



# INSTALLATION GUIDE FOR POSTGRESQL

Version 6.7.3



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# 1 Preface

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This guide provides instructions about installing and configuring Logilab ELN. This preface contains these topics:

- [Audience](#)
- [Prerequisites](#)
- [Documentation Accessibility](#)
- [Conventions](#)

## 1.1 Audience

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Logilab ELN Installation Guide is intended for administrators or anyone installing LogilabELN on a computer.

## 1.2 Prerequisites

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- A supported Microsoft Windows operating system installed and tested on your computer system.
- Apache Tomcat Manager 8.0 or above installed with memory pool up to 4GB maximum. Click here for more information on [how to set maximum memory in Tomcat server](#).
- PostgreSQL 9.6 installed and tested on your computer.
- Knowledge about the following concepts:
  - Firewalls
  - Public and private networks
  - Connected applications.

## 1.3 Documentation Accessibility

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Logilab ELN documentation set consists of the following:

1. Logilab ELN Installation Guide v 6.7.3-SQL Server
2. Logilab ELN Installation Guide v 6.7.3-PostgreSQL

### 3. Logilab ELN User Manual v6.7.3

## 1.4 Conventions

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The following text conventions are used in this document:

### 1.4.1 Keyboard

Keys are referred to throughout the guide in the following way:

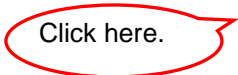
[ENTER] – denotes the return or enter key, [DELETE] – denotes the Delete key and so on.

Where a command requires two keys to be pressed, the manual displays this as follows:

[CTRL][P] – this means press the letter “p” while holding down the Control key.

### 1.4.2 Callout

Callouts are used to denote an action or describe something in the interface.

A red callout bubble with a tail pointing to the right, containing the text 'Click here.'

Click here.

## 2 System requirements

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### 2.1 Hardware Requirements

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Computer	Component	Minimum requirement
Client	Processor	Pentium IV More than 700 MHz
	RAM	16 GB or higher
	Hard disk	20 GB of free space
	Network Access	100 Mbps speed or higher
Server	Processor	Xeon Class 3GHz
	RAM	16GB or higher
	Hard disk	40 GB of free space for installation of database and App server. Minimum RAID I for data protection

## 2.2 Software Requirements

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Computer	Minimum requirement
Client	<p>Microsoft® Windows® 2000 or Windows® XP or Windows Vista or higher (needs special version of client)</p> <p>Windows 8 or Windows 10 (normal version) or higher</p> <p>Latest version of Google Chrome</p>
Server	<p>Microsoft® Windows® 2016 server or higher.</p> <p>Apache Tomcat Manager 8.0 or above installed with memory pool up to 4GB maximum.</p> <p>Upto PostgreSQL 14.0 installed.</p> <p>Upto PgAdmin 4 Version 7.0 installed.</p> <p>Up to MongoDB 5.0.18 installed.</p>

## 3 Installation

To Install Logilab ELN, you must create archive database, and then install ELN.

Logilab ELN installation process consists of the following steps:

Step 1: [Creating Database and Archive Database for ELN](#)

Step 2: [Creating Database in MongoDB](#)

Step 3: [Installing Logilab ELN](#)

### 3.1 Creating Database and Archive Database for ELN

To create archive database for ELN, follow these steps:

1. Open **PgAdmin**. The login screen appears as shown in the figure:

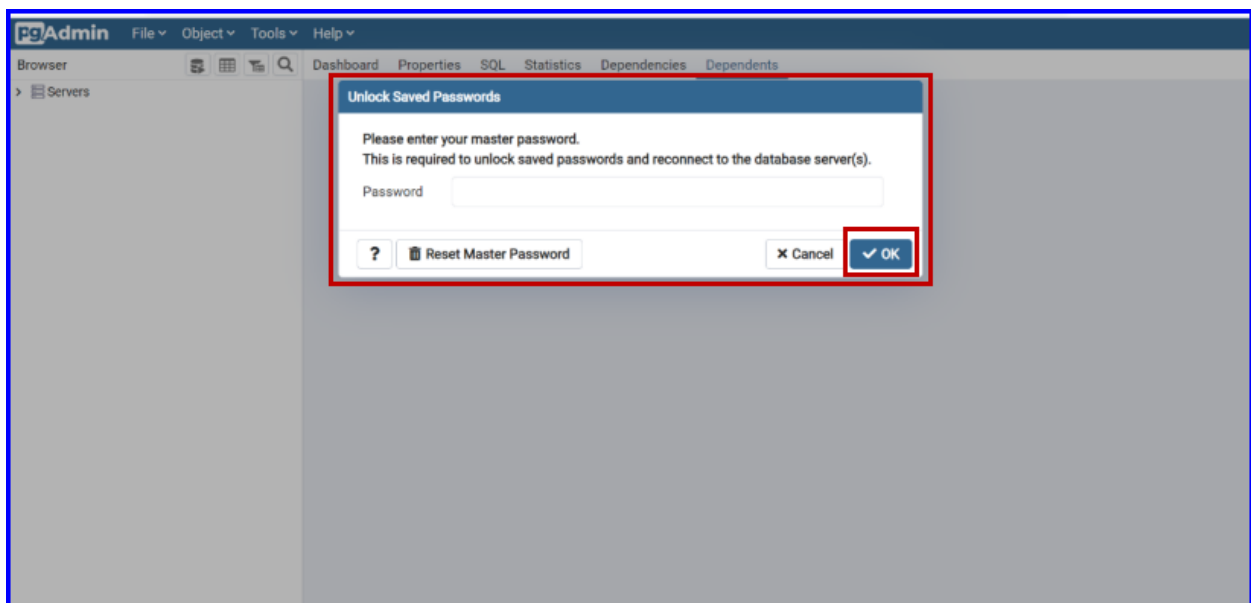


FIGURE: Postgres SQL Login Screen

2. In the **Password** field, type a valid password and then click **OK**. The PostgreSQL admin screen appears as shown in the figure:



