Software Installation Guide

Quest Data Intelligence (DI)

Version 16.0

Windows Installation Guide

This document provides the instructions to install the new 16.0 version of the Quest Data Intelligence application on a Windows OS.

If you have any questions regarding your potential use of this material, contact:

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Refer to our Web site (https://www.quest.com) for regional and international office information.

Patents

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Contents

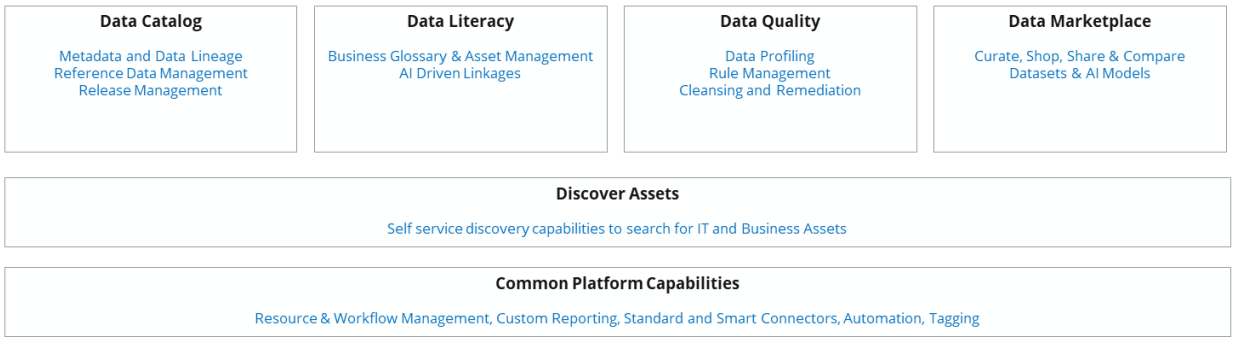
About this Guide

This document describes the installation process of the Quest Data Intelligence application on a dedicated on-premises physical or virtual server, as well as cloud based virtual machines. It provides the software installation procedure for a basic installation of Quest Data Intelligence Suite, configuration tasks, and troubleshooting information. This document also describes the technical specifications and the pre-requisites required for the successful installation of the Data Intelligence software on a supported Windows Distribution.

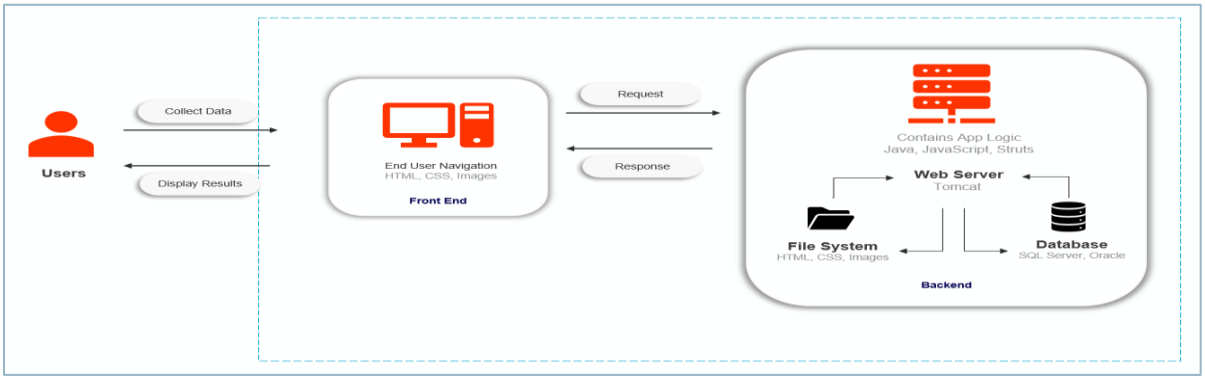
Software Solution Architecture

Key Components

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



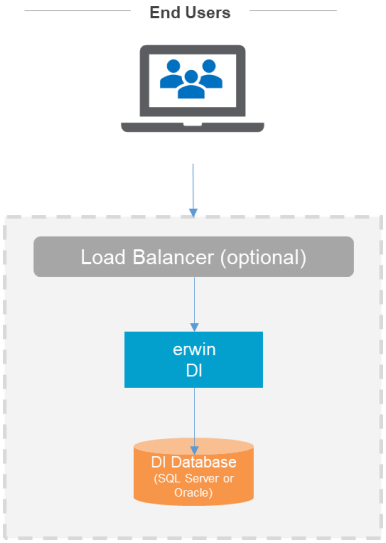
Web Application Architecture



Tiers

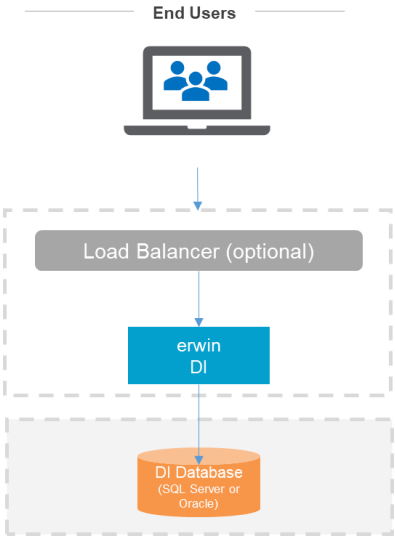
The Quest Data Intelligence application supports both single server (application and database on the same server) and distributed (application and database on the different servers and/or multiple app instances under a load balanced set up) architectures.

Single Server Setup



- Only Recommended for POC or Demo environments

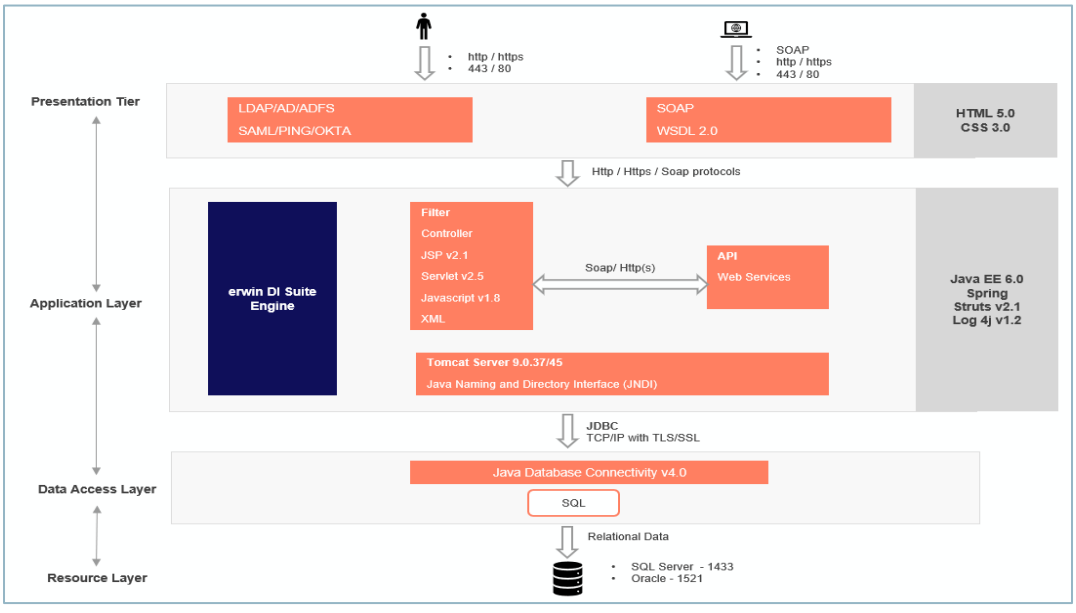
Distributed Server Setup



- Highly Recommended for Production Deployments

Technology Stack and Components

The Quest Data Intelligence application follows multi-tier architecture consisting of Presentation, Application, Data Access, and Resource layers. The following is a high-level diagram depicting these layers.



System Specifications and Software Requirements

Important Note: The following specifications are for the Quest Data Intelligence application only and do not include the erwin Data Quality module (DQLabs). We recommend the erwin Data Quality (DQLabs) be installed on a separate server.

For Production Deployments

Application Tier – Minimum Compute & Software Requirements	
Node Options	Single / Multi
Operating System	Windows Server / Linux Server
Processor	64 Bit
CPU Cores / vCPUs / RAM [1]	4 Cores / 8 vCPUs / 64 GiB RAM recommended (32 GiB RAM Minimum)
Local Storage	100 -200 GB
Java JDK	Eclipse Temurin Adoptium JDK version 17.0.x
Java Servlet Container / Web Server	Apache Tomcat version 10.1.x
Web Browsers	MS Edge (v86.0+), Google Chrome (v86.0+), Firefox (v82.0+)

- [1] RAM GiB required is based on the number of concurrent users that will use the application.
  For optimal performance, we recommend about a minimum of 0.5 GB space per login user on the application server.
- If you have 30 users logging in concurrently, the application will 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 (tomcat JVM) itself.

Database Tier – Minimum Compute & Software Requirements	
Database Server	MS SQL Server: 2016, 2017, 2019, 2022 Oracle Database: 18c, 19c
Processor	64 Bit
CPU Cores / vCPUs / RAM	4 Cores / 8 vCPUs / 64 GiB RAM recommended (32 GiB RAM Minimum)
Database Storage	200 GB storage recommended as minimum starting size. Oracle Table Space 100 GB recommended as minimum starting size.

- Quest Data Intelligence requires a dedicated database/schema, NOT a dedicated server instance.
- The storage/tablespace allocated initially will need to increase over time based on product usage and data growth.
- Azure Cloud databases supported: Azure SQL Managed Instance, Azure SQL Database (PaaS) or SQL Server in a VM.
  AWS Cloud databases supported: AWS RDS SQL or AWS RDS Oracle.

