

```
datalens:/opt/datalens/server/data/shared /server_  
directory/data/shared nfs defaults 0 0
```

3. Create the mount point on the Transform Server:

```
mkdir -p /opt/datalens/server/data/shared
```

4. Mount the file system as defined in `/etc/fstab` to the newly created mount point:

```
mount -a
```

Note: If you have problems with the `mount` command on the Transform Server, you may need to flush the firewall rules using the `iptables -F` command. Consult your IT Department for help resolving firewall issues that might be preventing the Transform Server from mounting the `/server_directory/data/shared` directory from the Oracle DataLens Administration Server.

5. Verify that the `/server_directory/data/shared` directory is mounted correctly on the Transform Server:

```
ls /server_directory/data/shared
common  devdata  proddata  qadata
```

Running the Installer

To install an Oracle DataLens Transform Server on a Linux server:

1. Log in to the server that you want to install as an Oracle DataLens Transform Server as an administrator user.
2. Go to the installation directory:

```
cd /opt/dls_install/install
```

3. Change the permissions of the `.sh` files in the directory:

```
chmod +x *.sh
```

4. Execute the Oracle DataLens Server install script:

```
./dlsinstall.sh
```

```
Please enter your install directory:
```

5. Enter `/opt/dataLens/`.

If the directory path does not exist, the following is displayed:

```
(/opt/dataLens/server) does not exist. Would you like to create the directory?
```

Enter **y** and press **Enter** so that the directory is created for use.

```
Will this be an admin or transform server [A/T]:
```

6. Enter **T** to install an Oracle DataLens Transform Server.

```
Please enter the path to the directory that contains DLS Data directory: ()
```

7. Enter the directory path to your Data Directory, which is the directory you set to be shared previously. For example, `/server_directory/data`.

Note: You *must* include the `/data` directory in this path otherwise the installer will repeat the query until the path is correct.

Messages similar to the following are displayed:

```
Installing JDK...
```

```
.
```

```
.
Configuring the datalens.war file...
Please enter the Profile ID number for this server: ()
```

8. Enter the number identified in ["Preparing to Install"](#) on page 8-1.

Messages similar to the following are displayed:

```
.
.
.
Finished the n.n.nn Oracle DataLens Server Installation.
```

If Tomcat was installed, the messages similar to the following are displayed:

```
Using $CATALINA_OPTS: -server -Xmx728m
Using CATALINA_BASE: /opt/datalens/tomcat
Using CATALINA_HOME: /opt/datalens/tomcat
Using CATALINA_TMPDIR: /opt/datalens/tomcat/temp
Using JRE_HOME: /opt/datalens/jdk1.6.0_16
Using CLASSPATH: /opt/datalens/tomcat/bin/bootstrap.jar
Tomcat Started
Finished the n.n.nn Oracle DataLens Server Installation
```

You can verify successful installation by viewing the OPDQ Server Topology and ensure that the server is *not* designated as "DOWN" as it was when it was added to the topology in ["Configuring the OPDQ Server Topology"](#) on page 8-2

Additionally, you can view the log file for the Transform Server to ensure that no errors were encountered. For more information, see the *Oracle Product Data Quality Oracle DataLens Server Administration Guide*.

Configuring and Installing on Windows

This section describes how to install an Oracle DataLens Transform Server on a Windows server.

Note: Throughout this section the `\server_directory` is used to indicate the directory path to the Oracle DataLens Server. For example, `c:\datalens\server` is the default directory created by the OPDQ installer.

Confirming Consistent Administrator Privileges for Access to the Data Directory

Ensure that there is a network administrator user account, `dlsadmin` for example, for use by all the servers in the OPDQ Server Topology. This network account will be used for the following:

- Running the Java Web Server, especially if using a Tomcat service needs to use the same user across all servers in the OPDQ topology.
- Transform Server remote access to the Oracle DataLens Administration Server for shared file system access.
- Derby database updates written to log files that need the same ownership from all users.

Contact your system administrator for assistance in setting up and configuring OPDQ user accounts on your servers.

Sharing the Data Directory

The Data Directory must be shared with your administrator user. For example, the `dlsadmin`.

1. On the Oracle DataLens Administration Server, start **Windows Explorer**.
2. Locate the Data Directory directory, right-click it, and then select the share option. For example, your Data Directory may be located in `c:\datalens\server\data` or it could be located on a network drive.
3. Share this directory with everyone with read-only permissions. For more information about file sharing, contact your system administrator or see *Windows Help*.

You need to ensure that your Transform Server can access the Oracle DataLens Administration Server shared directory.