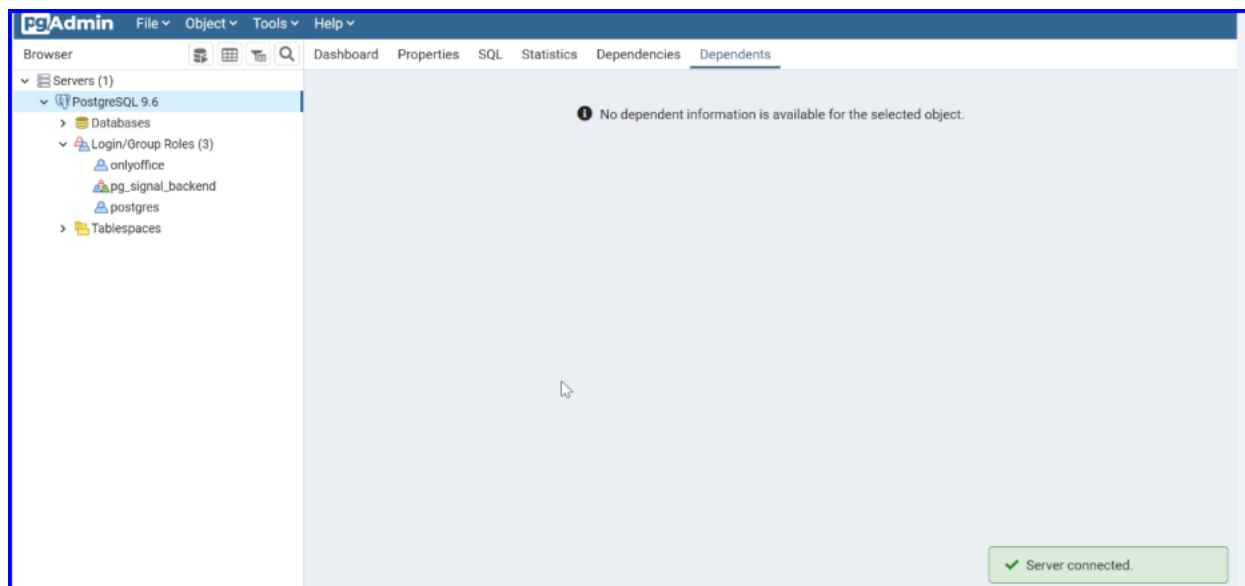


FIGURE: PostgreSQL Admin Screen

3. Right-click **Databases**, click **Create** and then click **Database** as shown in the figure:

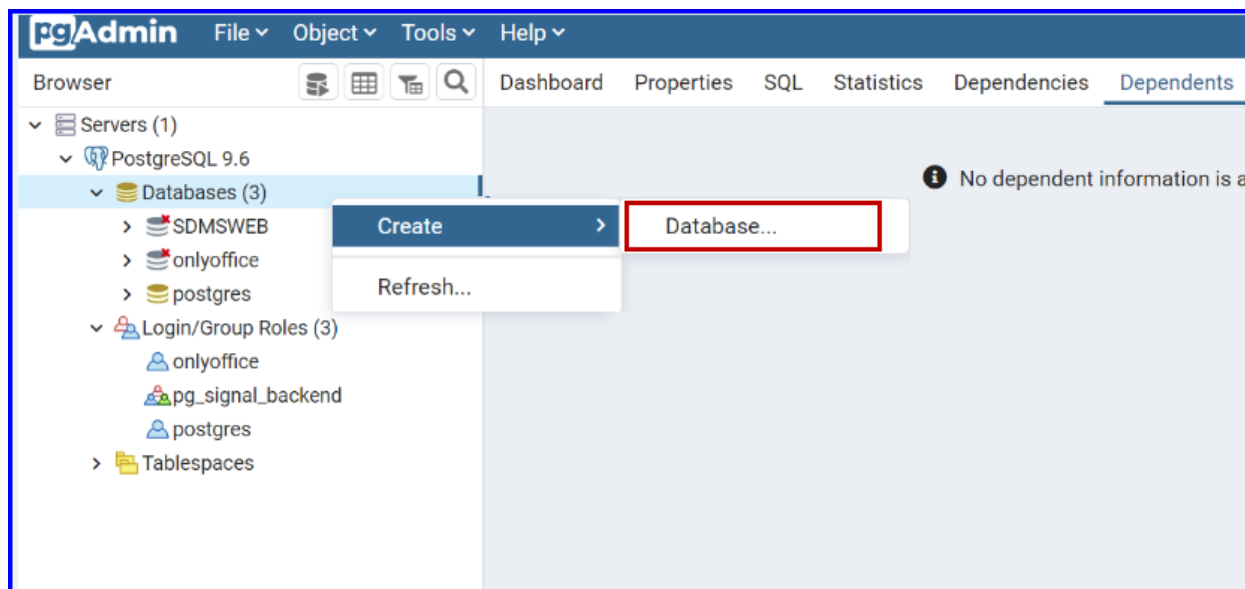


FIGURE: Creating Database for ELN

The **Create - Database** dialog appears as shown in the figure:

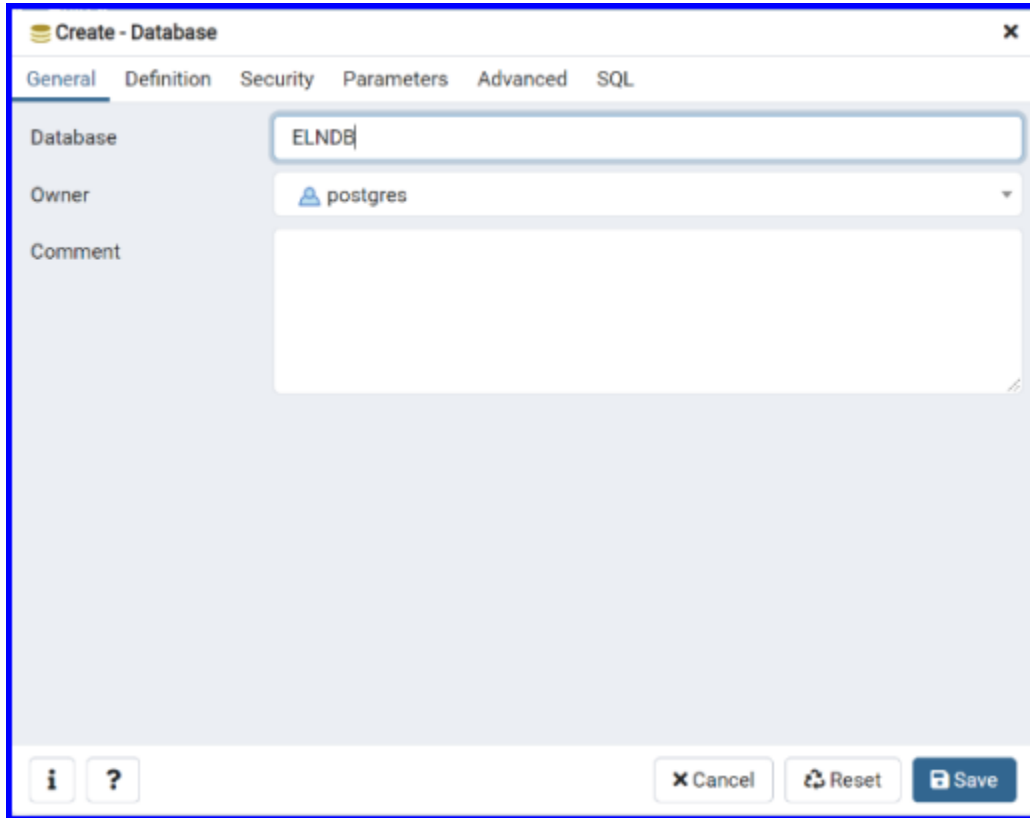


FIGURE: Create Database Dialog

4. In the **Create Database** dialog, in the **Database** field, type a name for the database you want to create. For example: ELNDB
5. Click **Save**. You can see the new database created and appears as shown in the figure:

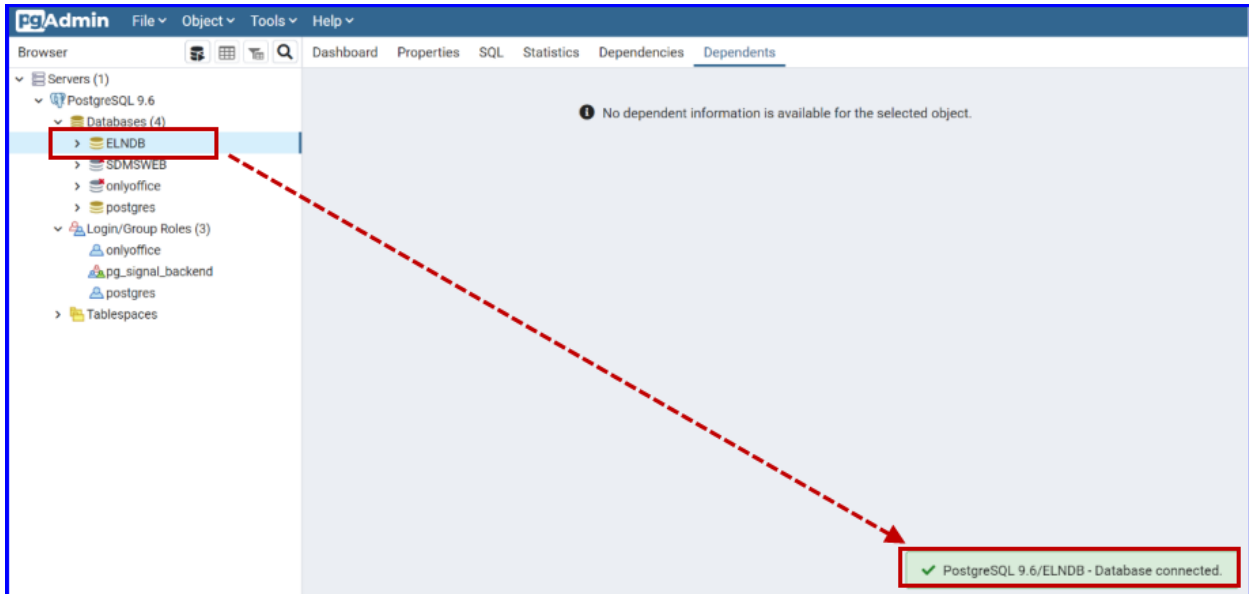


FIGURE: New Database Created

6. Click on the database you created. You can see a message saying, “**PostgreSQL 9.6/ELNDB – Database Connected**”.
7. Follow step 2 to step 4 to create an archive database. For example: Archive DB, as shown in the figure:

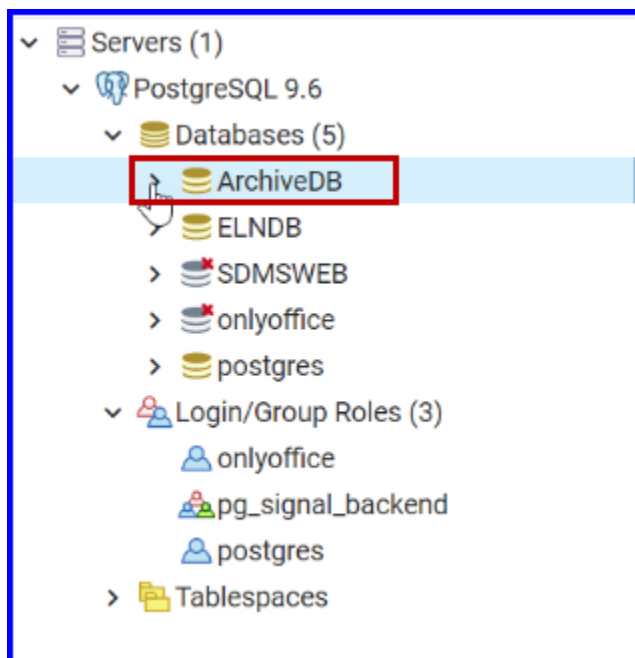


FIGURE: Archive Database Created

## 3.2 Creating Database in MongoDB

1. In the MongoDB **New Connection** screen, click **Fill in connection fields individually**, as shown in the figure:

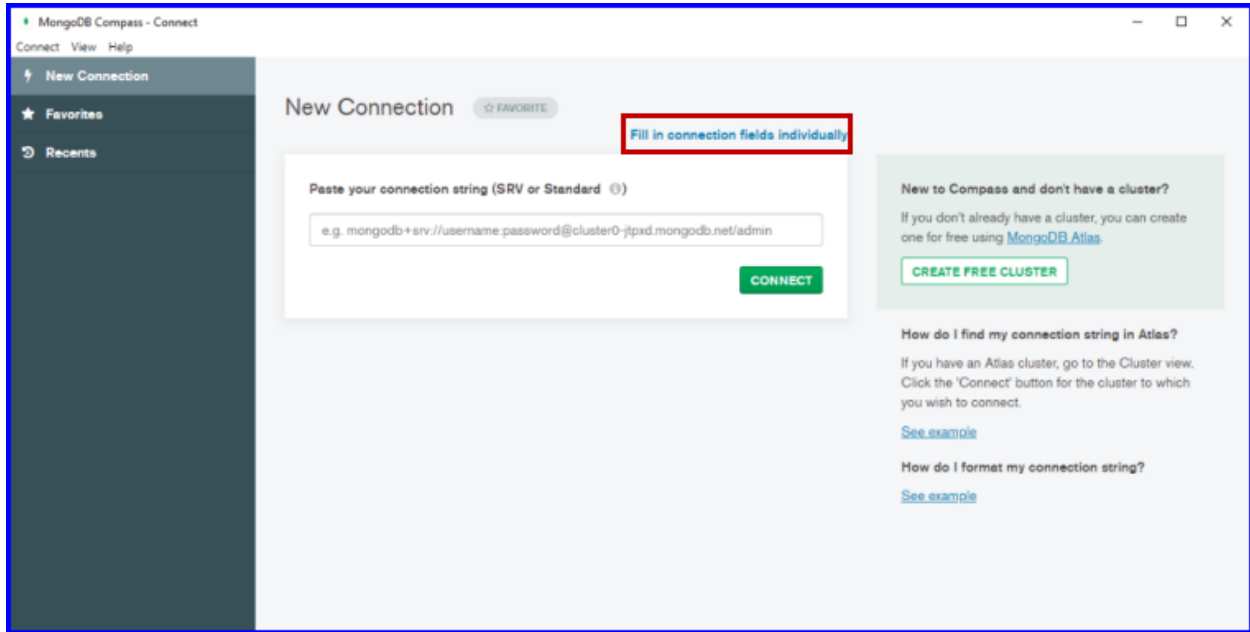


FIGURE: New Connection Screen

The screen appears as shown in the figure:

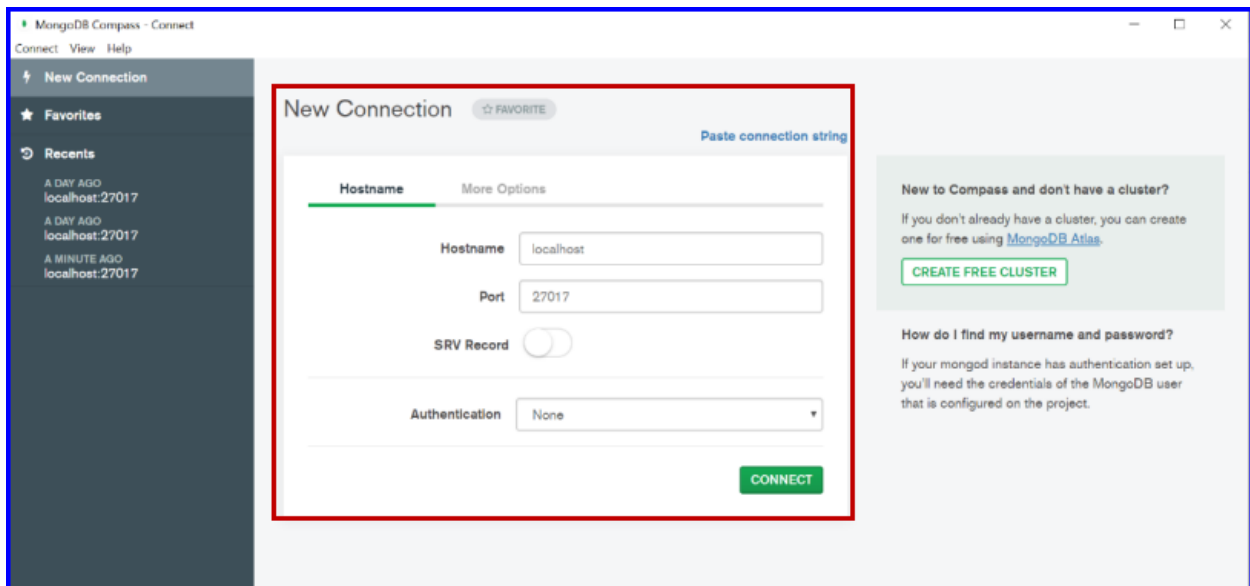


FIGURE: New Connection Screen

2. Under **Hostname**, in the **Hostname** and **Port** fields, ensure that the default host name and port number of MongoDB is filled and then click **CONNECT**. The screen appears as shown in the figure:

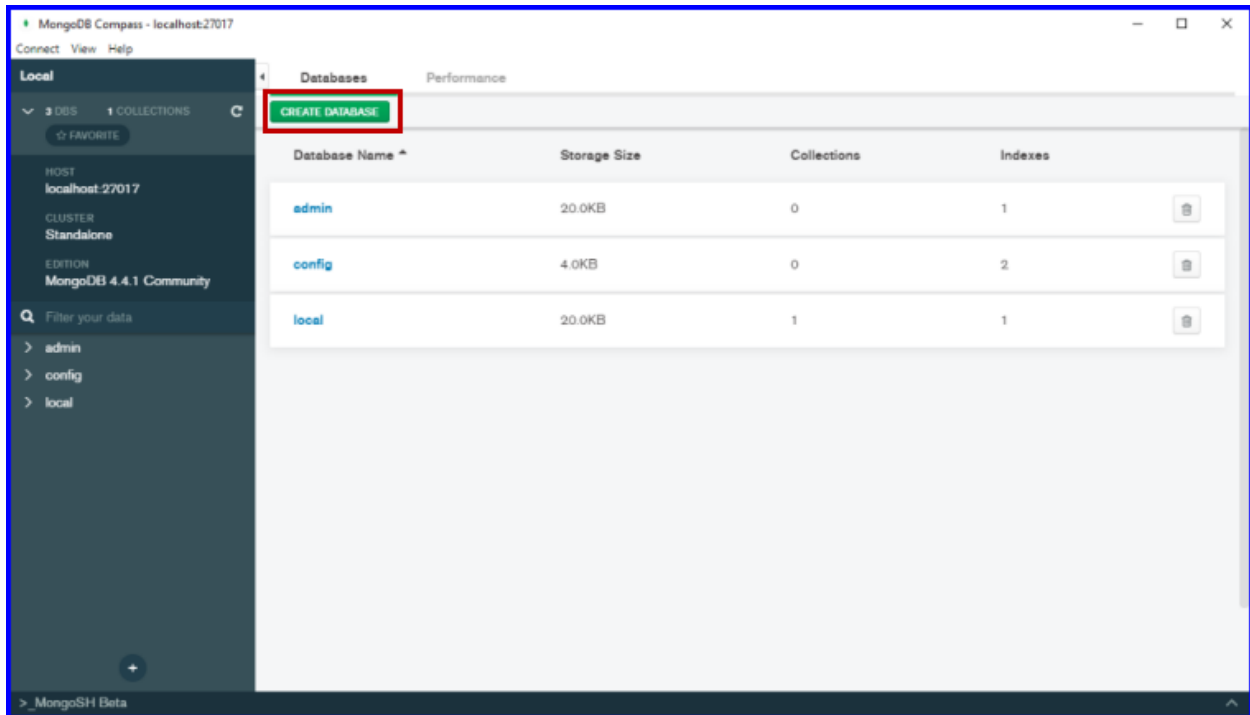


FIGURE: Database Screen

3. Click **CREATE DATABASE**. The **Create Database** dialog appears as shown in the figure:



FIGURE: Create Database Dialog

4. In the **Database Name** field, type the database name. Example: ELN
5. In the **Collection Name** field, type collection name. Example: ELN

6. Click **CREATE DATABASE**. The database is created and appears as shown in the figure:

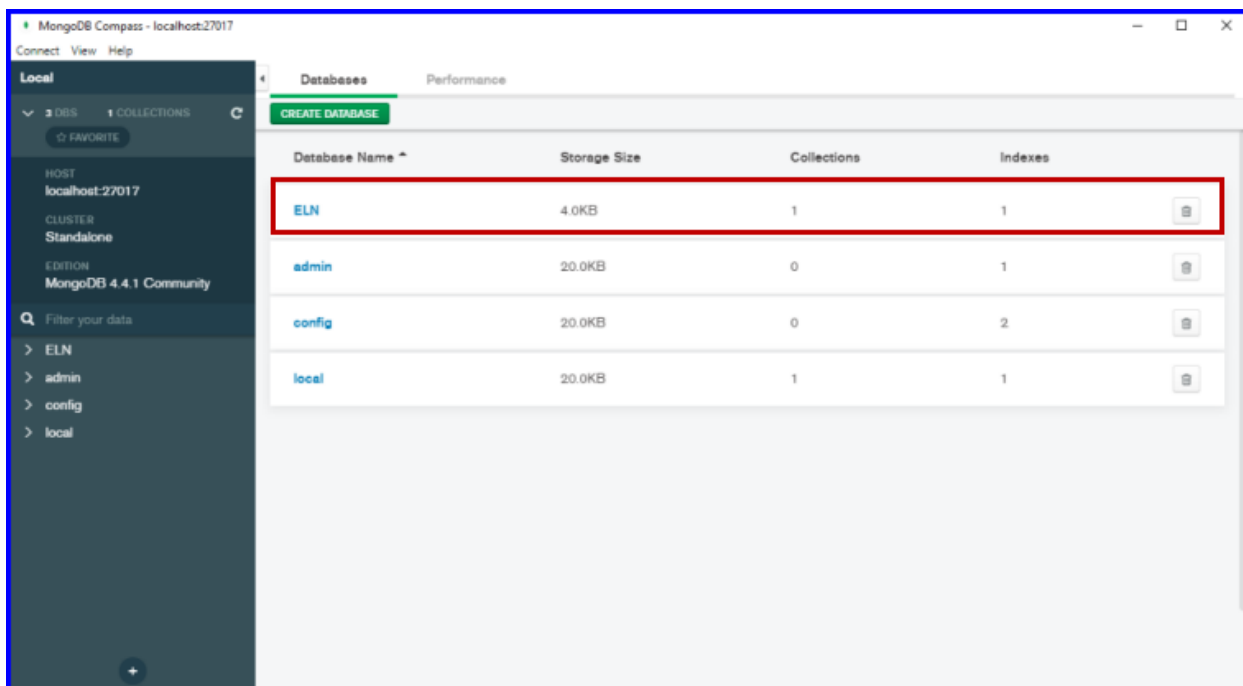


FIGURE: Database Created

At runtime, you see the orders, sheets etc. created stored in MongoDB appear as shown in the figure.