Operating Systems Supported	
Microsoft Windows	Windows Server 2016 and above
Linux Distributions	Linux Versions (Linux Kernel version 4.18 and above)
Amazon Linux	2023
Red Hat Enterprise Linux	v8, v9
SUSE Enterprise / openSUSE	15 sp4 / Leap 15.4
Ubuntu Server	20.04 LTS, 22.04 LTS

- Server class operating system is recommended for production deployments.
- Choice of operating system should be based on customer's skill set and ability to support, manage, maintain the server.

Suggested Cloud Instance Sizing			
Azure VM Series		Amazon EC2 Instance Types	
Intel	(8vCPU/64 GiB) Standard_E8s_v5, Standard_E8ds_v5	Intel	(8vCPU/64 GiB) r6i.2xlarge, r6id.2xlarge r5.2xlarge, r5d.2xlarge
	(8vCPU/32 GiB) Standard_D8s_v5, Standard_D8ds_v5		(8vCPU/32 GiB) m6i.2xlarge, m6id.2xlarge, m5.2xlarge, m5d.2xlarge
AMD	(8vCPU/64 GiB) Standard_E8as_v5, Standard_E8ads_v5	AMD	(8vCPU/64 GiB) r5a.2xlarge, r5ad.2xlarge, r6a.2xlarge
	(8vCPU/32 GiB) Standard_D8as_v5, Standard_D8ads_v5		(8vCPU/32 GiB) m6a.2xlarge, m5a.2xlarge, m5ad.2xlarge
Azure E-series memory optimized VM types recommended Azure Application Gateway or third-party Layer 7 load balancer required for multi-node deployments. Suggested sizes are a starting point only, you may need to upsize instances based on concurrent usage and performance needs		AWS r-family memory optimized instance types recommended. Application Load Balancer or third-party Layer 7 load balancer required for multi-node deployments.	

Note: We highly recommend that you stay compliant with the above-mentioned system requirements for the best experience. In case you need to use a software (database version, browser etc.) that is not listed in the above system requirements, we recommend that you reach out to your erwin support or professional services contact so we can provide a recommendation on the compatibility.

For Proof of Concept/Development Server

Application Tier – Minimum Compute & Software Requirements	
Node Options	Single / Multi
Operating System	Windows Server / Linux Server
Processor	64 Bit
CPU Cores / vCPUs / RAM [1]	2 Cores / 4 vCPUs / 32 GiB RAM recommended (16 GiB RAM Minimum)
Local Storage	100 -200 GB
Java JDK	Eclipse Temurin Adoptium JDK version 17.0.x
Java Servlet Container / Web Server	Apache Tomcat version 10.1.x
Web Browsers	MS Edge (v86.0+), Google Chrome (v86.0+), Firefox (v82.0+)

- [1] RAM GiB required is based on the number of concurrent users that will use the application.
  For optimal performance, we recommend about a minimum of 0.5 GB space per login user on the application server.
- If you have 30 users logging in concurrently, the application will 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 (tomcat JVM) itself.

Database Tier – Minimum Compute & Software Requirements	
Database Server	MS SQL Server: 2016, 2017, 2019, 2022 Oracle Database: 18c, 19c
Processor	64 Bit
CPU Cores / vCPUs / RAM	2 Cores / 4 vCPUs / 32 GiB RAM recommended (16 GiB RAM Minimum)
Database Storage	100 GB storage is recommended as minimum starting size. Oracle Table Space 75 GB recommended as minimum starting size.

- Quest Data Intelligence requires a dedicated database/schema, NOT a dedicated server instance.
- The storage/tablespace allocated initially will need to increase over time based on product usage and data growth.
- Azure Cloud databases supported: Azure SQL Managed Instance, Azure SQL Database (PaaS) or SQL Server in a VM.
  AWS Cloud databases supported: AWS RDS SQL or AWS RDS Oracle.

Operating Systems Supported	
Microsoft Windows	Windows Server 2016 and above
Linux Distributions	Linux Versions (Linux Kernel version 4.18 and above)
Amazon Linux	2023
Red Hat Enterprise Linux	v8, v9
SUSE Enterprise / openSUSE	15 sp4 / Leap 15.4
Ubuntu Server	20.04 LTS, 22.04 LTS

- Server class operating system is recommended for production deployments.
- Choice of operating system should be based on customer's skill set and ability to support, manage, maintain the server.

Suggested Cloud Instance Sizing			
Azure VM Series		Amazon EC2 Instance Types	
Intel	(4vCPU/32 GiB) Standard_E8s_v5, Standard_E8ds_v5	Intel	(4vCPU/32 GiB) r6i.2xlarge, r6id.2xlarge r5.2xlarge, r5d.2xlarge
	(4vCPU/16 GiB) Standard_D8s_v5, Standard_D8ds_v5		(4vCPU/16 GiB) m6i.2xlarge, m6id.2xlarge, m5.2xlarge, m5d.2xlarge
AMD	(4vCPU/32 GiB) Standard_E8as_v5, Standard_E8ads_v5	AMD	(4vCPU/32 GiB) r5a.2xlarge, r5ad.2xlarge, r6a.2xlarge
	(4vCPU/16 GiB) Standard_D8as_v5, Standard_D8ads_v5		(4vCPU/16 GiB) m6a.2xlarge, m5a.2xlarge, m5ad.2xlarge
Azure E-series memory optimized VM types recommended. Azure Application Gateway or third-party Layer 7 load balancer required for multi-node deployments.		AWS r-family memory optimized instance types recommended. Application Load Balancer or third-party Layer 7 load balancer required for multi-node deployments.	
Suggested cloud instance sizes are a starting point only. Upsizing may be required based on concurrent usage and performance needs.			

Pre-requisites to install Quest Data Intelligence

Eclipse Temurin Adoptium Java JRE and Tomcat webserver are standard prerequisites to install and deploy the Quest Data Intelligence application.

The Quest Data Intelligence 16.0 software is certified to run on the following versions of Tomcat and Java.

Tomcat Webserver	Tomcat 10.1.x
Java	Eclipse Temurin Adoptium 17.0.x

* Important Note: The Quest Data Intelligence v16.0 has been officially certified on Tomcat 10.1.x and Java 17.0.x. We recommend that you install tomcat 10.1.x versions to avoid any compatibility issues. If you are on the older Tomcat 8x or 9x version, it is *mandatory* that you upgrade to Tomcat 10.1.x before installing DI 16.0.

Additional Note

- We recommend that you use the certified versions of Tomcat and Java for the best experience. In case you need to use a point version that is above or below the certified versions, the product might still work as expected on the non-conformant point versions, but we recommend that you reach out to your erwin support or professional services contact so we can provide a recommendation on the compatibility.
- From a *best practice perspective*, although not mandatory, we recommend that you install the Java and Tomcat software versions and the Quest Data Intelligence application on the *D drive* (versus C drive as the C drive is typically reserved for server maintenance and monitoring tools). This also avoids filling up the C: drive and preventing the physical server from starting.

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 32 GB RAM, the web server needs to be allocated a minimum of 50% of the RAM to begin with i.e. 16 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	12 GB
32 GB	16 – 28 GB
64 GB	48 – 54 GB

Note: 32-64 GB is recommended for Production installs, while 16 GB is recommended for Proof of Concepts (POCs)/Dev.

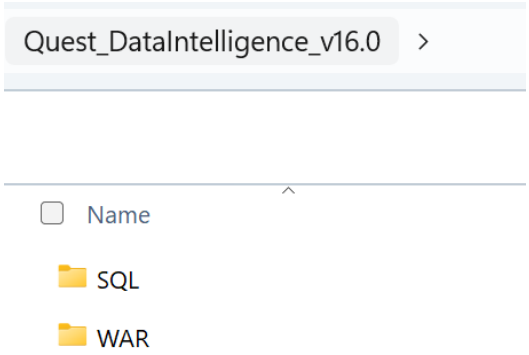
End-user Machine/Laptop Specifications

	End User Machine/Laptop Configuration
Processor	i3 and above
Minimum RAM	8 GB
Minimum Free Space available	1 – 2 GB

- The CPU should have minimum 1 – 2 GB RAM free space while accessing the Quest Data Intelligence application via a web browser.
- e.g., If you have a 4GB laptop and any application is occupying 100%CPU space, then the Quest Data Intelligence web pages will not load until some physical memory is freed up.

Getting the Quest Data Intelligence 16.0 software ready

Download the Quest Data Intelligence 16.0 software zip file and store it in a D drive directory (or another equivalent drive) that can be easily accessed during the installation process.



Installing the Quest Data Intelligence software

Install DI software in 5 easy steps.

Step 1: Install Java (Eclipse Temurin Adoptium 17.0.x).

Step 2: Install Apache Tomcat 10.1.x.

Step 3: Deploy the **QuestDataIntelligence.war** file on Tomcat.

Step 4: Create the database schema for the application.

Step 5: Configure two properties files to connect to the database and set up the paths for the application documents.

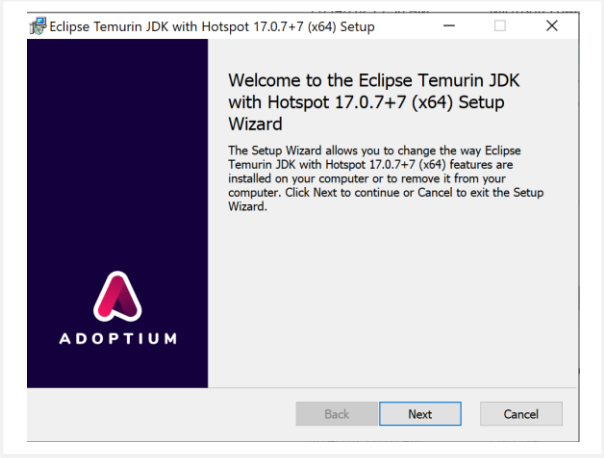
Step 6: Access the Quest Data Intelligence application Login screen.

