# erwin Data Intelligence Suite

# Installation Guide

**Release v10.0**

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# Installation

This section walks you through the steps to review prerequisites, and install and activate erwin Data Intelligence Suite (DIS). Also, it briefs you about LDAP/Active Directory user configuration and troubleshooting tips.

# Technical Specifications and Prerequisites

erwin Data Intelligence Suite (DIS) is certified to run on Java 8 and Apache Tomcat 8.5.35. While Apache Tomcat and JRE are packaged with erwin DIS installer, review the following specifications and prerequisites to ensure a smooth installation:

# Hardware Specifications

For erwin DIS Standard Edition, the following hardware specifications are applicable for your workstation:

| Prerequisite | Specification |
|---|---|
| Server Type | Dedicated standalone server |
| Processor | 64-bit, minimum 4 cores |
| RAM | 16 GB for limited user POCs |
| | 32-64 GB for enterprise production deployment |
| Hard Disk Drive | 200-300 GB |
| Operating Systems | Microsoft Windows |
| | RHEL |
| | Ubuntu |
| | Unix |
| | Linux |
| Databases | SQL Server 2005 or higher |
| | Oracle 9i or higher |
| Web Browsers | Google Chrome v28.0 or higher |
| | Mozilla Firefox v 16.0 or higher |

| | |
|---|---|
| | Microsoft Internet Explorer v11.0 or higher |
| Web Servers | Apache Tomcat v8.5.35 or higher |
| | IBM WebSphere 8.5.x |
| Development Platform | Java |

## Web Server Memory Allocation

Based on your web server's physical RAM specification, allocate as much memory as possible to your web server.

For example, if the web server has 16 GB RAM, allocate at least 50 percent of it. That is, 8 GB. Higher memory allocation ensures better application function. The following table illustrates memory allocation:

| Physical RAM | Allocation to Web Server |
|---|---|
| 16 GB | 8-12 GB |
| 32 GB | 16-28 GB |
| 64 GB | 48 GB |

## Enterprise Deployment Configuration

In case of enterprise deployment, for the best performance, it is recommended to allot at least 0.5 GB space per user on the application server. For example, if 30 users log on simultaneously, the application server must have at least 15 GB of RAM allocated to it.

**Note**: The above RAM allocation does not indicate the RAM of the server machine. It indicates the physical RAM allocation to the application server.

## Database Server Specifications

The following table lists database server specifications:

| Prerequisite | Specification |
|---|---|
| Server Type | Dedicated standalone server |
| Processor | 64-bit, minimum 4-8 cores |
| RAM | 16-32 GB |

| | |
|---|---|
| Hard Disk Drive | 250-500 GB |
| Tablespace | 50 GB, minimum |

**Note**: erwin DIS requires a dedicated schema/database (SQL Server or Oracle) with at least 50 GB tablespace allocated to it, which increases exponentially based on usage.

## Client Workstation Specifications

The following table lists client workstation specifications:

| Pre-requisite | Specification |
|---|---|
| Processor | i3 or higher |
| RAM | 8 GB, minimum |

**Note**: Client workstation's CPU must have at least 1 GB RAM free while accessing erwin DIS via a web browser.

# Installing erwin Data Intelligence Suite (DIS)

Installing erwin DIS is a multistep process and involves the following:

1. Installing prerequisites
2. Creating dedicated database or schema
3. Deploying erwin DIS application
   - Configuring database properties for SQL Server
   - Configuring database properties for Oracle
   - Configuring LDAP/Active Directory Logon

# Installing Prerequisites

To ensure a smooth installation of erwin Data Intelligence Suite (DIS), ensure that the pre-requisites, JRE 8 and Apache Tomcat 8.5.35 are installed on your environment. Both, JRE

and Apache Tom are packaged with erwin DIS installation.

## Installing JRE

To install JRE, follow these steps:

1. Unzip the erwin DIS installation package.

2. Navigate to the JRE folder.

3. Double-click the JRE executable file.
   The JRE installation wizard appears.

4. Follow the instructions on the wizard to complete installation.

## Installing Apache Tomcat

To install Apache Tomcat, follow these steps:

1. Unzip the erwin DIS installation package.

2. Navigate to the Tomcat folder.

3. Double-click the Apache Tomcat executable file.
   The Apache Tomcat installation wizard appears.

4. Follow the instructions on the wizard to enter appropriate port numbers.
   By default, Apache Tomcat uses port 8080.

5. Enter the username and password to access the web server.
   By default, the credentials are set to admin/admin.

6. On the Java Virtual Machine selection window, set the path to point to the JRE folder.
   **Note**: If multiple JRE versions are installed on your environment, ensure that the path is set to the JRE 8.