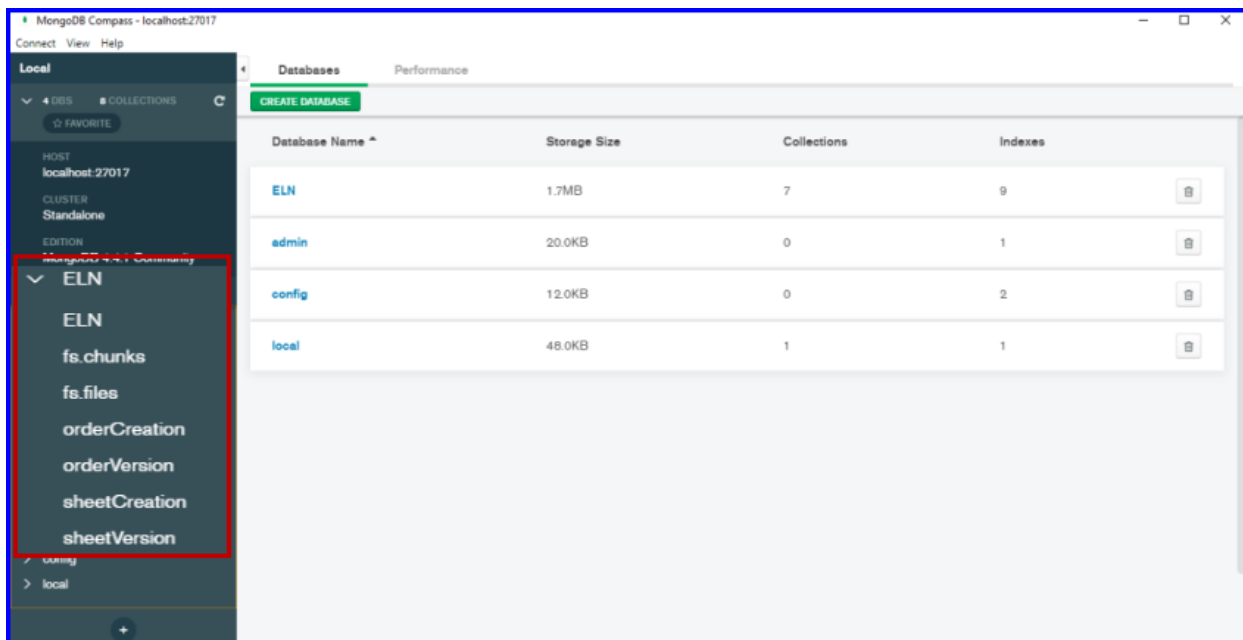


FIGURE: MongoDB Showing Stored ELN Sheets and Orders

## 3.3 Installing Logilab ELN

To Install Logilab ELN, follow these steps:

1. Open the folder that contains ELN installation files as shown in the figure:

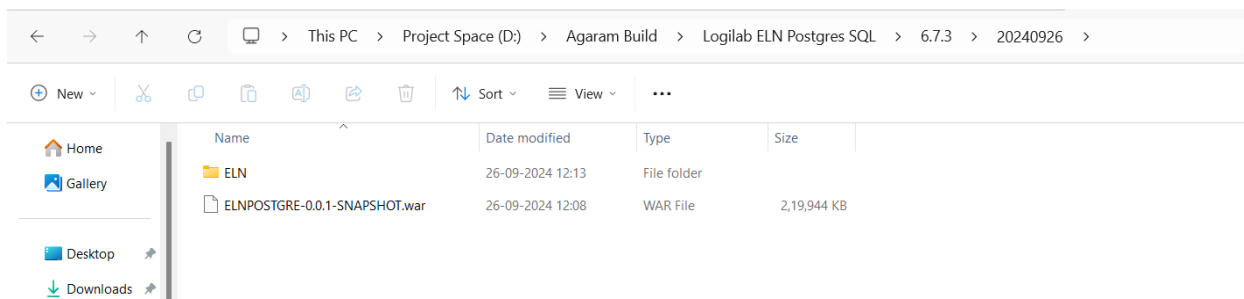


FIGURE: ELN Installation Folders

2. Copy the **ELN** folder and **ELNPOSTGRE-0.0.1-SNAPSHOT.war** file to the **webapps** folder in the Tomcat server as shown in the figure:

**Note:**

i) If *LIMS LabSheet\_Service* is involved, then you must copy the *LIMSLabSheet\_Service-1.0.1.war* file along with other files to the **webapps** folder.

ii) Ensure that the Tomcat server is stopped when you copy these folders into the **webapps** folder.