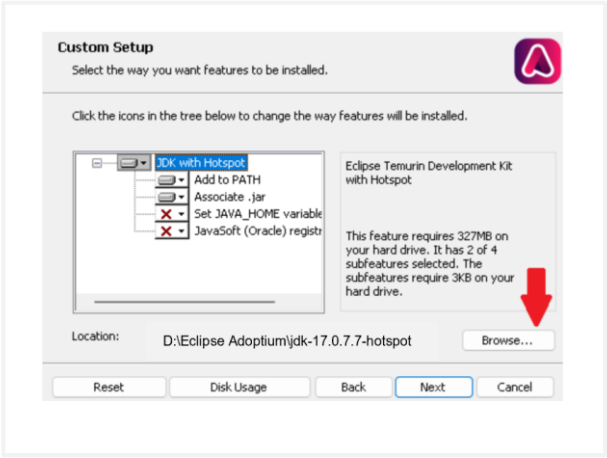
Step 1: Install Java

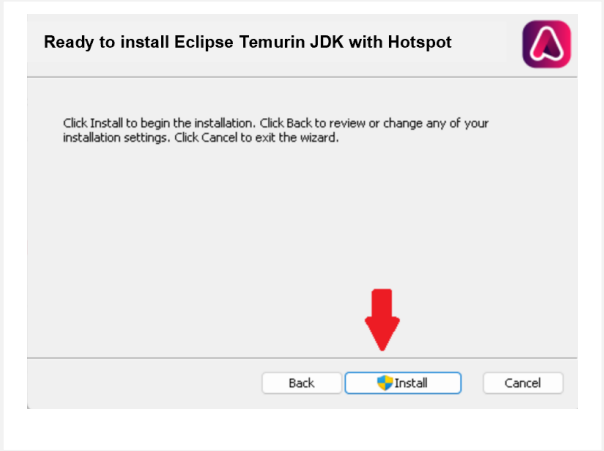
1. Download Java (Eclipse Temurin Adoptium 17.0.x) from https://adoptium.net/temurin/releases/?version=17 Java can be installed on the D drive from a best practice perspective (versus C drive).

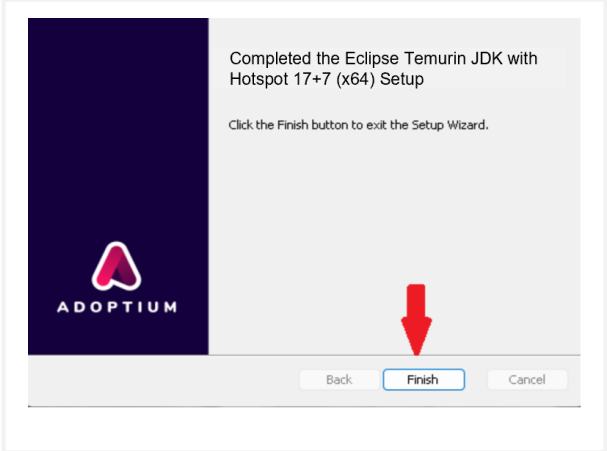
2. Once you've downloaded the Eclipse Temurin JDK installer, right-click on the .exe file, select Run As Administrator, and launch the setup wizard. You'll see a *Welcome* screen explaining the installation process. Click Next.

3. The wizard will guide you through the installation steps.
   - Ensure you are installing the JDK 17 in the Administrator mode (Run as Administrator) for a full and uninterrupted installation.
   - Install JDK on an alternate drive (versus C drive) from a best practice perspective (i.e. D: or E:)

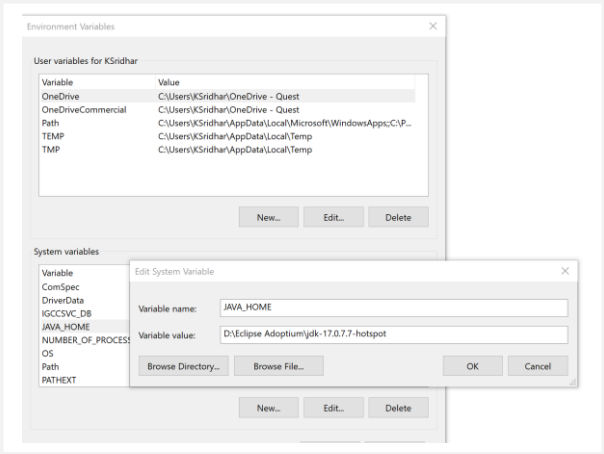


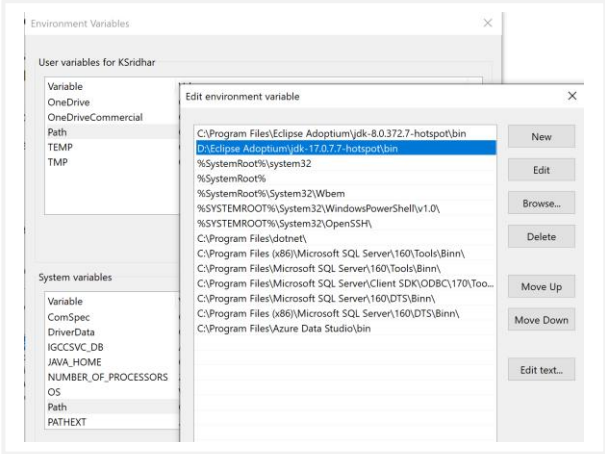






4. Set the ***PATH*** and ***JAVA_HOME*** variables as follows (Drive and Java version may vary):
    a. In File Explorer, right-click on This PC and select Properties.
    b. On the far right, select Advanced system settings (you may need to widen the window if you don't see Related settings on the side)
    c. Click on Environment Variables and under System Variables, update Path and JAVA_HOME:
        i. Path example - D:\Eclipse Adoptium\jdk-17.0.7.7-hotspot\bin
        ii. JAVA_HOME example - D:\Eclipse Adoptium\jdk-17.0.7.7-hotspot

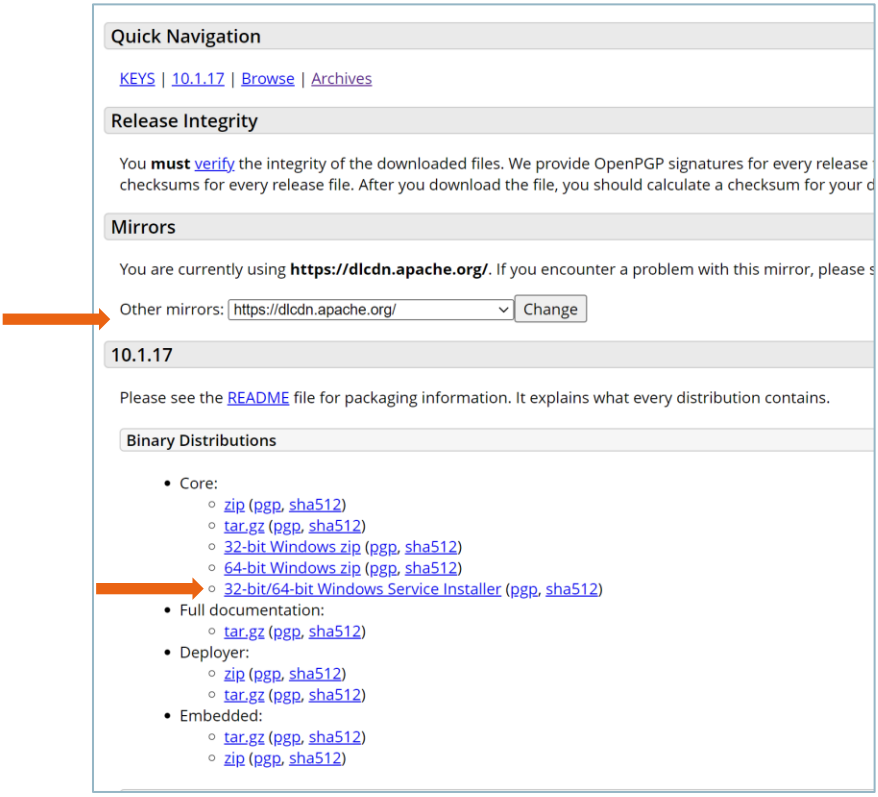




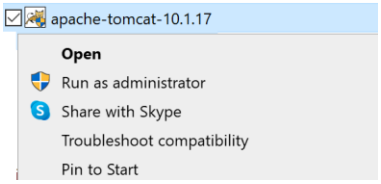
Step 2: Install Tomcat

1. Download the Tomcat 10.1.x.exe version using this link - https://tomcat.apache.org/download-10.cgi Select the 32-bit/64-bit Windows Service Installer.

   An example shown below (actual version may be higher as long as it is 10.1.x).



2. To Start Installation, right click on the downloaded *apache-tomcat v10.1.x.exe* file and select the 'Run as Administrator' option. You will see the welcome screen. Click on the Next button and I agree to continue the installation process.