4. On the Transform Server, start **Windows Explorer**.
5. Locate the Data Directory that was shared. For example, `\\server\datalens\server\data\` directory where *server* is the name of the server on which the Data Directory resides.
6. Verify that you see these directory folders:

```
common
devdata
proddata
qadata
```

Upon completion of your Transform Server installation, you can change the share permissions to share only with the `dlsadmin` or your administrator user as this is the only user that requires access to this directory.

Running the Installer

To install an Oracle DataLens Transform Server on a Windows server:

1. Log on to the Transform Server as an administrator user.
2. Locate the MS-DOS Command Prompt (`cmd.exe`), right-click on it, and then select **Run as administrator**.
3. Run the command:

```
c:\dls_install\install\dlsinstall.bat
```

```
Welcome to the DataLens n.n.nn Installation.
Please enter your DLS Server Home directory: (C:\datalens\server)
```

4. Press **Enter** to accept the default installation directory or enter the directory path to your server where *server* is the name of your Oracle DataLens Server.

If the directory path does not exist, the following is displayed:

```
C:\datalens\server does not exist. Would you like to create the directory?
(C:\datalens\server)
```

Enter **y** so that the directory is created for use.

```
Will this be an Admin or Transform server [A/T]: ()
```

5. Enter **T** to install an Oracle DataLens Transform Server.

```
Please enter the path to the directory that contains DLS Data directory: ()
```

6. Enter the directory one directory above your Data Directory, which is the directory you set to be shared previously. For example, `\\server\datalens\server`.

Note: Do not include the `\data` directory in this path as it causes the installer to repeat the query until the path is correct.

```
Copying the Server Files to c:\datalens\server...
Updating DbInfo.xml...
Please enter the Profile ID number for this server: ()
```

7. Enter the number identified in "Preparing to Install" on page 8-1.

Messages similar to the following are displayed:

```
Copying the WAR file to C:\datalens\server...
Configuring the datalens.war file...
.
.
.
Copying the WAR file to C:\datalens\server\datalens.war
Finished the DataLens n.n.nn Installation. (Return to Exit)
```

If Tomcat was installed, the messages similar to the following are displayed:

```
Copying the Server Files to C:\datalens\server...
Configuring the datalens.war file...
.
.
.
Copying the WAR file to C:\datalens\server\datalens.war
Finished the DataLens n.n.nn Installation. (Return to Exit)
```

8. Press **Enter** to exit the installation script.

Your Oracle DataLens Transform Server installation completes. If your Transform Server is using a Tomcat Application Server, then it automatically started.

9. If your Transform Server is using a WebLogic Application Server, then you must start the `dls_domain` domain.

You can verify successful installation by viewing the OPDQ Server Topology and ensure that the server is *not* designated as "DOWN" as it was when it was added to the topology in "Configuring the OPDQ Server Topology" on page 8-2

Additionally, you can view the log file for the Transform Server to ensure that no errors were encountered. For more information, see the *Oracle Product Data Quality Oracle DataLens Server Administration Guide*.

Next Step

Deploy data lenses for use in transforming data, and then select those data lenses for the Transform Server to load so that they are available for processing data by completing the following tasks:

1. Go to your Oracle DataLens Administration Server Web page and login.
2. View your OPDQ Server Topology Web page by clicking **Platform Topology**.

3. View the Server Group that contains your Transform Server by clicking the appropriate icon.
4. View your Transform Server Configuration Information Web page by clicking it's icon.
5. Deploy your choice of data lenses available to your Transform Server by selecting one or more checkboxes, and then clicking **Submit**.

Caution: You must complete this task list or your Transform Server will be unable to process any of the data on that Transform Server.

For detailed information, see the *Oracle Product Data Quality Oracle DataLens Server Administration Guide*

Known Issues

This appendix describes known issues with the Oracle DataLens Servers installation and configuration.

Debugging Installation Problems

The following sections are known issues with installation.

Firewall is Preventing Access to Port 2229

Windows servers by default have the Microsoft firewall disabled. However, in some environments, there may be firewalls preventing access to the server. If the Tomcat server shows that the server started properly, but you are unable to access the Oracle DataLens Administration console from a client workstation, contact your Information Security department (or the equivalent) to have them open this port for user access.

In Red Hat Enterprise Linux 5, the firewall is enabled by default. Use the `system-config-securitylevel` tool to customize the settings, opening up port 2229 for external access.

In order for production nodes to access the Oracle DataLens Administration Server, they will need to be able to connect to JavaDB on port 1527. In addition, to reach a windows share, nodes will need to be able to access ports 135, 139, and 445. To reach an NFS share, ports 111 and 2049 will need to be opened.

