

# SOFTWARE INSTALLATION GUIDE

## erwin DATA INTELLIGENCE (DI) SUITE

### Version 11.1

Certified Release on Log4j 2.17.1

This document provides the instructions to install the new 11.1 version.

The 11.1 version is certified on Log4j 2.17.1

### Quick Start Installation Guide

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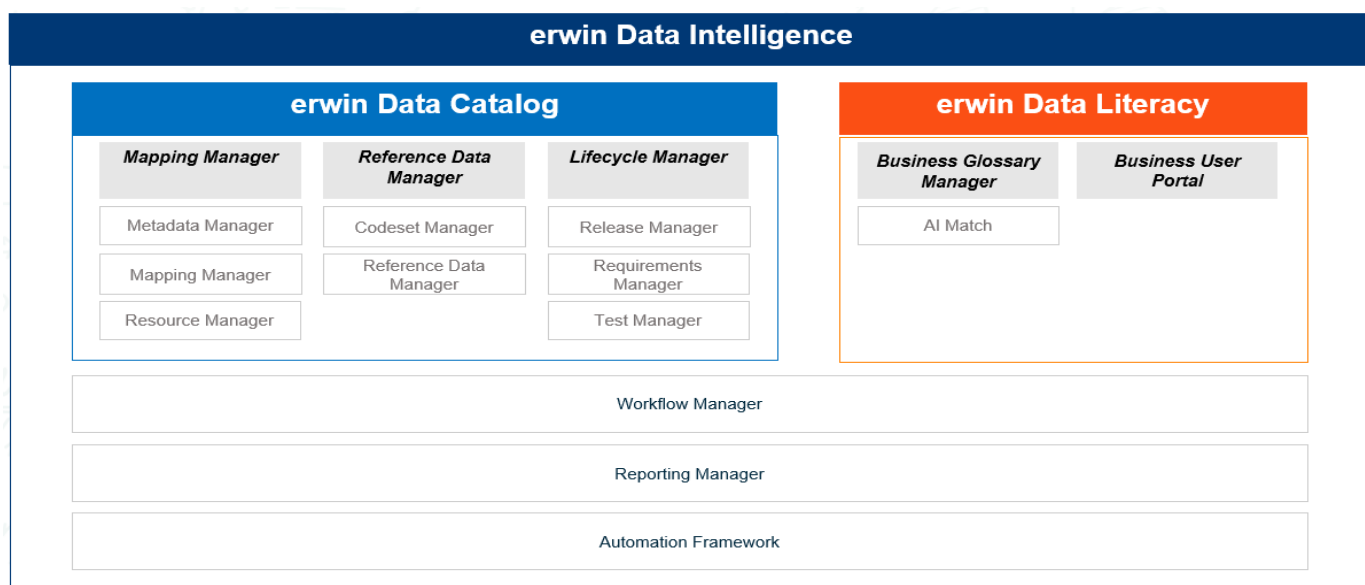
## 1 About this Guide

This document describes the installation process of the erwin Data Intelligence (DI) Suite on a dedicated on-premise server. It provides the software installation procedure, configuration tasks, and troubleshooting information. This document also describes the technical specifications and the pre-requisites required for the successful installation of DI Suite software.

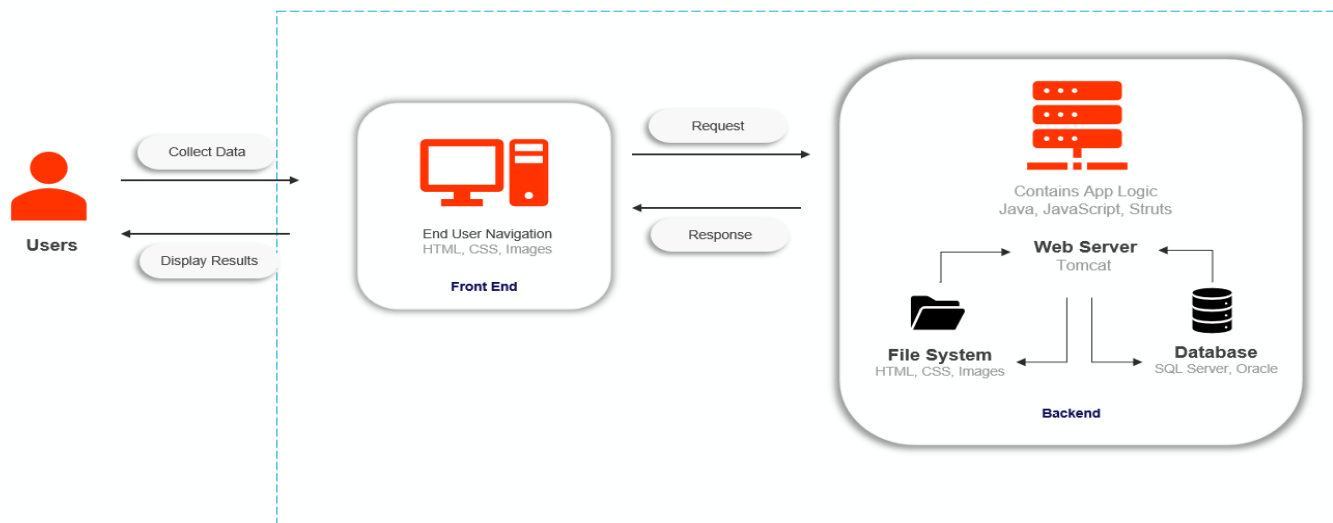
## 2 Software Solution Architecture

### Key Components

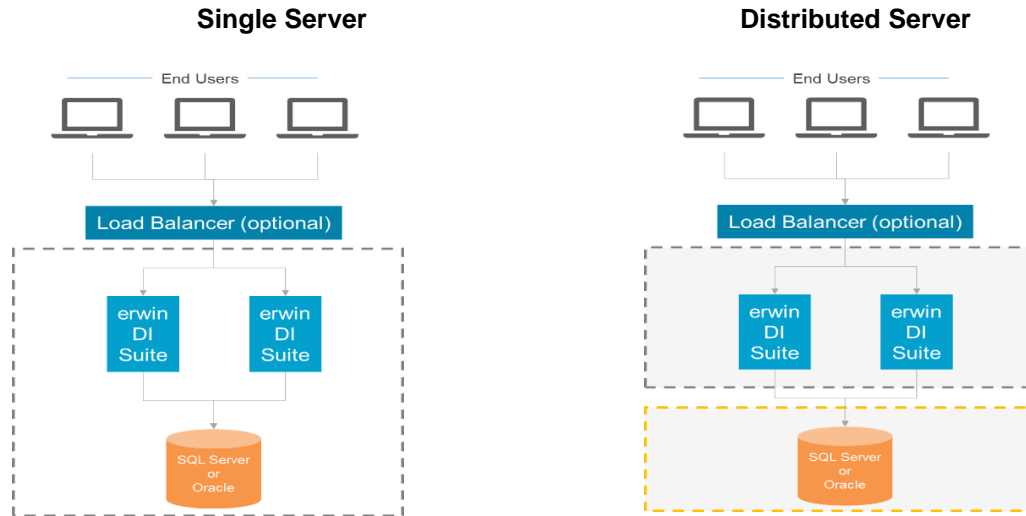
The following diagram shows a high-level modular architecture of the application.