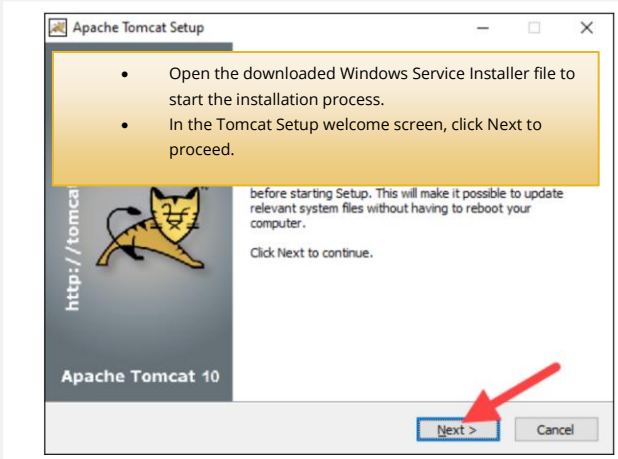


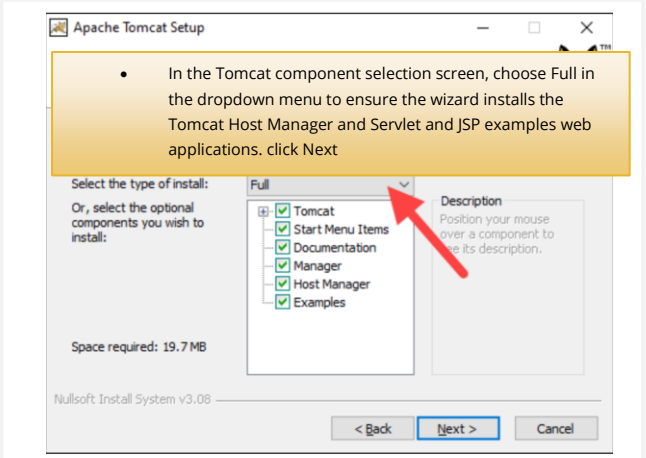
3. Select Full for the install option and click Next.

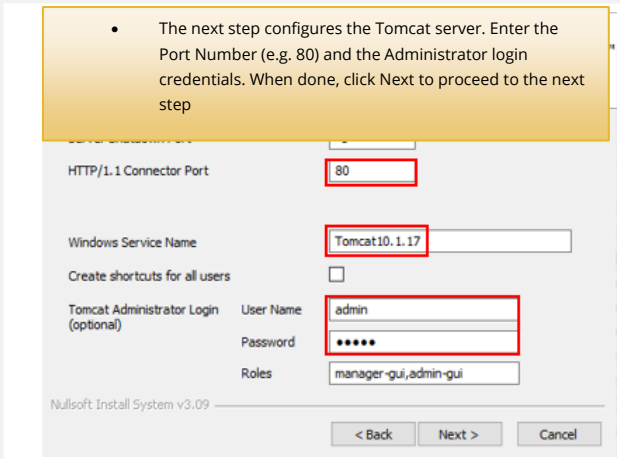
4. Choose the port number on which you want to run the tomcat server. Tomcat uses 8080 as its default port, but for best practices, use port 80 (you can provide any other port number if 8080 or 80 is already being used). Rename the Tomcat service as applicable to match the tomcat version number e.g. *Tomcat10.1.x*. Enter Admin User ID and password for Tomcat (default: admin/admin).

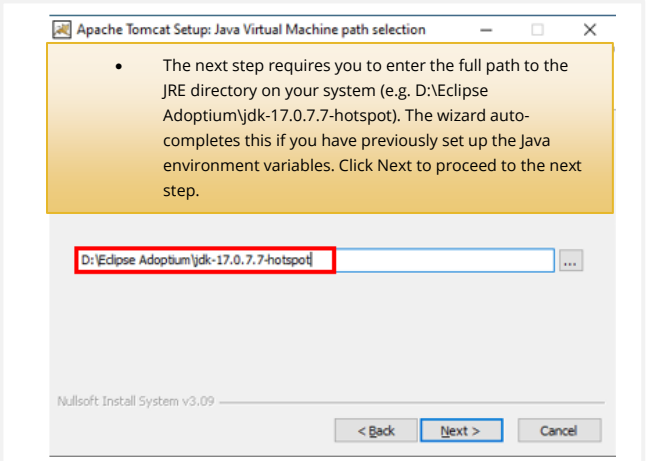
5. On the Java Virtual Machine selection window, select the path to the JDK/Java 17 folder. On the next screen, update the path to install tomcat e.g. D:\Tomcat<version> (i.e. D:\Tomcat 10.1.x). Then uncheck both options on the next screen before clicking Finish.

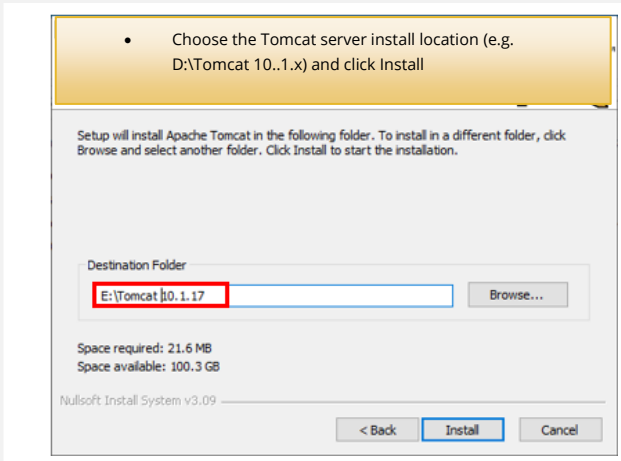
Note**: *If there is more than one version of JDK installed, Ensure Tomcat 10.1.x is being mapped to the JDK 17 version previously installed.*

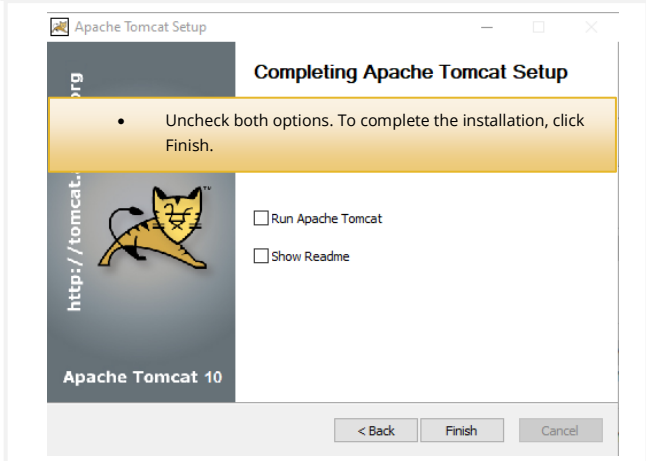




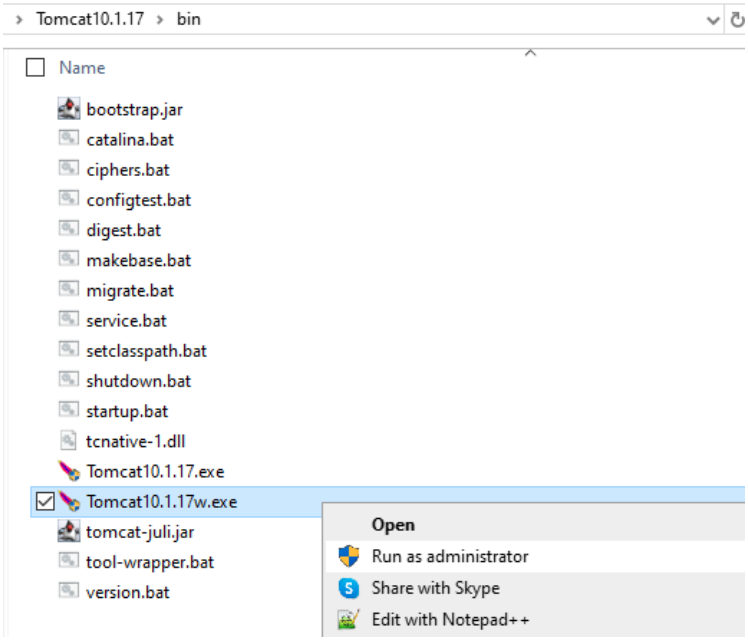




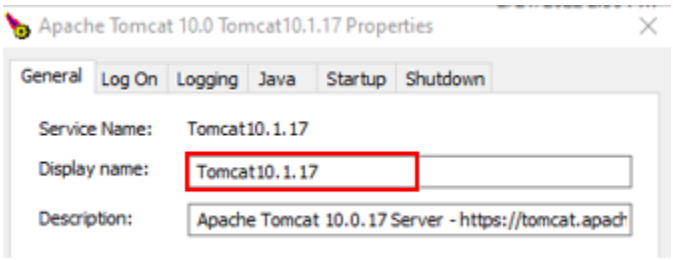




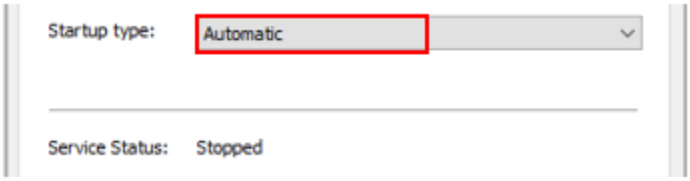
6. Go to the Tomcat directory → bin folder. Right click on the Tomcat10w file → right click → select the “Run as administrator” option. This will open the tomcat service window.



7. Go to the initial tab and update the Display Name to Tomcat10.1.x (i.e. Tomcat10.1.17).



8. Make sure the Startup Type is Automatic.



9. Switch to the Java tab and proceed to the next step.

Configuring Tomcat Memory settings for optimum performance

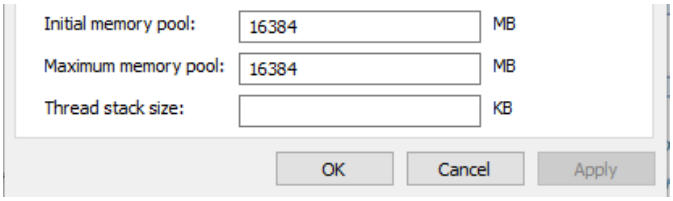
After installing tomcat, modify the tomcat memory settings as described below to achieve optimum performance.