7. Follow the instructions to complete installation.

Once Apache Tomcat is installed, you need to configure its memory settings for optimum performance.

To configure memory settings in case of normal installation and Tomcat Manager, follow these steps:

1. Go to **Windows Start Menu** > **Apache Tomcat** > **Configure Tomcat**.
   The Apache Tomcat properties window appears.

2. Go to the **Java** tab.

3. Under Java Options, add the following settings:
   -Xms2048m
   -Xmx8192m

**Note**: Ensure that the **Initial memory pool** and **Maximum memory pool** fields are blank.

To configure memory settings in case of Tomcat ZIP installation (startup.bat), follow these steps:

1. Locate and open the catalina.bat file (Microsoft Windows) or cataline.sh (Unix) file on your computer.

2. Add the following settings:

   - **cataline.bat**: set CATALINA_OPTS=%CATALINA_OPTS% -Xms2048m –Xmx16384m

   - **catalina.sh**: CATALINA_OPTS="$CATALINA_OPTS -Xms2048m –Xmx16384m"

# Creating Dedicated Database or Schema

To function, erwin Data Intelligence Suite (DIS) requires a dedicated Microsoft SQL Server or Oracle database/schema. The SQL files for database tables necessary for erwin DIS are available in the erwin DIS installation package.

## Creating a Dedicated Database or Schema in Microsoft SQL Server

To create a dedicated database in Microsoft SQL Server, follow these steps:

1. Create a database/schema.
   For example, erwinMMDG.

2. Unzip the erwin DIS installation package.

3. Navigate to the SQL folder.

4. Execute the <xx>_SqlServer.sql file against the newly created database.

   For example, execute the MappingManager_SqlServer.sql file against erwinMMDG database.

   The database tables required for erwin DIS are created in your SQL Server database.

   **Note**: Ensure that you execute the <xx>_SQLServer.sql file against the newly created dedicated database.

Once you have created a dedicated database/schema, create a dedicated database user account.

To create a database login role, follow these steps:

1. In **Microsoft SQL Server Management Studio** > **Security**, right-click **Logins**.

2. Click **New Login**.
   The Login - New window appears.

3. Enter a Login name.

4. Select SQL Server Authentication.

5. Enter a Password and confirm it.

6. On the User Mapping page, do the following:
   a. In the Users mapped to this login section, select your dedicated database.
   b. In the Database role membership for <database> section, select the following roles:
      - public
      - db_owner
      - data_reader
      - data_writer

7. Click **OK**.

## Creating a Dedicated Database or Schema in Oracle

To create a dedicated schema in Oracle, follow these steps:

1. Create a schema.
   For example, erwinMMDG.

2. Assign the following roles/privileges to the user/schema.

   - Resource

   - Connect

   - Create Views

3. Unzip the erwin DIS installation package.

4. Navigate to the SQL folder.

5. Execute the <xx>_Oracle.sql file against the newly created schema.
   For example, execute the MappingManager_Oracle.sql file against erwinMMDG schema.
   The database tables required for erwin DIS are created in your Oracle schema.
   **Note**: Ensure that you execute the <xx>_Oracle.sql file against the newly created dedicated database.

## Deploying erwin Data Intelligence Suite (DIS)

The final step in the installation process if to deploy erwin DIS WAR file on your web server.

To deploy erwin DIS WAR file, follow these steps:

1. Unzip the erwin DIS installation package.

2. Navigate to the WAR folder.

3. Copy the MappingManager.war file.

4. Open the webapps folder in Apache Tomcat installation folder. For example, C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps.

5. Place the MappingManager.war file.
   An MappingManager folder is created.

6. Go to **MappingManager** > **WEB-INF** > **database** folder.

7. Edit the database.properties file and do the following:

   a. Add credentials to connect to Oracle/SQL Server database/schema.

   b. Set the PasswordEncrypted property to false.

For more information on configuring database properties, refer to the Configuring Database Properties for SQL Server and Configuring Database Properties for Oracle topics.