### Web Application Architecture

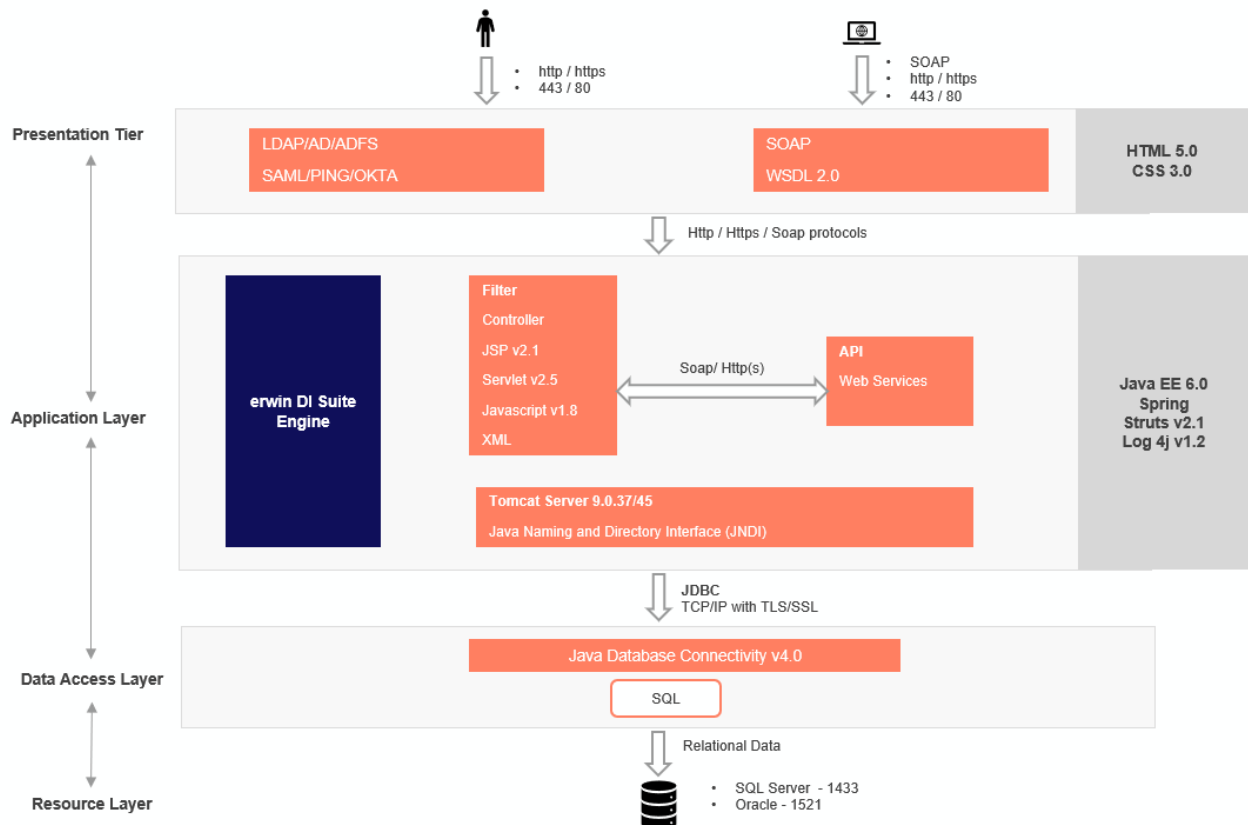


The erwin DI Suite application supports both single server (application and database on the same server) and distributed (application and database on the different servers) architectures.



## Technology Stack and Components

The erwin DI Suite application follows multi-tier architecture consisting of Presentation, Application, data access and resource layers. The following is a high-level diagram depicting these layers.



## 3 System and Software Requirements

### 3.1 Hardware Specs for Standard Edition

<b>Type of Server</b>	Dedicated Standalone server
<b>Processor</b>	64 Bit
<b>Cores</b>	4 cores minimum
<b>RAM</b>	16 GB – for limited user Proof of Concepts 32-64 GB – for enterprise production deployment <a href="#">Increase as needed or introduce load balancing depending on the number of users</a>
<b>Hard Drive</b>	200 – 300 GB minimum

### 3.2 Software Compatibility

<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>• Microsoft Windows Server 2016 and above</li> <li>• RHEL - 7.6</li> <li>• Linux - v4.19 and above</li> <li>• Amazon Linux 2</li> </ul>
<b>Supported Databases</b>	<ul style="list-style-type: none"> <li>• SQL Server – 2016, 2017, 2019, AWS RDS, Azure SQL Server</li> <li>• Oracle – 12c, 18c, 19c</li> </ul>
<b>Web Browsers</b>	<ul style="list-style-type: none"> <li>• Google Chrome – v86.0</li> <li>• Firefox – v82.0</li> <li>• Edge – v86x</li> </ul>
<b>Supported Web Servers</b>	<ul style="list-style-type: none"> <li>• Apache Tomcat - v9.0.45/46</li> </ul>
<b>Java Version</b>	<ul style="list-style-type: none"> <li>• AdoptOpen JDK/JRE 8u282-b08</li> </ul>
<b>Windows Theme</b>	<ul style="list-style-type: none"> <li>• Light color theme</li> </ul>

**\* Important Note:** The DI Suite v11.1 has been officially certified on Tomcat 9.0.45/46. We would recommend that you install tomcat 9.0.45/46 to avoid any compatibility issues. If you are on the older Tomcat 8.5.35/41/51 version, it is mandatory that you upgrade to Tomcat 9.0.45/46 to avoid any unexpected compatibility issues.

### 3.3 Pre-requisites to install Erwin DI Suite

Adopt Open Java JRE and Tomcat webserver are standard prerequisites to install and run the erwin DI Suite.

The erwin DI Suite v11.1 software is certified to run on the following versions of Tomcat and Java.

<b>Java</b>	AdoptOpen JDK/JRE 8u282-b08
<b>Webserver</b>	Apache Tomcat - v9.0.45/46

### 3.4 Memory Allocation to Web Server

Allocate memory as high as possible to the tomcat web server based on the RAM size of the server.

**E.g.** If the server has a 16 GB RAM, the web server needs to be allocated a minimum of 50% of the RAM to begin with i.e. 8 GB minimum. The higher the memory allocation, the better for the functioning of the application.

An example of the recommended Memory allocation to Tomcat would look as follows:

Physical RAM on Server	Allocation to Tomcat
16 GB	➤ 8 – 12 GB
32 GB	➤ 16 – 28 GB
64 GB	➤ 48 GB

## Recommended Configuration for Enterprise deployments:

**Note:** For good performance, we recommend about a minimum of 0.5 GB space per login user on the application server. If you have 30 users simultaneously logging in, then the application server would need to have a minimum of 15 GB (30\*0.5=15) free RAM space allocated to it. This is not the RAM of the server machine. It is the physical RAM allocated to the application server itself.