E.g. If the server has 32 GB RAM, the web server needs to be allocated a minimum of 50% of the RAM to begin with i.e. 16 GB or higher. The higher the memory allocation, the better for the optimal functioning of the application.

Memory Settings:

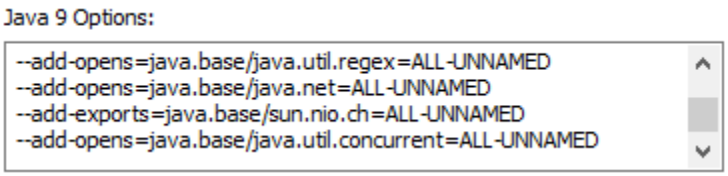
1. Clear the default Initial Memory Pool and Maximum Memory pool values and update them to the amount of RAM being allocated. Based on recommendations from Apache Tomcat, these values should be set to the same value.

Example values shown below:



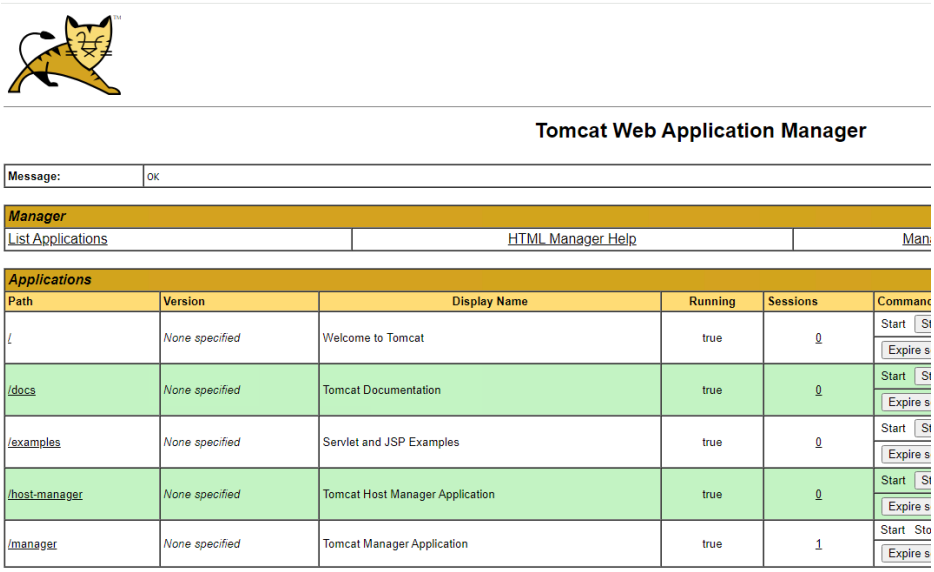
2. Copy the below lines as is (including the starting hyphens) and paste this block into the Tomcat → Java 9 options as highlighted:

--add-opens=java.base/java.lang=ALL-UNNAMED
--add-opens=java.base/java.io=ALL-UNNAMED
--add-opens=java.base/java.util=ALL-UNNAMED
--add-opens=java.rmi/sun.rmi.transport=ALL-UNNAMED
--add-opens=java.base/java.net=ALL-UNNAMED
--add-opens=java.management/sun.management=ALL-UNNAMED
--add-opens=java.base/java.nio=ALL-UNNAMED
--add-opens=java.base/sun.nio.ch=ALL-UNNAMED
--add-opens=java.base/java.lang.invoke=ALL-UNNAMED
--add-opens=java.base/java.lang.reflect=ALL-UNNAMED
--add-opens=java.base/java.util.regex=ALL-UNNAMED
--add-opens=java.base/java.net=ALL-UNNAMED
--add-exports=java.base/sun.nio.ch=ALL-UNNAMED
--add-opens=java.base/java.util.concurrent=ALL-UNNAMED



3. Click the Apply button and Start the Tomcat Server.

4. Ensure Tomcat is up and running by going to http://server_name/Port#/manager (e.g. http://localhost:8080/manager for port 8080 or http://locahost/manager if using port 80) and enter the Tomcat Administrator User ID and Password credentials to ensure that the Tomcat is up and running. You should see the following Tomcat Manager screen if Tomcat is up and running.



Tomcat Web Application Manager

Message:	OK

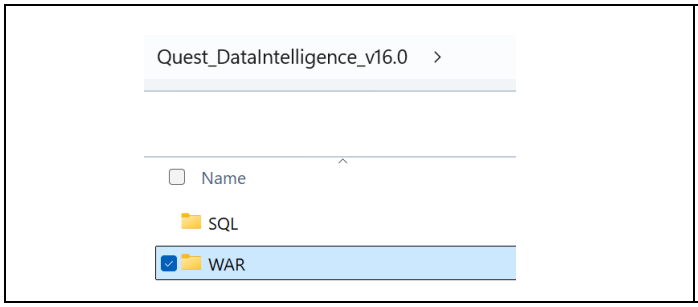
Manager		
List Applications	HTML Manager Help	Man

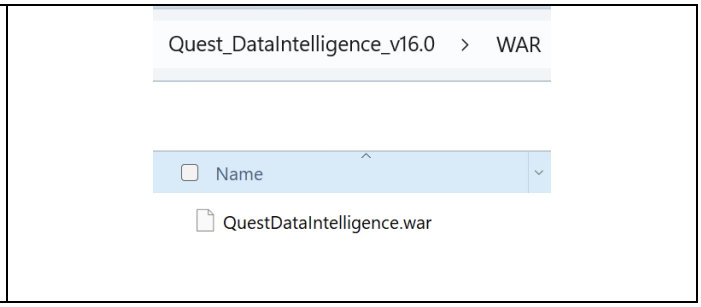
Applications					
Path	Version	Display Name	Running	Sessions	Command
/	None specified	Welcome to Tomcat	true	0	Start St Expire s
/docs	None specified	Tomcat Documentation	true	0	Start St Expire s
/examples	None specified	Servlet and JSP Examples	true	0	Start St Expire s
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start St Expire s
/manager	None specified	Tomcat Manager Application	true	1	Start Sto Expire s

Step 3: Deploy Quest Data Intelligence on Tomcat

1. Go into the WAR folder of the installation

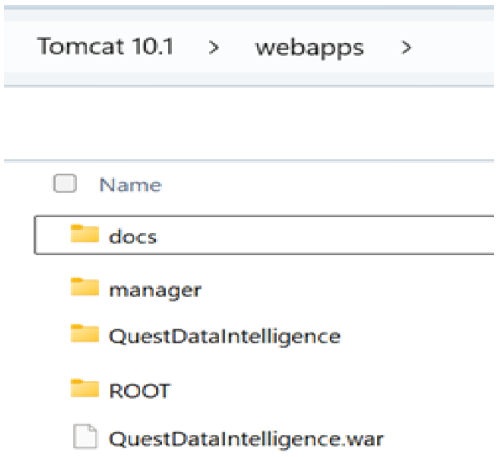
2. Copy the "**QuestDataIntelligence.war"** file





3. Go into the webapps folder of Tomcat directory and paste the "**QuestDataIntelligence.war**" file into this webapps folder

4. You will see a newly created "**QuestDataIntelligence**" folder. While waiting for the folder to fully extract, proceed to the next step.



Step 4: Create the Database Schema

Create a Database in SQL SERVER

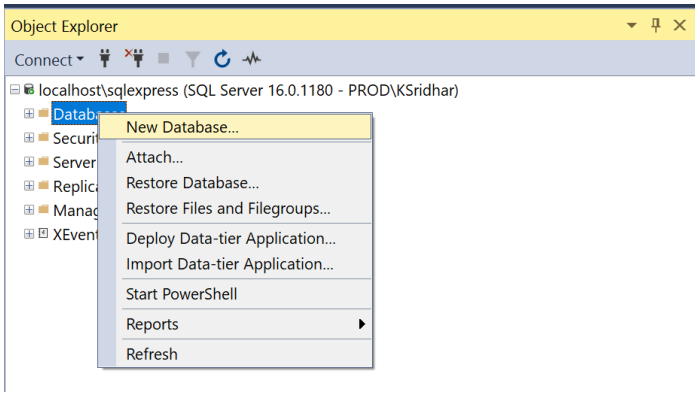
The following steps are for a **SQL SERVER** database.

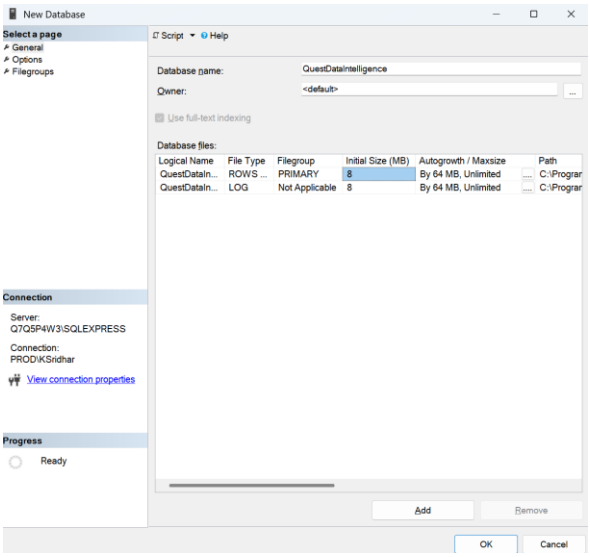
1. Create a new Database/Schema name for Quest Data Intelligence application e.g. "**QuestDataIntelligence**".
2. From the ***SQL*** folder of the installation software, run the "**QuestDataIntelligence_SqlServer.sql**" file against the newly created SQL Server Database.
3. In the SQL folder, you will also see a file **QuestDataIntelligence_SqlServer_Prerequisite.sql**. Please note that this file is not required for a new installation and is only required in the case you are upgrading from an older version to the 11.1 version. In the case of upgrade, please refer to the upgrade guide.
4. 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.