Oracle DataLens Server Port Number

The Oracle DataLens Server uses port 2229 by default. On a standard installation with a dedicated server, this should not pose any problems. If there is a problem with this port, then the port number can be changed.

If there is a clash with the default port number (2229), then change to port 8089 or another unused port number. You can do this by stopping the Tomcat service and then editing the `server.xml` file located in the Tomcat installation directory (for example, `c:\Program Files\Apache Group\Tomcat 6.0\config\`) as follows:

```
<!-- Define a non-SSL HTTP/1.1 Connector on port 8080 -->
<Connector className="org.apache.catalina.connector.http.HttpConnector"
  port="8080" minProcessors="5" maxProcessors="75"
  enableLookups="true" redirectPort="8443"
  acceptCount="10" debug="0" connectionTimeout="60000"/>
```

Restart the Tomcat service, and then ensure that the server is running without errors.

Privilege Problems

On Linux, verify that the entire Datalens directory structure is owned by user, dlsadmin and group, dlsadmin. On Windows servers, the share rights and folder rights need to be set so that the Oracle DataLens Server user can access the repository share.

Sun JDK Directory Not Found

If your server is unable to locate the directory in which you installed Sun JDK, you must create a `%JAVA_HOME%` environment or path variable and set it to the directory where you installed JDK.

For example, if the default installation directory of JDK 6 Update 18 are set to one of the following:

On Linux: `/opt/java/jdk1.6.0_18`

On Windows: `c:\Program Files\Java\jdk1.6.0_18`

Use the documentation included with the Sun JDK product you installed to set this variable to ensure that the Sun JDK files are always found on your server.

Metro Web Services

This appendix describes how to use install and enable the use of Metro 2.0 Web Services with Oracle DataLens Servers.

Installing and Enabling Metro 2.0 Web Services

To install and enable the use of Metro 2.0 Web Services, use the following steps:

1. Download the Metro 2.0 ZIP file from the GlassFish Metro 2.0 Web site at:
<https://metro.dev.java.net/2.0/>
2. Unzip the Metro 2.0 release package into a separate directory.
3. Create a temporary directory in which to update the `datalens.war` file.
4. Copy the `datalens.war` file to the temporary directory.
5. Create a subdirectory structure named, `WEB-INF/lib`, in the temporary directory.
6. Copy the JAR files from the `metro/lib` directory that were unzipped into `WEB-INF/lib`.
7. Update the WAR file with the latest Metro JAR files:

Note: You must have a JDK installed and in your path to complete this step.

- ```
jar -uf datalens.war WEB-INF
```
8. Delete the `WEB-INF` directory tree from the temporary directory.
  9. Extract the WAR file:

```
jar xf datalens.war
```
  10. Edit the `web.xml` file to remove the comments surrounding the `WSServlet` tag:

```
cd WEB-INF
notepad web.xml
```
  11. Near the beginning of the `web.xml` file, remove the comments surrounding the `listener` tag as the comments suggest:  
NOTE- There is another block to uncomment farther down in this file...

```
<listener>
```

```
<listener-class>com.sun.xml.ws.transport.http.servlet.WSServletContextListener<
/listener-class>
 </listener>

 <servlet>
 <servlet-name>WSServlet</servlet-name>

<servlet-class>com.sun.xml.ws.transport.http.servlet.WSServlet</servlet-class>
 <load-on-startup>10</load-on-startup>
 </servlet>
-->

<!-- Uncomment these lines if the METRO (doc-lit) lib is used for Web Services
```

12. Near the middle of the `web.xml` file and just under the `SERVLET MAPPINGS` section, remove the comments surrounding the `servlet-mapping` tag as indicated:

```
<!-- _____ SERVLET MAPPINGS _____ -->

<!-- Uncomment these lines if the METRO (doc-lit) lib is used for Web Services
<servlet-mapping>
 <servlet-name>WSServlet</servlet-name>
 <url-pattern>/ws/*</url-pattern>
</servlet-mapping>
-->
```

13. Close and save the `web.xml` file.

14. Repack the WAR file using these steps:

- a. Delete the existing `dataLens.war` file.
- b. Create the new WAR file with the Metro Web Services JAR files and update the `web.xml` file.

```
jar cf ..\dataLens.war *
```

---

**Note:** You can substitute the `..\` in the `jar` command with a directory to locate the updated WAR file.

---

15. Deploy the repackaged WAR file, including the Metro Web Service JAR files, to your WebLogic or Tomcat server.