### 3.5 Database Server Specs

**Dual Core or higher.** The software requires a dedicated schema/database name (Oracle or SQL Server) (*and NOT a whole new DB instance*) with a minimum of 50GB tablespace allocated to it that will increase over time as usage increases.

Type of Server	Dedicated Standalone server
Processor	64 Bit
Cores	4- 8 cores minimum
RAM	16 - 32 GB
Hard Drive	250 – 500 GB
Tablespace	Min 50 GB

### 3.6 End-user Machines/Laptops

Minimum i3 processor or higher, min 8 GB RAM.

**NOTE:** The CPU should have minimum 1GB RAM free space while accessing the DI application via web browser. e.g. If you have a 4GB laptop and any application is occupying 100%CPU space, then the DI web pages will not load until some physical memory is freed up.

## 4 Installing the erwin the DI Suite software

Install DI Suite software in 5 easy steps.

#### Step 1:

Install Java (AdoptOpen JDK/JRE 8u282-b08)

#### Step 2:

Install Apache Tomcat v9.0.45/46.

#### Step 3:

Deploy the **erwinDISuite.war** file on Tomcat.

#### Step 4:

Create the database schema for the application and configure the *database.properties* file to connect to the backend Database repository

**NOTE\*\*** Create the backend repository in SQL SERVER or ORACLE databases and provide these connectivity parameters in the *database.properties* file in the tomcat

#### Step 5:

Access the erwin DI Suite Login screen.

#### 4.1 Step 1: Install Java

Download and Java (AdoptOpen JDK/JRE 8u282-b08) and finish the installation process.

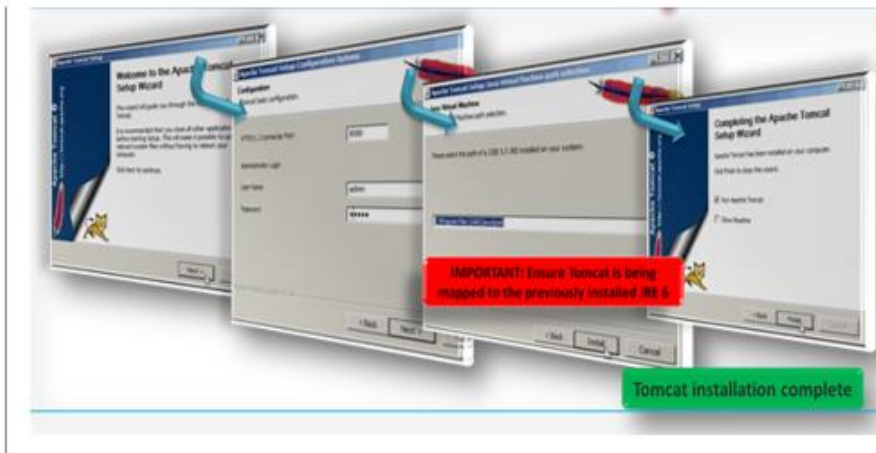
Link to download **Open Java 8** - <https://adoptopenjdk.net/archive.html>

#### 4.2 Step 2: Installing Tomcat & creating the database schema for the erwin DI application.

1. To Start Installation double click on \Tomcat\apache-tomcat v9.0.45/46.exe file. You will see the welcome screen. Click on the Next button to continue the installation process.
2. Choose the port number on which you want to run the tomcat server. Tomcat uses 8080 as its default port (you can provide any other port number if 8080 is already being used)
3. Enter Admin User ID and password for Tomcat (default: admin/admin)

On the Java Virtual Machine selection window, select the path to the JRE/Java 8 folder

**Note\*\*:** If there is more than one version of JRE installed, Ensure Tomcat is being mapped to the JRE8 version previously installed.



After successful installation, a shortcut icon to start the tomcat server appears in the icon tray of the task bar as shown below. Double clicking the icon, displays the window of Apache Manager for Tomcat. It might show the “Startup type” as manual (if you change default installation Location)



##### 4.2.1 Configuring Tomcat Memory settings for optimum performance

After installing tomcat, modify the tomcat memory settings as described below to achieve optimum performance.

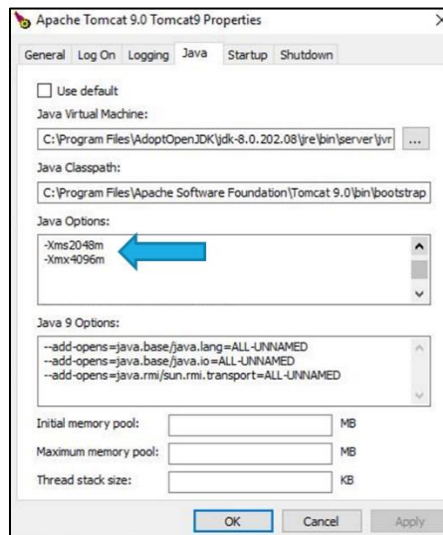
**E.g.** If the server has a 16 GB RAM, the web server needs to be allocated a minimum of 50% of the RAM to begin with i.e. 8 GB minimum. The higher the memory allocation, the better for the functioning of the application.

##### Memory Settings:

1. If you are using the normal tomcat installation and Tomcat manager then set the memory related values as shown in the Tomcat → Java → Java Options window



Copy the 2 lines in blue below and paste these 2 lines at the end of the existing lines in the Java Options window.



**\*\*IMPORTANT NOTE\*\*:** Ensure that the “Initial memory pool” & “Maximum memory pool” values are empty. If values exist in these 2 fields, delete the values i.e. set to empty and click the “Apply” button

2. If using an alternate Tomcat zip installation (startup.bat)

Add the following line to the **catalina.bat** (Windows) or **catalina.sh** (Unix) file as the first line in the file.

catalina.bat:

=====

**set CATALINA\_OPTS=%CATALINA\_OPTS% -Xms2048m -Xmx16384m**

catalina.sh

=====

**CATALINA\_OPTS="\$CATALINA\_OPTS -Xms2048m -Xmx16384m"**

## 4.2.2 Create Dedicated Database/Schema for the application (on SQL Server or Oracle)

### 4.2.2.1 Create Database in SQL SERVER Database

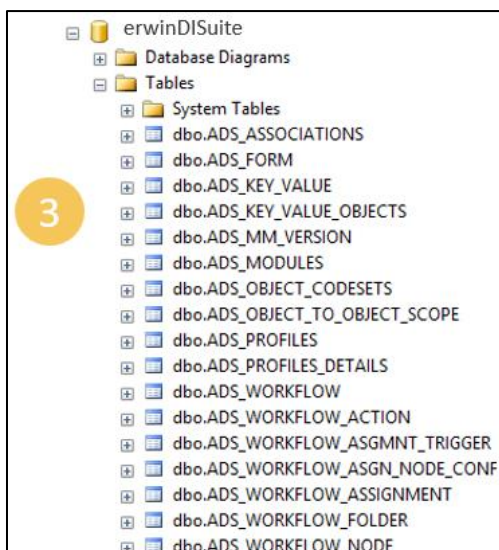
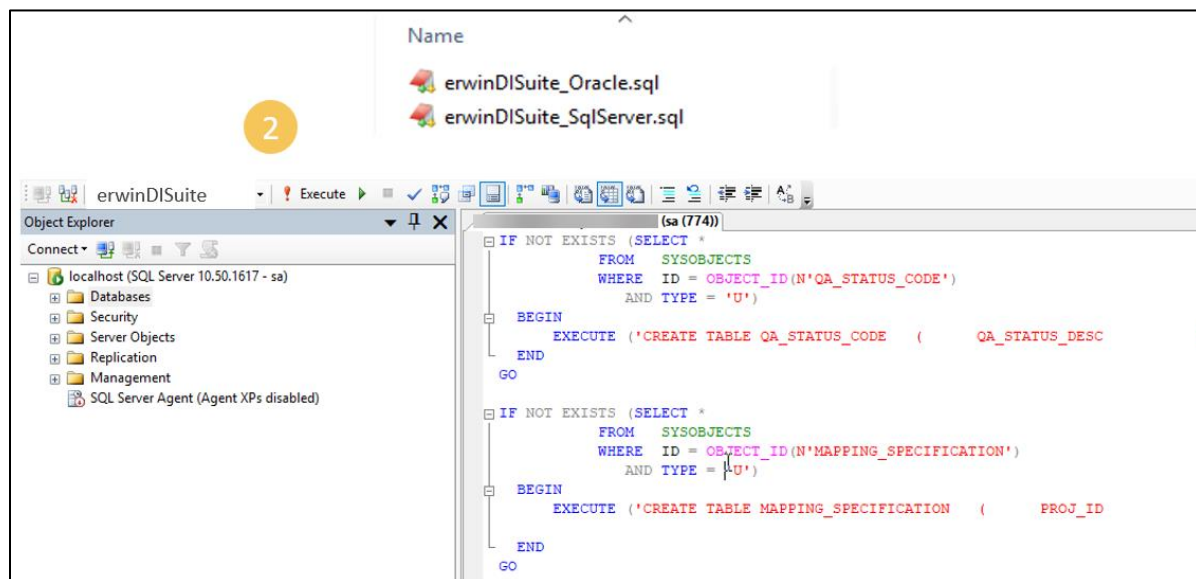
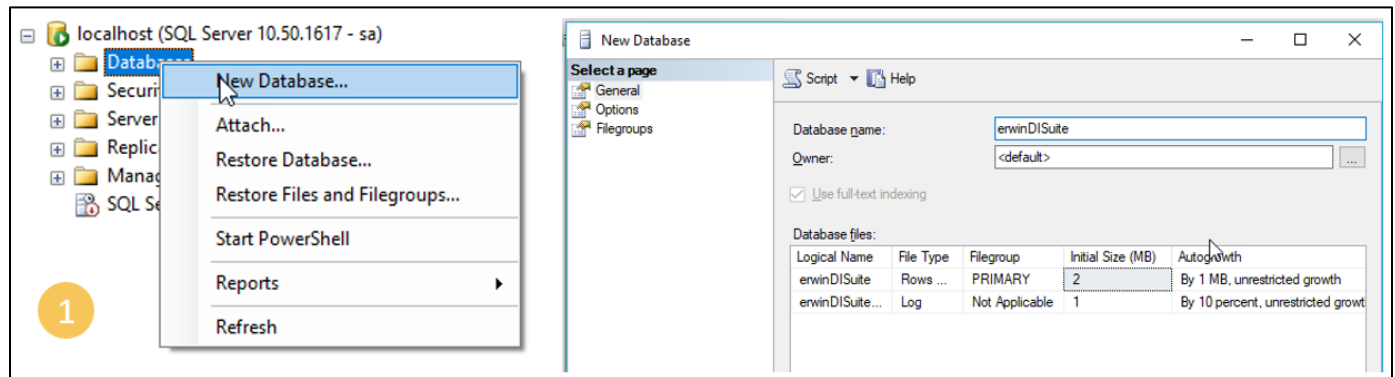
The following steps are for a **SQL SERVER** database.

1. Create a new Database/Schema name for erwin DI Suite e.g. “**erwinDISuite**”.
2. From the SQL folder of the installation software, run the “**erwinDISuite\_SqlServer.sql**” file against the newly created SQL Server Database.
  - a. In the SQL folder, you will also see a file **erwinDISuite\_SqlServer\_Prerequisite.sql**. Please note that this file is not required for a new install and is only required in the case you are upgrading from an older version to the latest 11.1 version. In the case of upgrade, please refer to the upgrade guide.
3. The required database tables for the software are created in the SQL Server database.

**\*\*IMPORTANT NOTE\*\*:**

**A dedicated database needs to be created in SQL Server** for the software and the DDL needs to be executed against this dedicated database.

**The DDL should not be executed against the MASTER schema.**



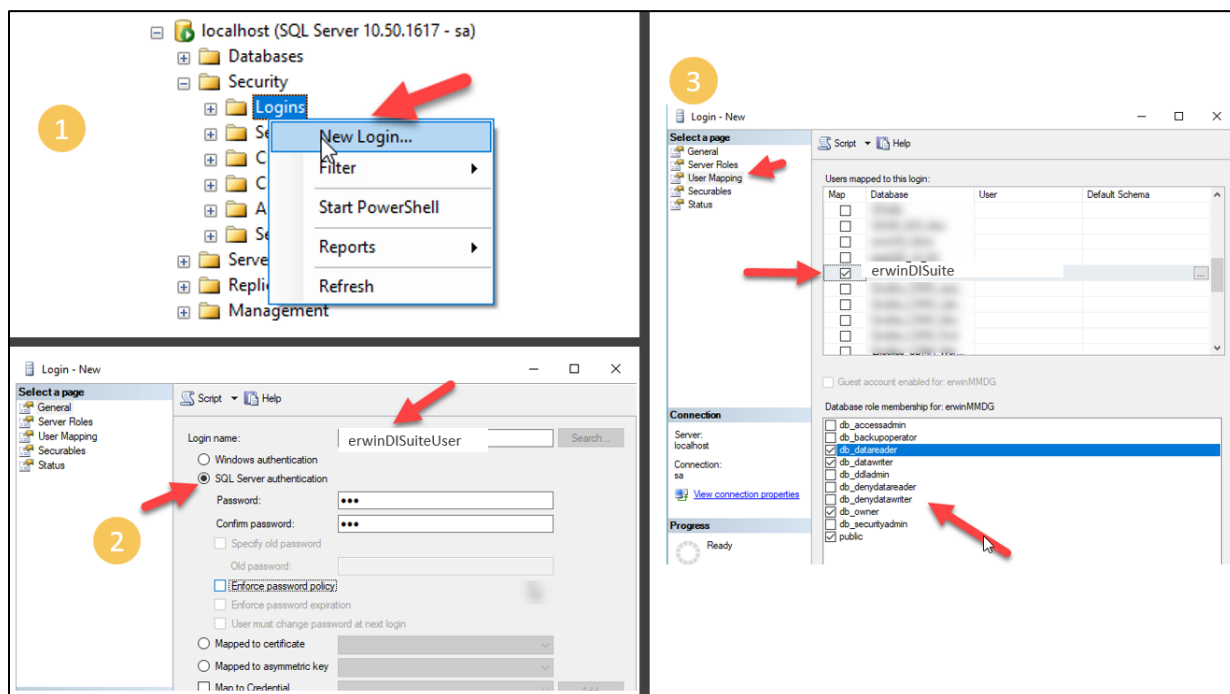
### Create a dedicated DB User Account for the erwin DI Suite's database