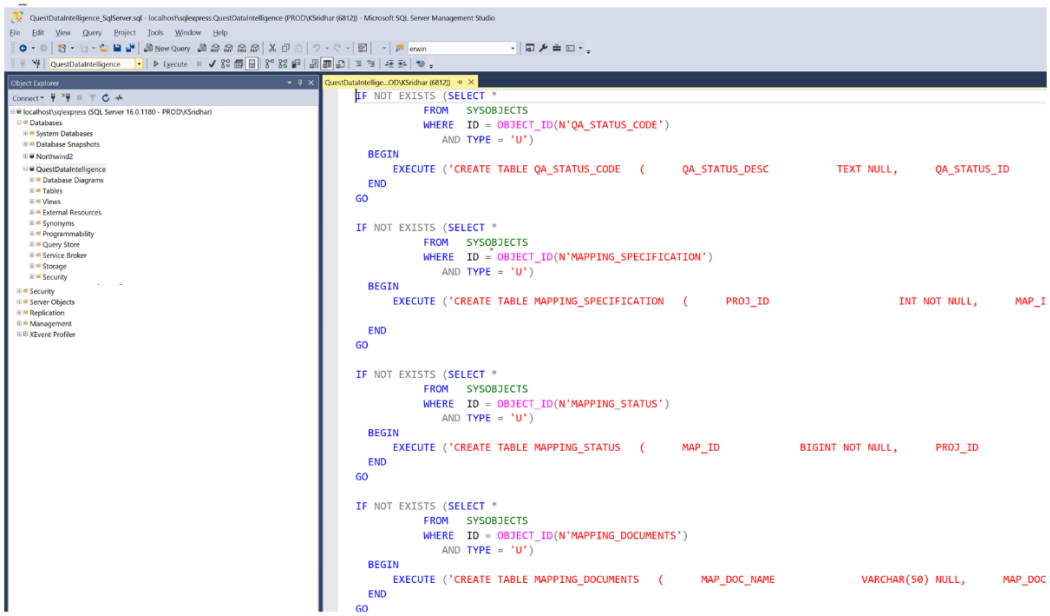
The DDL should not be executed against the MASTER schema.



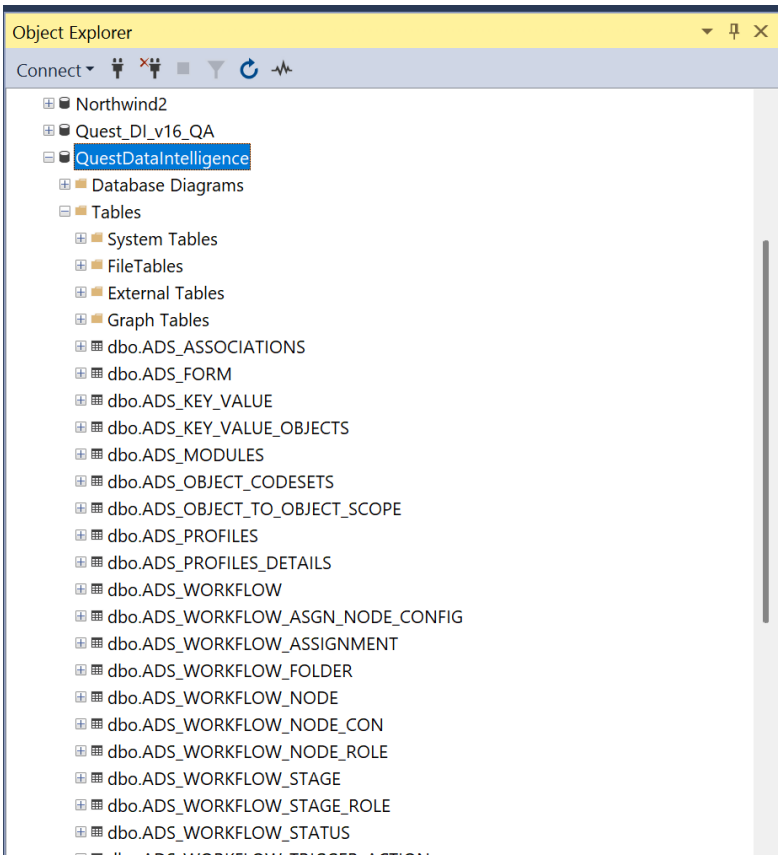


QuestDataIntelligence_Oracle.sql

QuestDataIntelligence_SqlServer.sql



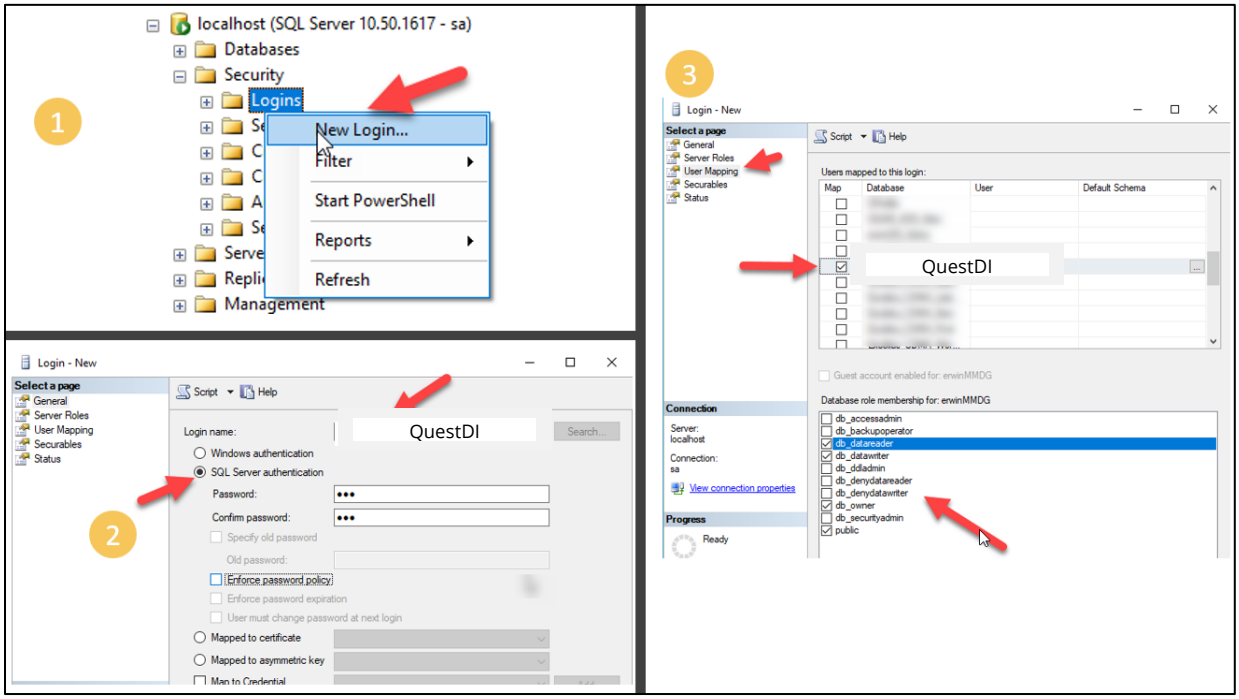
```
IF NOT EXISTS (SELECT *
          FROM   SYSOBJECTS
          WHERE  ID = OBJECT_ID(N'QA_STATUS_CODE')
            AND TYPE = 'U')
  BEGIN
      EXECUTE ('CREATE TABLE QA_STATUS_CODE   (      QA_STATUS_DESC          TEXT NULL,      QA_STATUS_ID
  END
GO

IF NOT EXISTS (SELECT *
          FROM   SYSOBJECTS
          WHERE  ID = OBJECT_ID(N'MAPPING_SPECIFICATION')
            AND TYPE = 'U')
  BEGIN
      EXECUTE ('CREATE TABLE MAPPING_SPECIFICATION   (      PROJ_ID                   INT NOT NULL,      MAP_I

  END
GO

IF NOT EXISTS (SELECT *
          FROM   SYSOBJECTS
          WHERE  ID = OBJECT_ID(N'MAPPING_STATUS')
            AND TYPE = 'U')
  BEGIN
      EXECUTE ('CREATE TABLE MAPPING_STATUS   (      MAP_ID            BIGINT NOT NULL,      PROJ_ID
  END
GO

IF NOT EXISTS (SELECT *
          FROM   SYSOBJECTS
          WHERE  ID = OBJECT_ID(N'MAPPING_DOCUMENTS')
            AND TYPE = 'U')
  BEGIN
      EXECUTE ('CREATE TABLE MAPPING_DOCUMENTS   (      MAP_DOC_NAME            VARCHAR(50) NULL,      MAP_DOC
  END
GO
```



Create a dedicated DB User Account for the Quest Data Intelligence database

1. Create a new Database login role for the QuestDataIntelligence Database (e.g. create a new DB role as "**QuestDataIntelligenceUser**" for the previously created database "QuestDataIntelligence".
2. Both Windows Authentication and SQL Server Authentication modes are supported for a SQL Server database.
3. Grant the new login the following roles.