Alternately, you can configure erwin DIS to use LDAP/Active Directory. Refer to the Configuring LDAP/Active Directory Logon topic.

8. Restart the Apache Tomcat server.

## Configuring Database Properties for SQL Server

To configure database properties for SQL Server, follow these steps:

1. Go to **MappingManager** > **WEB-INF** > **database** folder.

2. Open the databases.properties file and do the following:

    a. Uncomment the SQL Server section by removing the hash (#) sign at the beginning of each line between SQL SERVER BEGIN and SQL SERVER END.

    b. Set the following parameters:

        - URL

            - Server name. For example, server name is localhost, in case you deploy erwin DIS on a local environment.

            - Port number. The default port number is 1433.

            - databaseName. For example, erwinMMDG.

        - UserName

        - Password

        - PasswordEncrypted=false

3. Save the file.

# Configuring Database Properties-Oracle

To configure database properties for Oracle, follow these steps:

1. Go to **MappingManager** > **WEB-INF** > **database** folder.

2. Open the databases.properties file and do the following:

   a. Uncomment the Oracle section by removing the hash (#) sign at the beginning of each line between ORACLE BEGIN and ORACLE END.

   b. Set the following parameters:

      - URL

         - Server name. For example, server name is localhost, in case you deploy erwin DIS on a local environment.

         - Port number. The default port number is 1521.

         - SID

      - UserName

      - Password

      - PasswordEncrypted=false

3. Save the file.

# Configuring LDAP/Active Directory Logon

You can configure erwin Data Intelligence Suite (DIS) to use LDAP or Active Directory logon using the database.properties file. Ensure that the following prerequisites are in place:

- Create an organizational unit (OU) in Active Directory and create roles corresponding to the ones available in erwin DIS, except Administrator. Ensure that the role names in Active Directory match the role names in erwin DIS.
  For example, create an organizational unit, AMMRoles in Active Directory. Then, under AMMRoles, create all the roles (ETLDeveloper, Mapping Admin, Power User, Tester, and so on) available in erwin DIS.

- For the Administrator role, create a group in Active Directory. The name of the group cannot be Administrator as a Global Group named Administrator is already available in Active Directory.

  For example, create an administrator role, AMMAdministrator, in Active Directory.

Following is a sample snippet of LDAP properties:

```
#Start LDAP Properties #uid,sAMAccount,cn

IsLDAPEnabled=false

LDAPLoginAttribute=sAMAccountName

LDAPServerUrl=ldap://<ldapserver/ipaddress>:389/DC=ERWIN,DC=LOCAL

LDAPUserDN=CN=ammuser,OU=AMMEmployees,DC=ERWIN,DC=LOCAL

LDAPServerPassword=<ldappwd>

LDAPSearchBase=DC=ERWIN,DC=LOCAL

LDAPBindUser=ammuser

LDAPBindServerURL=ldap://<ldapserver/ip>:389

SearchBase=

SearchFilter=(sAMAccountName={0})

GroupRoleAttribute=cn

ConstructorArg=OU=AMMRoles

LDAPAdminGroupName=AMMAdministrator

## END LDAP Properties
```

The following table lists LDAP configuration parameters:

| Parameter | Description-Value |
|---|---|
| IsLDAPEnabled | Set to True. |
| LDAPLoginAttribute | Set the login attribute name used to bind to the LDAP database. It can be any of the #uid, sAMAccountName, or cn, as set up.<br><br>For example, LDAPLoginAttribute=sAMAccountName. |
| LDAPServerUrl | Set a fully-qualified name (URL) of the LDAP Server IP address, port number, and domain controller. |