1. Create a new Database login role for the erwinDISuite Database (e.g. create a new DB role as "**erwinDISuiteUser**" for the previously created database "erwinDISuite").
2. Ensure that you select the "**SQL Server Authentication**" mode for the new login role

**Note\*\*:** **Windows Authentication mode** support is not available at this point of time.

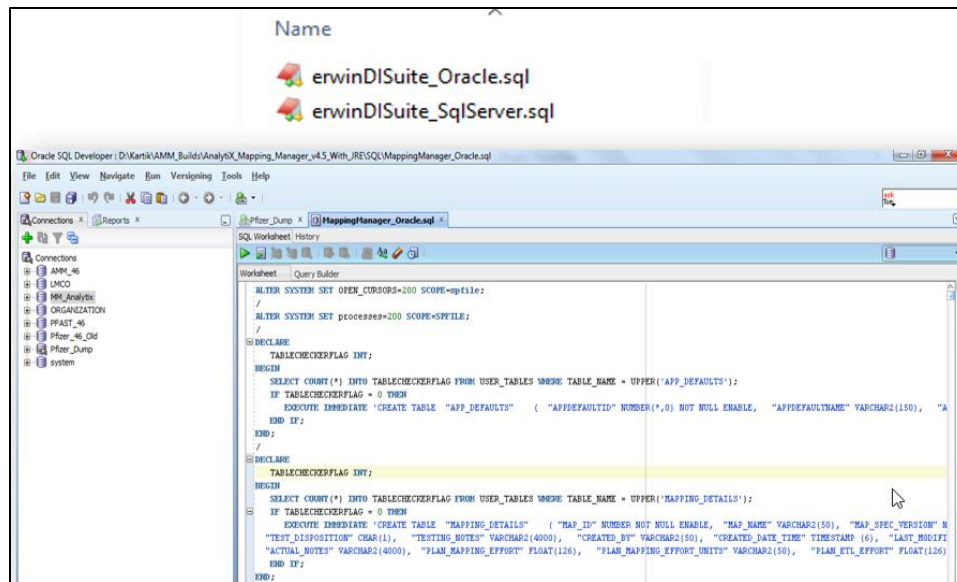
3. Grant the new login the following roles.

➤ Public, db\_owner, data\_reader, data\_writer



#### 4.2.2.2 Create a Schema in Oracle Database

1. Create a new Database/Schema name for the DI application in the Oracle database e.g. "**erwinDISuite**".
2. Provide the following privileges to the "**erwinDISuite**" user/schema
  - **Resource**
  - **Connect**
  - **Create a View privileges**
3. From the SQL folder of the installation software, run the "**erwinDiSuite\_Oracle.sql**" file against the newly created Oracle Schema
4. The required database tables for the software are created in the Oracle schema.

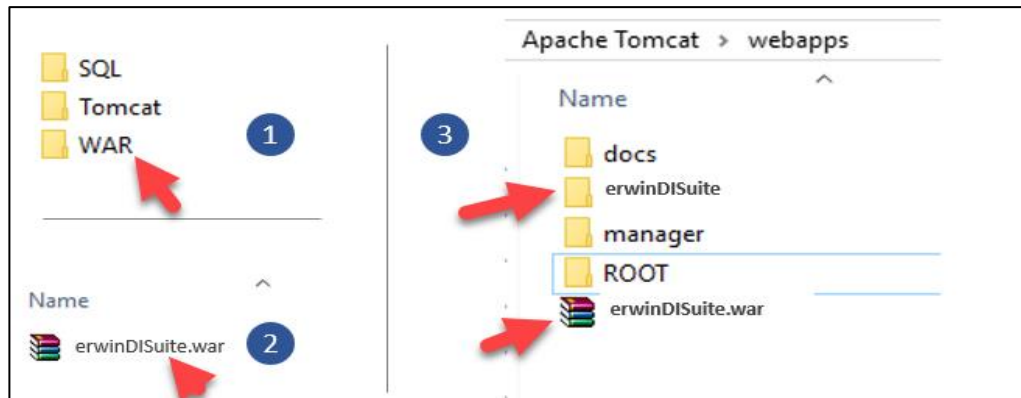


**\*\*IMPORTANT NOTE\*\*:**

A dedicated schema name needs to be created in Oracle for the DI Suite and the DDL needs to be executed against this dedicated schema. **The DDL should not be executed against SYS or SYSTEM schemas.**

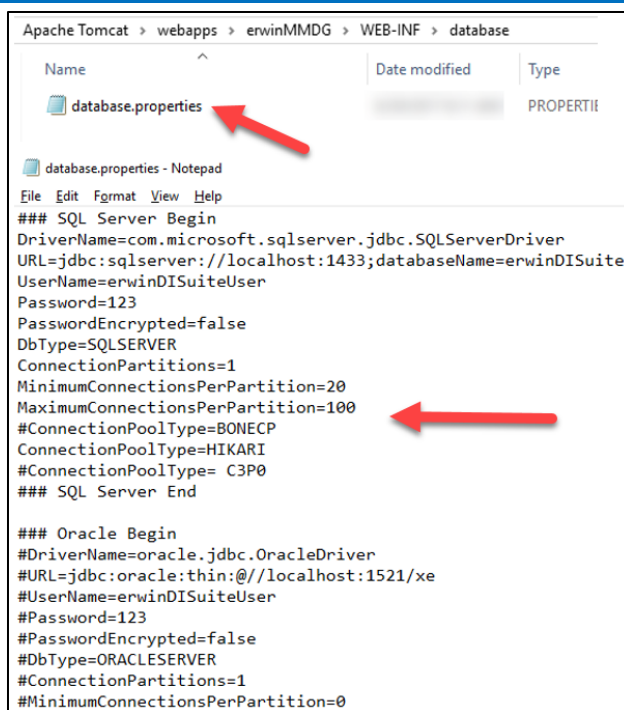
### 4.3 Step 3: Deploying the erwin DI Suite on Tomcat