    - Public, db_owner, data_reader, data_writer



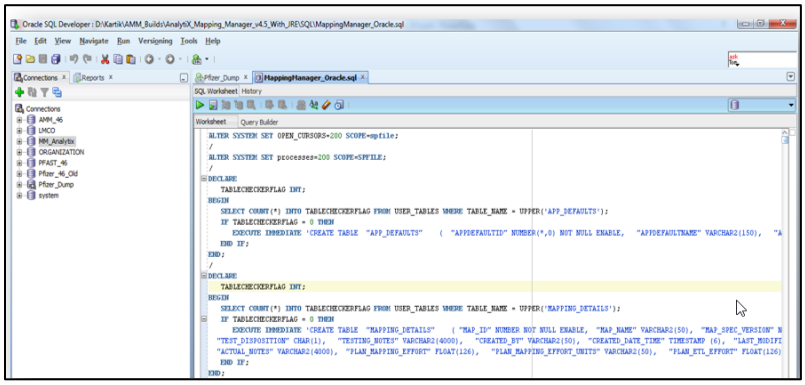
Create a Schema in Oracle Database

1. Create a new Database/Schema name for the DI application in the Oracle database e.g. "**QuestDataIntelligence**"

2. Provide the following privileges to the "**QuestDataIntelligence**" user/schema
    - Resource
    - Connect
    - Create a View Privileges
    - GRANT UNLIMITED TABLESPACE

3. From the SQL folder of the installation software, run the "**QuestDataIntelligence_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:

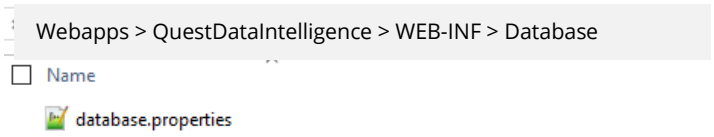
A dedicated schema name needs to be created in Oracle for the DI Suite and the DDL needs to be executed against this dedicated schema.

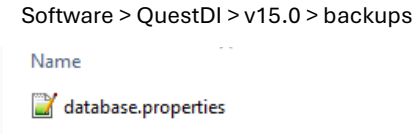
The DDL should not be executed against SYS or SYSTEM schemas.

Step 5: Configuring files for the Database and Documents

Database.properties file Configuration

This file can be found under your Tomcat directory\webapps\QuestDataIntelligence\WEB-INF\database. Create a backup copy of the file before updating and store it in a backup folder with the application zip file. An example is shown below.



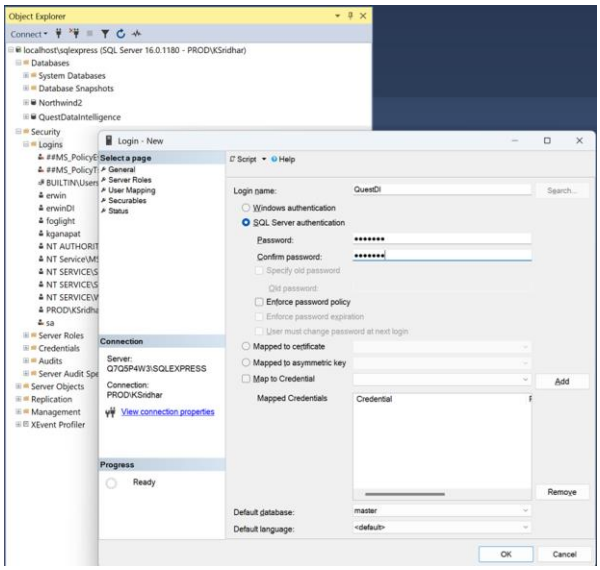


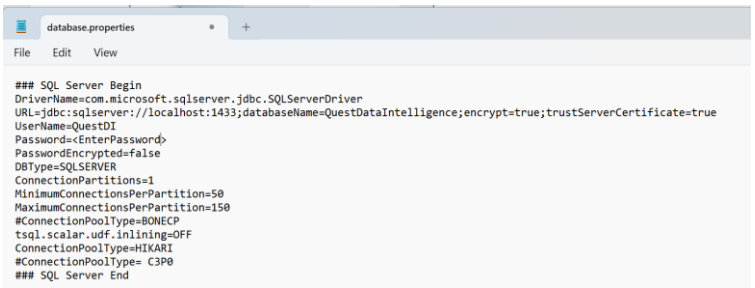
SQL Server Database

SQL Server Authentication Mode

In the first section, enter the following parameters:

- Server Name or IP Address
- Port# (default 1433)
- Database Name
- Username
- Password
- PasswordEncrypted = false





SQL Server Windows Authentication Mode

Comment out the SQL Server section by adding the # at the beginning of each line (between SQL SERVER BEGIN and SQL SERVER END section). Uncomment the SQL Server Windows Authentication section by removing the # at the beginning of each line (between SQL SERVER Windows Authentication BEGIN and SQL SERVER Windows Authentication END section)

Enter the following parameters:

- Server Name or IP Address
- Database Name
- Domain
- Username (this is still required for windows authentication)
- Password (this is still required for windows authentication)
- PasswordEncrypted = false

```
### SQL Server Windows Authentication Begin
#DriverName=net.sourceforge.jtds.jdbc.Driver
#URL=jdbc:jtds:sqlserver://<servername/ipaddress>/<databaseName>;domain=<domainname>
#UserName=uid
#Password=pwd
#PasswordEncrypted=false
#DBType=SQLSERVER
#ConnectionPartitions=1
#MinimumConnectionsPerPartition=50
#MaximumConnectionsPerPartition=150
##ConnectionPoolType=BONECP
#ConnectionPoolType=HIKARI
#TestConnectionQuery=SELECT 1
### SQL Server Windows Authentication End
```

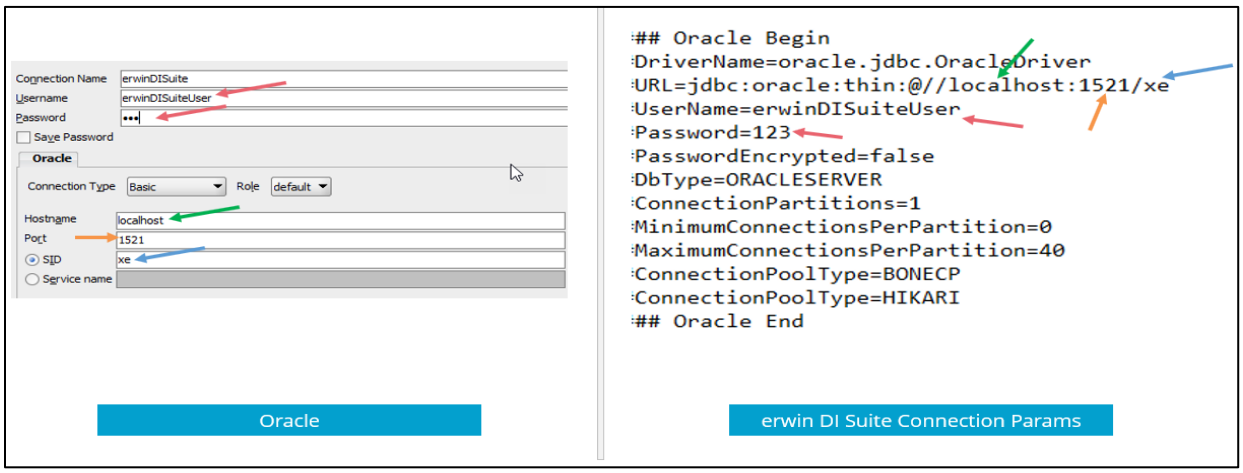
Potential additional parameters to the URL, ;useNTLMv2=true and/or ;ssl=required, if unable to connect.

Oracle Database

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

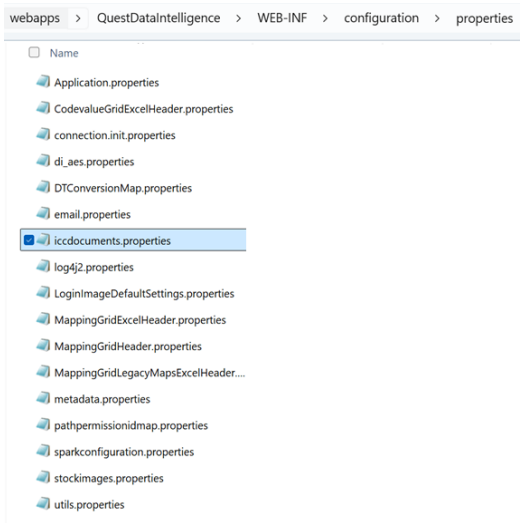
Enter the following parameters:

- Server Name or IP Address
- Port# (default 1521)
- Database Name
- Username
- Password
- PasswordEncrypted = false

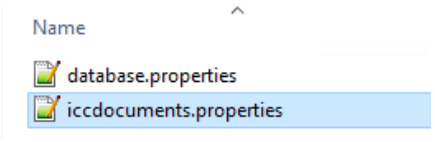


iccdocuments.properties file Configuration

This file can be found under your Tomcat directory\webapps\QuestDataIntelligence\WEB-INF\configuration\properties. Create a backup copy of the file before updating and store it in a backup folder with the application zip file. An example is shown below.



Software > erwinDI > v15.0 > backups



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

Update the ***iccdocuments.properties*** file:

- **DocumentsPath**=Client_Folder_Path **E.g.** DocumentsPath=D:\iccdocuments
  - This directory stores all the documents that are uploaded via the product as part of the rich media library and other attachment functionalities and this folder is used for backup and restoration purposes in case a shift to another server is required in the future.
- **ApplicationURL**= Client_DI_App_URL **E.g.** ApplicationURL= http://QuestServer:8080/QuestDataIntelligence (no port is required if using 80)
  - This is the base Quest Data Intelligence application URL that is used as part of the capabilities that generate Unique URLs to assets (If you will configure TLS/SSL and a DNS name you will need to update the URL to use https://<server/dns name>:8443/QuestDataIntelligence (no port is required if using 443). If you will deploy the QuestDataIntelligence.war file with a different application name, you will need to update the /path to match the deployed application name).
- **ApplicationTempPath**=Provide_New_Path_For_Temp_Files **E.g.** ApplicationTempPath= D:\DISTemp
  - 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.
- **DiscoverAssetsPath**=Provide_Folder_Path for syncing the Discover Assets folder **E.g.** DiscoverAssetsPath=D:\DiscoverAssets
  - This is typically the same path as the *ApplicationTempPath* variable but can be changed if needed. This path is used to sync the assets with the Discover Assets module and will be used going forward to support multiple instances.