| Parameter | Description-Value |
|---|---|
| | For example, LDAPServer-Url=ldap://192.168.1.10:389/DC=ERWIN,DC=LOCAL |
| LDAPUserDN | Set the LDAP bind user with fully-qualified distinguished name. You can add any user DN with the privilege to search LDAP/Active Directory.<br><br>For example, in the following case, ammuser is the bind user:<br><br>LDAPUser-DN=CN=ammuser,OU=AMMEmployees,DC=ERWIN,DC=LOCAL. |
| LDAPServerPassword | Set the password associated with the LDAP Server. |
| LDAPSearchBase | Set a fully qualified search base. A search base to set limits on the authentication server directories.<br><br>The standard format is, DC=<first part of distinguished server name>, DC=<any part of the distinguished server name that appears after the dot>.<br><br>For example, LDAPSearchBase=DC=ERWIN,DC=LOCAL. |
| LDAPBindUser | Set the bind user name.<br><br>For example, LDAPBindUser=ammuser. |
| LDAPBindServerUrl | Set the LDAP Bind Server URL.<br><br>For example, LDAPBindServerURL=ldap://192.168.1.10:389 |
| SearchBase | Set an OU to put limits on the authentication server directories. It is an optional paramater.<br><br>For example, SearchBase=OU=AMMEmployees |
| SearchFilter | Set the login attribute type used to get user information.<br><br>For example, SearchFilter=(sAMAccountName={0}) |
| GroupRoleAttribute | Set the group role attribute to holds user group information on the LDAP server. It is the identifier to search the association between the user and the AMM role.<br><br>For example, GroupRoleAttribute=cn |
| ConstructorArg | Set the path where AMM roles are created.<br><br>For example, ConstructorArg=OU=AMMRoles |

| Parameter | Description-Value |
|---|---|
| LDAPAd-minGroupName | Set the AMM administrator role name.<br><br>For example, LDAPAdminGroupName=AMMAdministrator |

# Activating erwin Data Intelligence Suite (DIS)

After you have deployed erwin DIS, to use it, you need to activate it using a license key. To obtain a license, contact erwin Support via the web licensing form or contact your license administrator. Once your license request is verified by erwin Support, you will receive a license key. Ensure that you keep a note of the license key.

To activate erwin DIS, follow these steps:

1. Through a certified web browser, start erwin DIS using your application URL (http://<server name>:<port number>/<application name>). For example, http://-localhost:2019/MappingManager.
   The Login page appears.

2. Click **Activate Software**.
   A page to enter your license key appears.

3. Paste your license key and click 💾.
   This activates erwin DIS.

4. Enter User Name and Password.

5. Select **I accept & agree to the terms of the EULA**.

6. Click **Sign In**.
   You are logged on to erwin DIS.

To understand erwin DIS architecture and its usage, refer to the Introduction to erwin Data Intelligence Suite (DIS) and quick start topics.

# Troubleshooting

This section helps you diagnose and resolve any errors you may encounter while installing or accessing erwin Data Intelligence Suite (DIS).

For additional help, write to erwin Support at dgsupport@erwin.com.

# erwin DIS Access Failure

While trying to access erwin DIS, at times, you may get a *404 The requested resource is not available.* error or a blank screen. There are two reasons for this error:

- Issue in connection to the database port
- Improper application deployment

## Troubleshooting Database Port Connection

The application is not able to establish a connection to the database (SQL Server or Oracle) repository.

**Cause 1: Incorrect parameters in the database.properties file**

Check the connection parameters in the database.properties file located at tomcat/webapps/MappingManager/WEB-INF/database.

For more information on configuring database properties, refer to the Configuring Database Properties for SQL Server and Configuring Database Properties for Oracle topics.

**Cause 2: Database port blocked by firewall**

The port numbers used for SQL Server or Oracle Databases need to be open and made available for access by erwin DIS. Check the port number mentioned in the database.properties file and ensure the port number being used is open.

For example, SQL SERVER typically uses port 1433. Ensure TCP/IP is enabled on your SQL SERVER database so that erwin DIS is able to establish a connection.

## Troubleshooting Application Deployment

The application is not deployed correctly.

**Cause: Incomplete deployment by the web server**

If the MappingManager.war file is not deployed correctly, erwin DIS is inaccessible. To ensure that the application is deployed correctly, follow these steps:

1. On your workstation or installation environment, navigate to the tom-cat/webapps/MappingManager/WEB-INF/ folder.

2. Check whether the web.xml file is available.
   If yes, erwin DIS is deployed correctly. Else, to redeploy erwin DIS, follow these steps:
   a. Stop Tomcat server.
   b. Navigate to the tomcat/webapps/ folder.
   c. Delete the MappingManager.war file and MappingManager folder.
   d. Navigate to the tomcat/work/catalina/localhost folder.
   e. Delete the MappingManager folder.
   f. Start Tomcat server.
   g. Redeploy the MappingManager.war file. For instructions, refer to the Deploying erwin Data Intelligence Suite (DIS) topic.