1. Go into the WAR folder of the installation
2. Copy the “**erwinDISuite.war**” file
3. Go into the webapps folder of Tomcat directory and paste the “**erwinDISuite.war**” file into this webapps folder
4. Wait a few minutes (2-3 min). You will see a newly created “**erwinDISuite**” folder



5. Go into the erwinDISuite/WEB-INF/Database folder to configure the “**database.properties**” file
6. Provide the required parameters to connect to the SQL Server/ORACLE database
7. Set **PasswordEncrypted=false** and Restart the Tomcat server

**IMPORTANT\*\*:** Restart the Tomcat server after updating the “database.properties” file



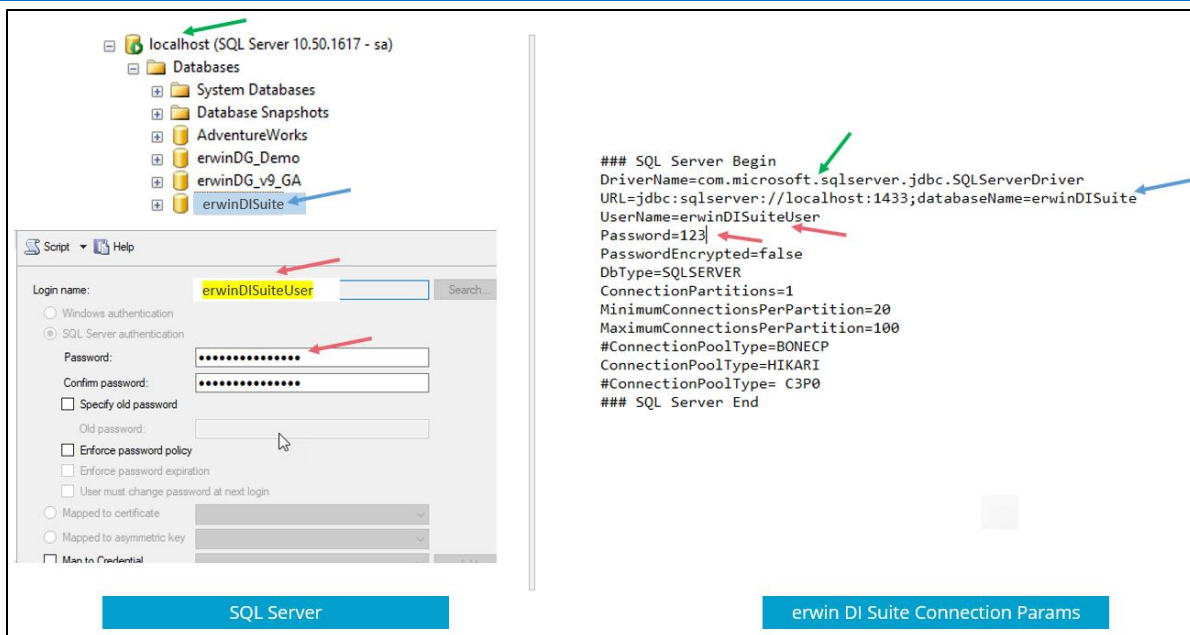
## 4.4 Step 4: Configuring the “database.properties” file

### 4.4.1 “database.properties” file for SQL Server Database

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

Enter the following parameters

- SERVER NAME
- PORT# (default 1433)
- Database Name
- User Name
- Password
- PasswordEncrypted = false



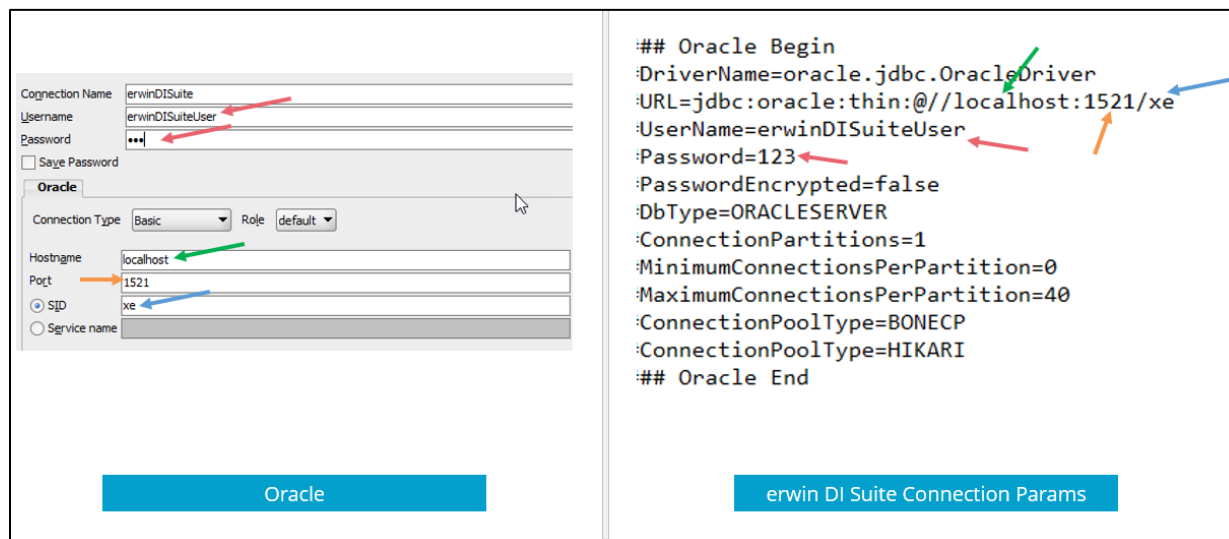
#### 4.4.2 “database.properties” file for Oracle Database

Uncomment the ORACLE section by removing the # at the beginning of each line (between ORACLE BEGIN and ORACLE END section)

Enter the following parameters

- SERVER NAME
- PORT# (default 1521)
- Database Name
- User Name
- Password
- PassEncrypted = false

Sample screenshot of Parameters is shown below.





## 4.5 Configuring the path for the application documents repository

This is the path that the application uses to store any documents uploaded via the application's UI.