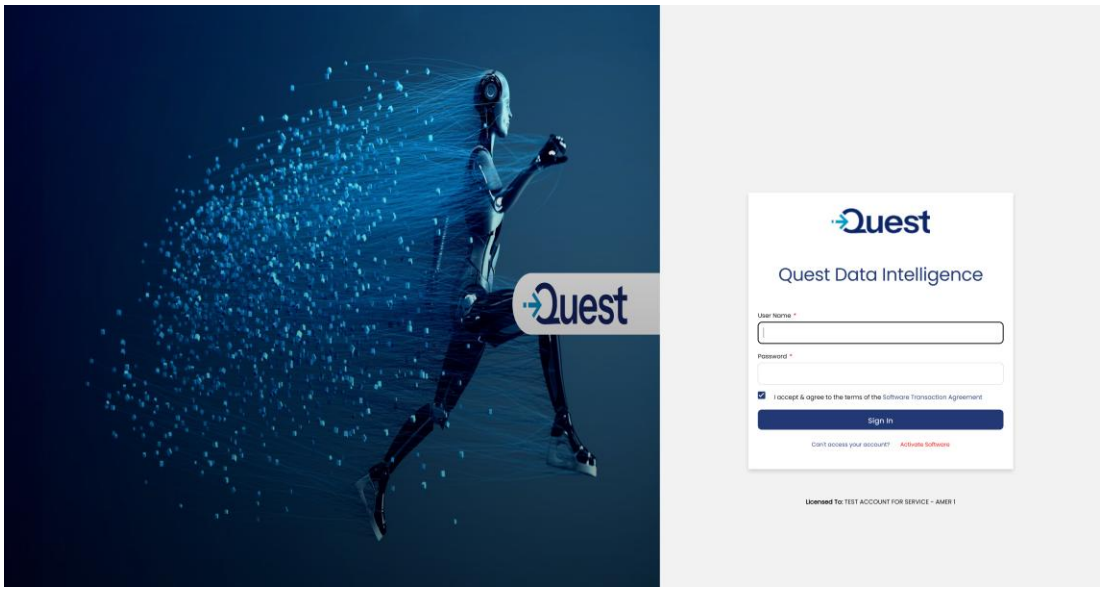
Important: Restart the Tomcat server once the Application and Database Properties file have been updated for these changes to come into effect.

Step 6: Access the Quest Data Intelligence Login Screen

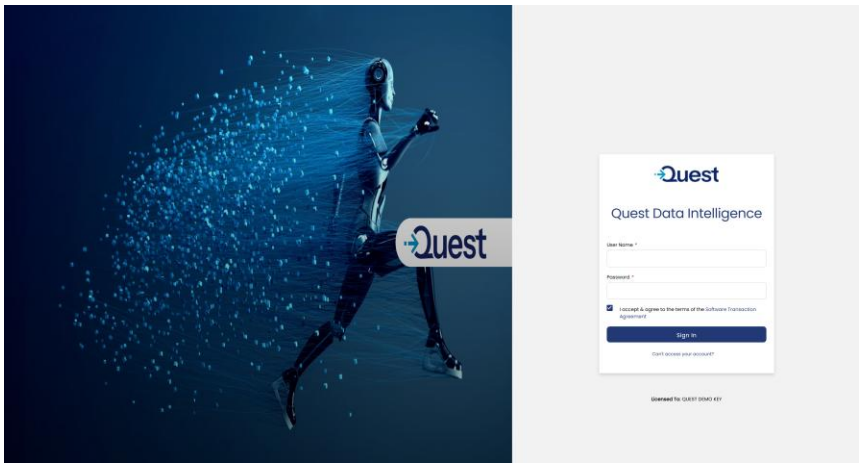
Now it's time to test your work. If you have faithfully completed all the steps outlined in this document, you should now be able to access the Quest Data Intelligence Login screen from your local browser.

The URL format is: **http://<ip-address/hostname>:8080/QuestDataIntelligence** (no port is required if using 80)

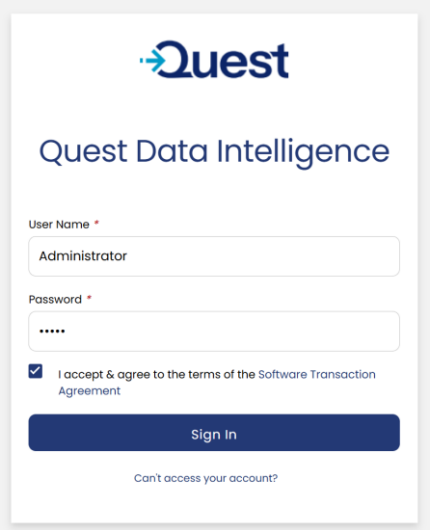
- Replace ***<ip-address/hostname>*** with your correct IP address or DNS hostname.
- Port '***8080***' is the port used earlier when configuring Tomcat (or port 80). If you changed the port used during Tomcat configuration, remember to use the correct port for your environment.
- URI path '***/QuestDataIntelligence***' is the default application name and URI path.
  If you deployed the war file with a different name, use the correct /path for your environment and replace the ***QuestDataIntelligence*** variable accordingly e.g. ***erwinDataIntelligence***
- If all steps were completed accurately, and the correct URL is used, your browser should display the Quest Data Intelligence login screen along with an option to apply your license key.



- Use the license key that has been provided to you to Activate the software (*How to activate the software* section below)
- You should now see the login screen with the license key successfully applied.



- Use your Administrator *User ID* and *Password* credentials to login to the application for the first time and configure all other aspects.

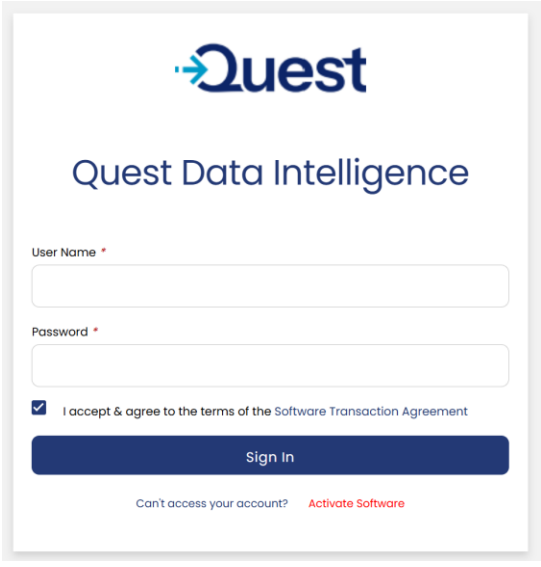


- We recommend that you change the default Administrator password upon login for security purposes.

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.

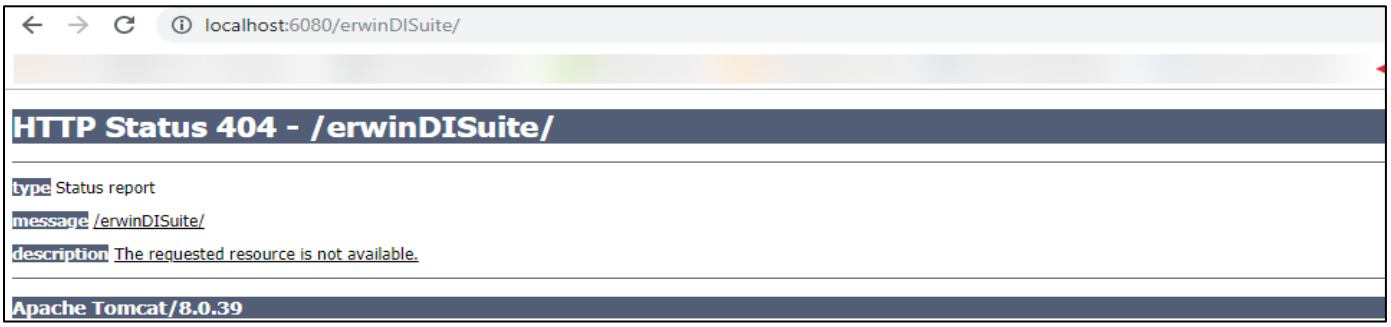
Important Note**: Once the product is successfully installed, please reach out to your sales contact for a valid license key.



Troubleshooting Tips

1. Cannot access the login screen?

Trying to access the URL http://IP_ADDRESS:Port#/QuestDataIntelligence/ in your web browser and get a "404 Page Not Found" or a "black screen" error?



If you get the above error,

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/QuestDataIntelligence/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 or the application is not able to connect to the backend database.

Solution: The port numbers being used for SQL Server or Oracle Databases need to be open and made available for access by the Quest Data Intelligence 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 for the Quest Data Intelligence 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 QuestDataIntelligence.war file results in the application not being available for access. To ensure that the application is properly deployed, go into the tomcat/webapps/QuestDataIntelligence/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 take a copy of the database.properties and iccdocuments.properties files. Then delete the QuestDataIntelligence.war and QuestDataIntelligence folder.
3. Go into the tomcat/work/catalina/localhost folder and delete the QuestDataIntelligence folder.
4. Start Tomcat
5. Follow steps from installation guide to deploy the QuestDataIntelligence.war file again and copy the two files back into the proper folders.

If the errors persist, check the *adsmm.log* file that is available in the location ***D:\Tomcat Directory\logs*** to troubleshoot installation issues and share this file with your Quest SME or raise a support ticket for further assistance.