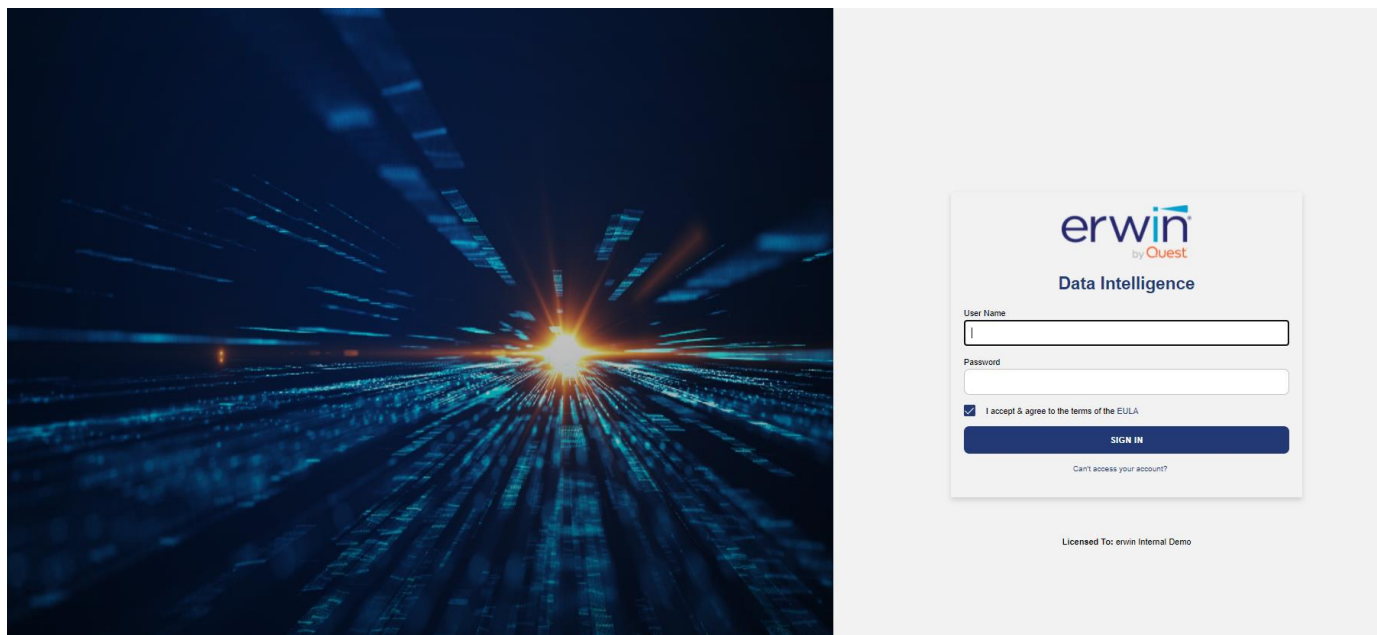
Update the **iccdocuments.properties** file. This is present in the *Tomcat home\webapps\erwinDISuite\WEB-INF\configuration\properties* folder. The default path is listed as *C:/MappingManager*.

- DocumentsPath=**Client\_Path** (For example: DocumentsPath=C:\MappingManager)
- ApplicationURL=**Client\_DI\_URL** (For example: ApplicationURL=http://erwintest:9191/erwinDISuite)
- ApplicationTempPath=**Provide New Path For Temp Files** (this path is used to store all the temp files uploaded into the application (typically outside the tomcat directory) and can be periodically deleted by an admin)  
For example: ApplicationTempPath= C:\DISuiteTemp

## 4.6 Step 5: Access the erwin DI Suite Login Screen

- Open a web browser
- Type the URL [http://IP\\_ADDRESS:Port/erwinDISuite/](http://IP_ADDRESS:Port/erwinDISuite/)  
**IP\_ADDRESS** = IP Address or Physical Name of Server where tomcat is running  
**Port**: Port Number on which Tomcat is configured
- You will now see the login screen.
- Enter the User Name as “**Administrator**” and Password as “**Administrator**” and login to the application.

**Note\*\***: Both User Name and Password are case sensitive



## 5 How to activate the software

Once you have a valid license key, go back to the login screen, click the “**Activate Software**” link and paste the text from the license key file in the pop up window.

**Important Note\*\*:** Once the product is successfully installed, please reach out to your [sales contact](#) for a valid license key.

## 6 Configuring erwin DI Suite with LDAP/Active Directory user login

erwin DI Suite can be configured to use LDAP/Active Directory by enabling the LDAP properties in the “database.properties” file.

Below is a depiction of typical LDAP instance and connectivity setup in the “database.properties” file for erwin DI Suite

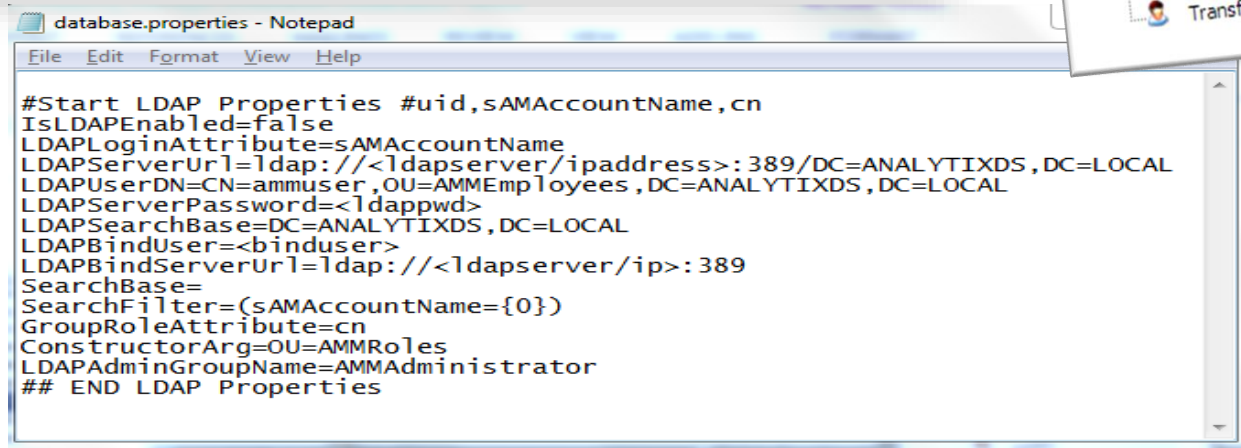
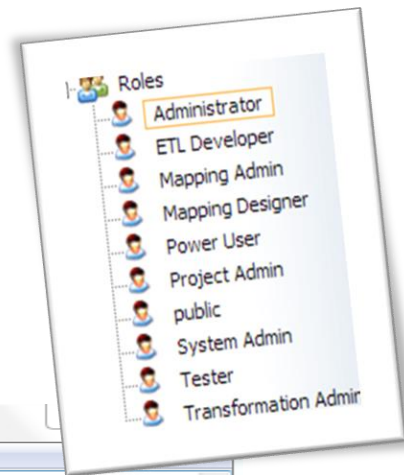
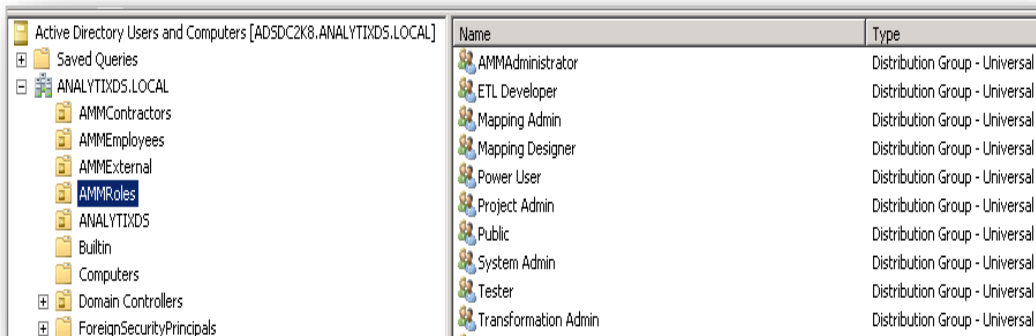
### 6.1 Prerequisites

- It is necessary to create an Organizational Unit as ‘AMMRoles’ in Active Directory and create the same role names available in Mapping Manager.
- To create an Administrator role, a separate Group has to be created in Active Directory, and the role name can be anything except “Administrator”. (Reason: Administrator is the Global Group available in Active Directory). The Administrator Group name can thus be mapped in “database.properties” file as below.

E.g. **LDAPAdminGroupName=AMMAdministrator**

**Note:** \*\*\*Except the ‘Administrator’ role which can be created as required (and provided as a dynamic parameter in LDAP configuration) all other role names in the LDAP space should exactly match the role names defined in the erwin DI Suite product.





## 6.2 LDAP Configuration parameters

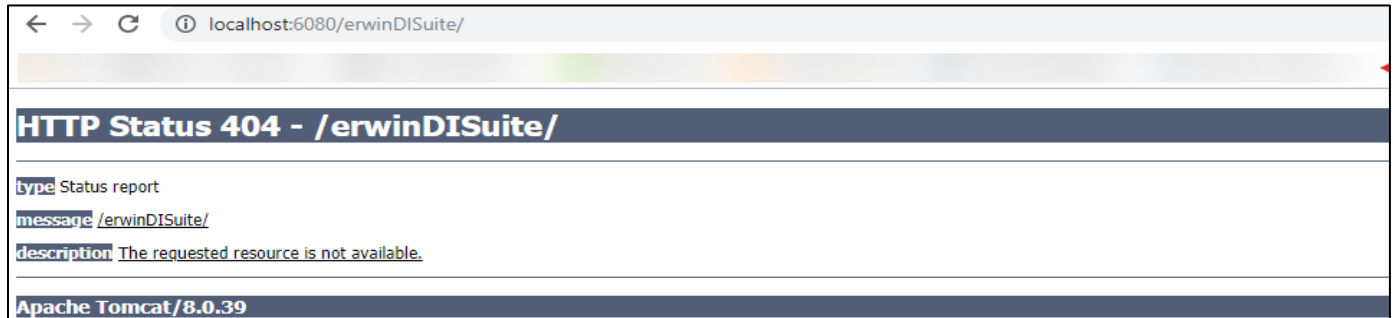
<b>IsLDAPEnabled</b>	Enter this as <b>true</b>
<b>LDAPLoginAttribute</b>	Enter the login attribute name used for the bind to the LDAP database. This can be any of the < <b>#uid</b> (or) <b>sAMAccountName</b> (or) <b>cn</b> > as setup.  e.g., <b>LDAPLoginAttribute=sAMAccountName</b>
<b>LDAPServerUrl</b>	Enter the fully qualified name (URL) of the LDAP Server IP address along with the port and domain controller details.  e.g., <b>LDAPServerUrl= ldap://192.168.1.10:389/DC=ANALYTIXDS,DC=LOCAL</b>
<b>LDAPUserDN</b>	Enter the LDAP bind user with fully qualified distinguished name. You can add any user DN with the privilege to search LDAP/Active Directory.  e.g., in the below case ammuser is the bind user <b>LDAPUserDN=CN=ammuser,OU=AMMEmployees,DC=ANALYTIXDS,DC=LOCAL</b>
<b>LDAPServerPassword</b>	Enter the password associated with the LDAP Server
<b>LDAPSearchBase</b>	The standard format is <b>dc=first part of distinguished server name, dc=any part of the distinguished server name that appears after the dot</b> .  You set a search base to put limits on the authentication server directories. Enter the fully qualified search base details  e.g., <b>LDAPSearchBase=DC=ANALYTIXDS,DC=LOCAL</b>

<b>LDAPBindUser</b>	Enter only the Bind User Name e.g., <b>LDAPBindUser =ammuser</b>
<b>LDAPBindServerUrl</b>	Enter the LDAP Server URL e.g., <b>LDAPBindServerUrl=ldap://192.168.1.10:389</b>
<b>SearchBase</b>	<Optional> Enter an OU to put limits on the authentication server directories. e.g., <b>SearchBase=OU= AMMEmployees</b>
<b>SearchFilter</b>	Enter the same Login Attribute type used to get user details e.g., <b>SearchFilter=(sAMAccountName={0})</b>
<b>GroupRoleAttribute</b>	This attribute holds user group information on the LDAP server. Here it is the identifier to search the association between the user and the AMM role. e.g., <b>GroupRoleAttribute=cn</b>
<b>ConstructorArg</b>	Specify the path where the AMM roles are created e.g., <b>ConstructorArg=OU=AMMRoles</b>
<b>LDAPAdminGroupName</b>	Specify the AMM Admin role name e.g., <b>LDAPAdminGroupName=AMMAdministrator</b>

## 7 Troubleshooting Tips

### 1. Cannot access the login screen?

Trying to access the URL [http://IP\\_ADDRESS:Port#/erwinDISuite/](http://IP_ADDRESS:Port#/erwinDISuite/) in your web browser and get a “404 Page Not Found” or a “black screen” error?



If you get the above error,

1. **The application is not able to establish a connection to the backend Database (SQL SERVER or Oracle) repository.**

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

**Solution:** Check the connectivity parameters “database.properties” file in the tomcat/webapps/erwinDISuite/WEB-INF/database folder to ensure the connectivity parameters are correctly listed. [Click here](#) to view the Configuration options for Oracle and SQL Server databases.

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

**Solution:** The port numbers being used for SQL Server or Oracle Databases need to be open and made available for access by the erwin DI Suite application. Check the port# listed in the “database.properties” file and ensure the port# being used is open. E.g. SQL SERVER typically uses port# 1433. Ensure TCP/IP is enabled on your SQL SERVER database in order for the erwin DI Suite application to successfully establish a connection.

### 2. The application did not deploy properly

**Cause 1:** Incomplete deployment by the web server

**Solution:** Sometimes, incomplete deployment of the erwinDISuite.war file results in the application not being available for access. To ensure that the application is properly deployed, go into the tomcat/webapps/erwinDISuite/WEB-INF/ folder and confirm if a “web.xml” file is visible. If yes, the application is deployed correctly.

If not, execute the following steps to re-deploy the application

1. Stop tomcat
2. Go into the tomcat/webapps/ folder and delete the erwinDISuite.war and erwinDISuite folder
3. Go into the tomcat/work/catalina/localhost folder and delete the erwinDISuite folder
4. Start Tomcat
5. Follow steps from installation guide to deploy the erwinDISuite.war file. [Click Here](#) to view deployment instructions

If the errors still persist, go into the tomcat/logs folder and zip all the log files into a compressed folder and send them to your erwin counterpart and we will get in touch with you to help you with the installation process.