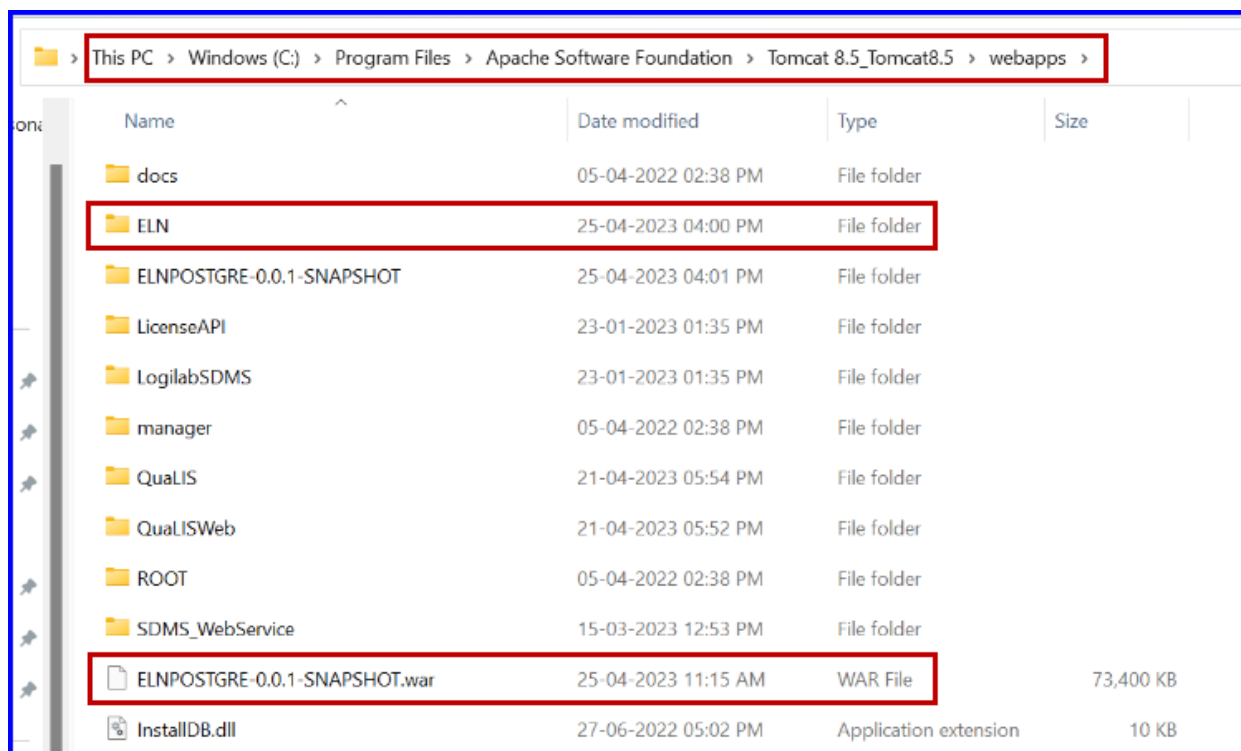


FIGURE: Copying ELN Installation Folder to Tomcat webapps Folder

3. Start Tomcat service in services.msc. The **ELNPOSTGRE-0.0.1-SNAPSHOT** folder is generated inside the **webapps** folder as shown in the figure:

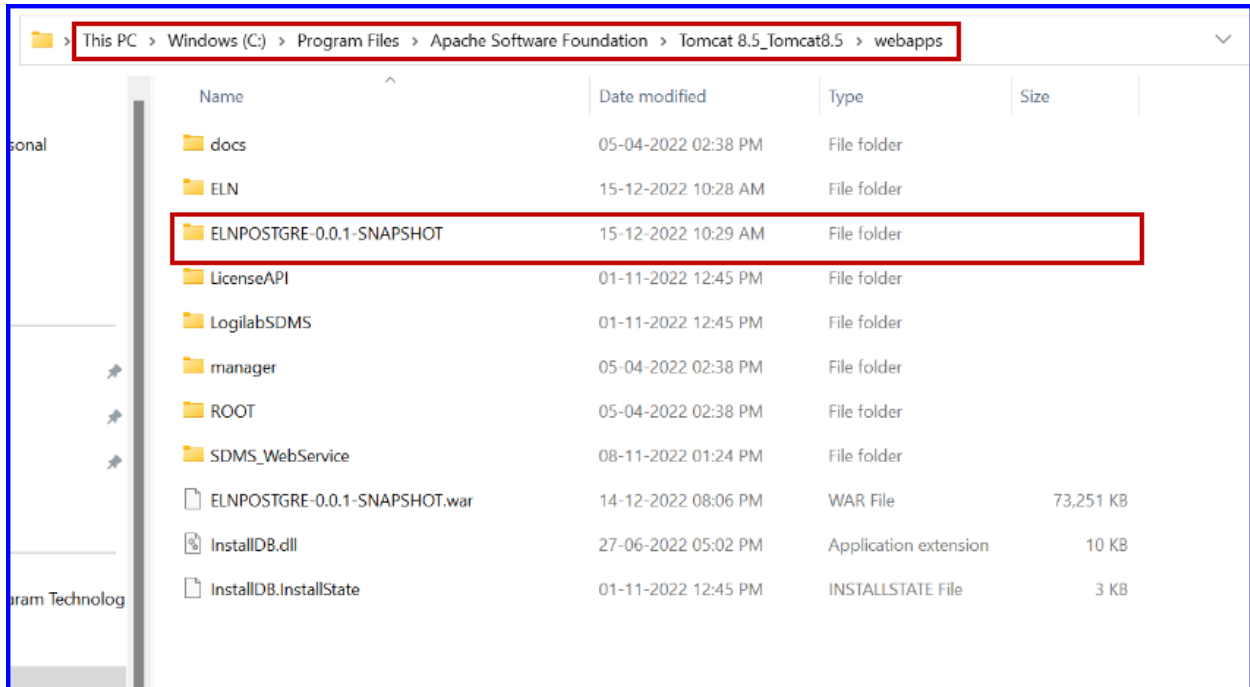


FIGURE: ELNPOSTGRE-0.0.1-SNAPSHOT Folder Generated

4. Stop Tomcat service in services.msc.
5. Inside the Tomcat **webapps** folder, open **ELNPOSTGRE-0.0.1-SNAPSHOT\WEB-INF\classes** folder.
6. Locate **application.properties** file, right-click and then click **Edit with Notepad++** as shown in the figure:



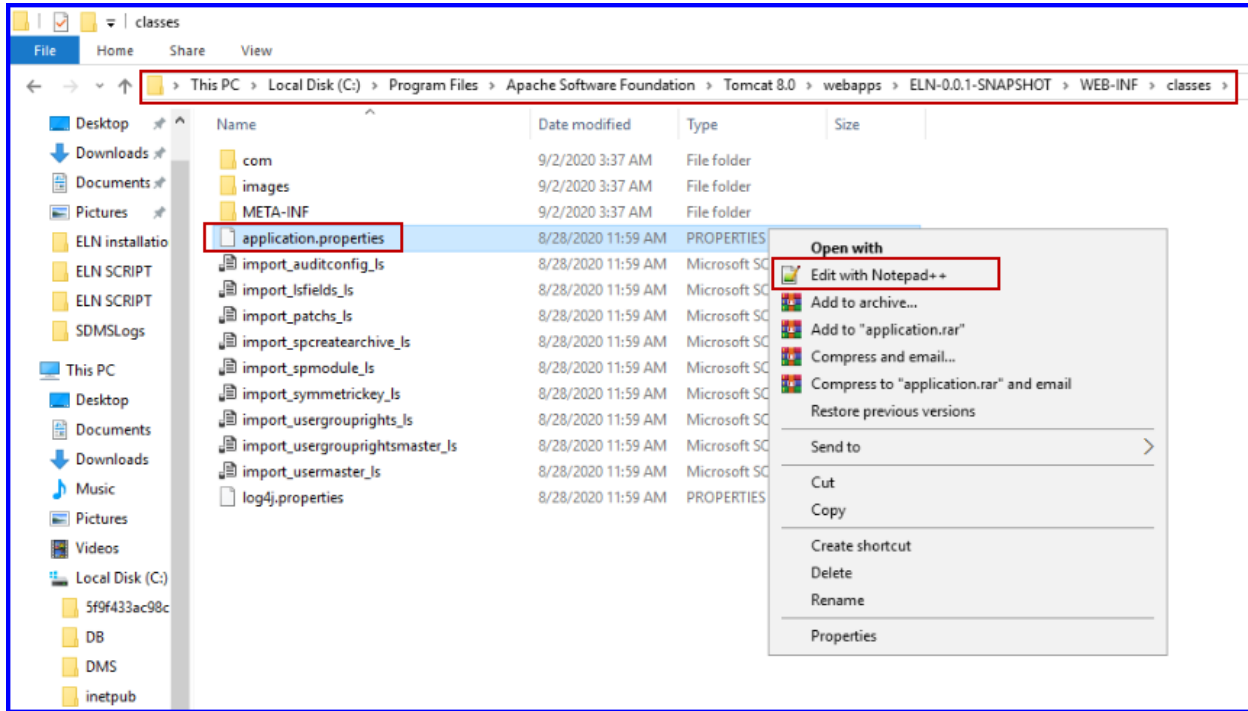


FIGURE: Opening application. properties File

- Update the **PostgreSQL server** name, **Database** name, **username** and **password**, **Archive DB** name as shown in the figure:

```

application (9).properties
1  spring.servlet.multipart.enabled=true
2  spring.servlet.multipart.max-file-size=512MB
3  spring.servlet.multipart.max-request-size=512MB
4
5  spring.http.multipart.max-file-size=512MB
6  spring.http.multipart.max-request-size=512MB
7
8  app.datasource.eln.url=jdbc:postgresql://localhost:5433/ELNDB
9  app.datasource.eln.username=postgres
10 app.datasource.eln.password=postgres
11 app.datasource.eln.driverClassName=org.postgresql.Driver
12 app.datasource.eln.initialize=false
13 #spring.jpa.hibernate.ddl-auto=create
14
15 app.datasource.archive.url=jdbc:postgresql://localhost:5435/ArchiveDB
16 app.datasource.archive.username=postgres
17 app.datasource.archive.password=postgres
18 app.datasource.archive.driverClassName=org.postgresql.Driver
19
20 spring.jpa.show-sql=true
21 spring.jpa.properties.hibernate.dialect =org.hibernate.dialect.PostgreSQL92Dialect
22 spring.datasource.driver-class-name=org.postgresql.Driver
23
24 spring.jpa.database-platform=org.hibernate.dialect.PostgreSQL9Dialect
25 spring.jpa.generate-ddl=true
26 spring.data.mongodb.uri=mongodb://localhost:27017/ELNPGDB
27 spring.jpa.properties.hibernate.temp.use_jdbc_metadata_defaults = false
28
29 spring.jpa.hibernate.naming.physical-strategy=org.hibernate.boot.model.naming.PhysicalNamingStrategyStandardImpl
30
31 limsbaseservice.url=http://AGL88:8085/QualIS/
32 webparserservice.url=http://192.168.0.235:8089/methodSetup/
33 sdms.template.service.url=http://AGL88:8085/SDMS_WebService/
34 # true = direct call on lims service, false = call from limslabsheetservice
35 limsbaseservice.serviceapi=true
36
37 DocxApi=http://AGL88/web-apps/apps/api/documents/api.js
38 DocxUrl=http://AGL88:8090/ELNdocuments
39 #Comment next line in case of deployment
40 #DocsPath=C:/Program Files/Apache Software Foundation/Tomcat 8.5/webapps/ROOT/ELNdocuments/
41 fileReceiver = http://1lelnonlyofficev6.centralus.cloudapp.azure.com:9080/ELNfileReceiver-0.0.1-SNAPSHOT/fileserver
42
43 server.port = 8095
44
45 jwt.secret=agaram
46
    
```

**1. This code is to update existing database.**  
**2. To create new database, set "app.datasource.eln.initialize=true" and then uncomment "spring.jpa.hibernate.ddl-auto=create"**

FIGURE: Editing Script in application.properties file

Edit the script as mentioned below for color boxes.

  Update PostgreSQL server name or IP Address and port number of PostgreSQL Server. The default port number 5432 is recommended for PostgreSQL.

  Update Database name used for ELN.

### Updating Existing Database:

Set `app.datasource.eln.initialize=false` and comment `spring.jpa.hibernate.ddl-auto=create` to update existing database.

### Creating New Database:

Set `app.datasource.eln.initialize=true` and ensure that the `spring.jpa.hibernate.ddl-auto=create` is not commented if you want to create a new database.

*Warning: If you use this code when you update an existing database, the database is flushed, hence you will experience data loss.*

After creating a new database, you must change `app.datasource.eln.initialize=false`, and comment the `spring.jpa.hibernate.ddl-auto=create` line and then restart Tomcat service to run the application service.

Update ELN archive Database name

Update username and password you use to connect PostgreSQL server.

The Mongo database is created and the same is updated as shown in the above figure.

## 3.3.1 Connecting LIMS

### 3.3.1.1 Method 1: Connect using LIMS lab sheet service.

To connect using LIMS lab sheet service, follow these steps:

- a. Set `limsbaseservice.serviceapi=false`.
- b. And then, update the LIMS lab sheet service folder name (**LIMSLabSheet\_Service-1.0.1**) as shown in the figure:

```

29 limsbaseservice.url=http://AGL88:8085/LIMSLabSheet_Service-1.0.1/
30 webparserservice.url=http://AGL88:8090/methodSetup/
31 sdms.template.service.url=http://AGL88:8085/SDMS_WebService/
32 # true = direct call on lims service, false = call from limslabsheetservice
33 limsbaseservice.serviceapi=false
34
  
```

FIGURE: Connect LIMS Using LIMSLabSheetService

### 3.3.1.2 Method 2: Connect Directly

To connect LIMS directly, follow these steps:

- a. Set `limsbaseservice.serviceapi=true`.
- b. And then, update the LIMS build folder name (**QualIS**) as shown in the figure.

```

28  limsbaseservice.url=http://AGL88:8085/QualIS
29  webparserservice.url=http://AGD59:8090/methodSetup/
30  sdms.template.service.url=http://AGL88:8085/SDMS_WebService/
31  # true = direct call on lims service, false = call from limslabsheetservice
32  limsbaseservice.serviceapi=true
    
```

FIGURE: Connect LIMS Directly

### 3.3.1.3 Connecting SDMS

If the database for SDMS is maintained separately, then configure SDMS DB details in the index.html file.

To do so, follow these steps:

8. Inside the Tomcat **webapps** folder, open **ELN** folder. The screen appears as shown in the figure:

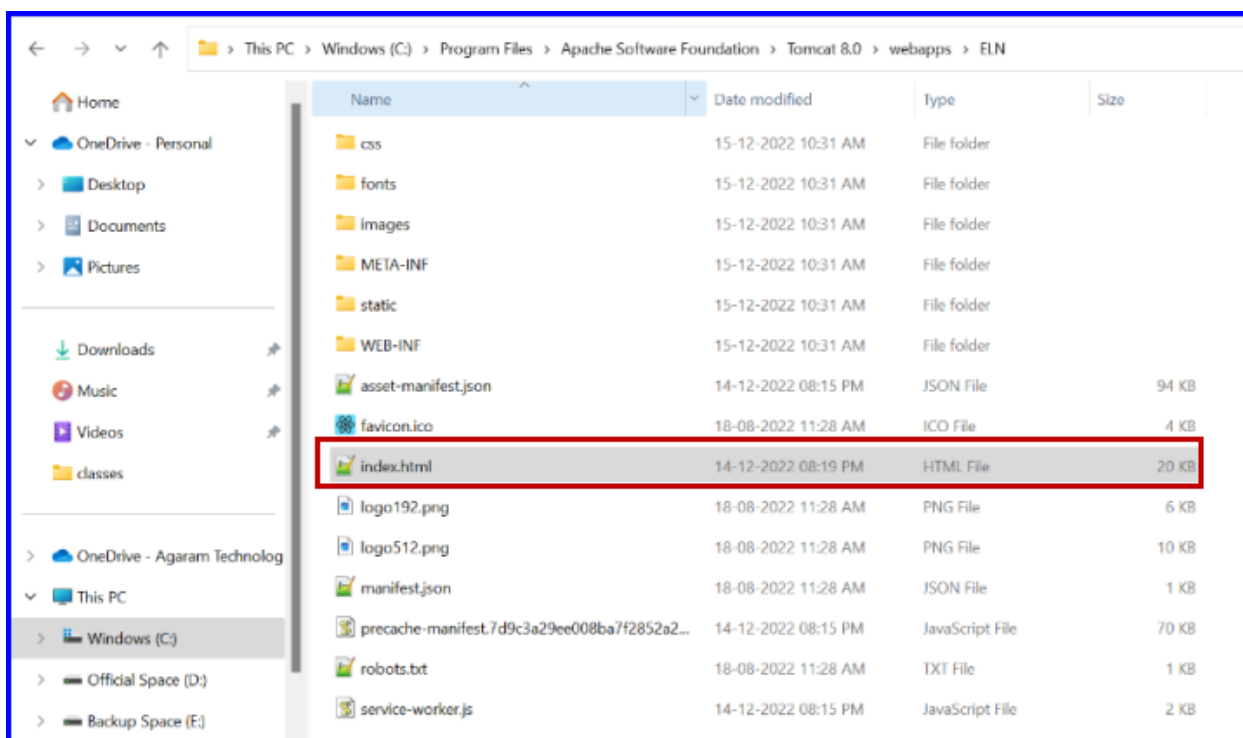


FIGURE: Editing index.html File

9. Locate **index.html** file, right-click and then click **Edit with Notepad++**.
10. Update the server's name and Tomcat Port number of SDMS DB as shown in the figure:

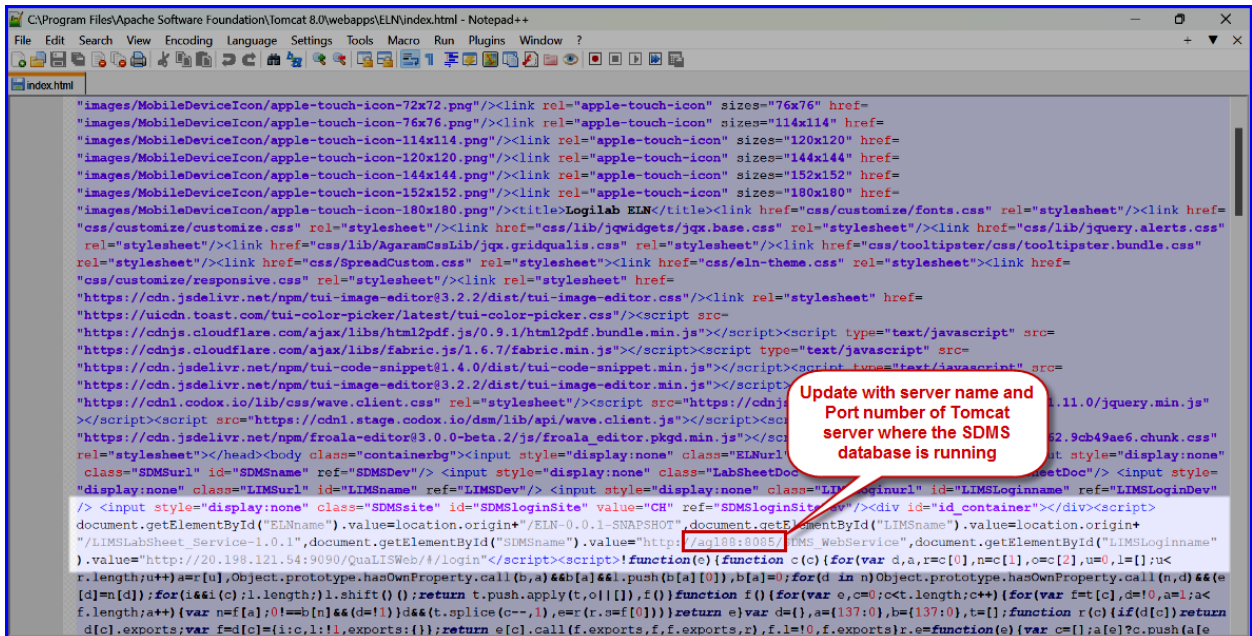


FIGURE: Updating Server name and Port No of SDMS DB

11. Restart Tomcat server.
12. In the Tomcat Application status screen, you can check the status as running for the **ELN** and **ELNPOSTGRE-0.0.1-SNAPSHOT** as shown in the figure:

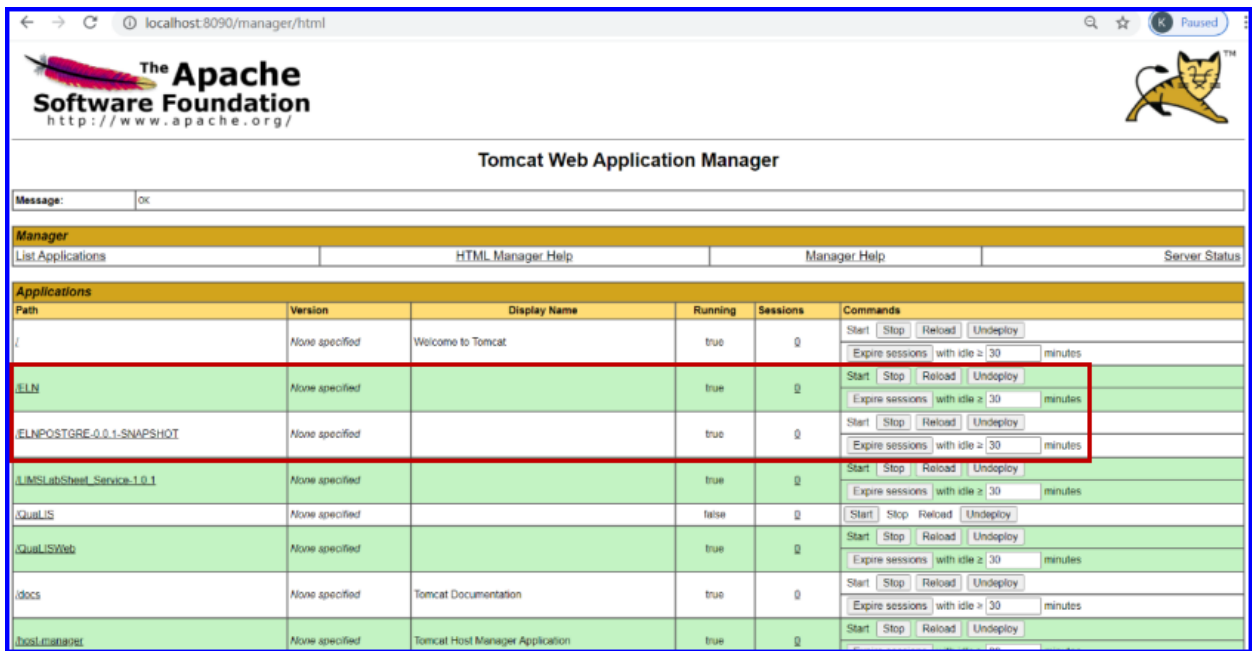


FIGURE: Checking Service Status

13. In the Tomcat **Applications** status screen click **ELN** application to start Logilab ELN application in a browser. Alternatively, you can use the link that you received from your

administrator to open Logilab ELN in a browser. The Logilab ELN login screen appears as shown in the figure:

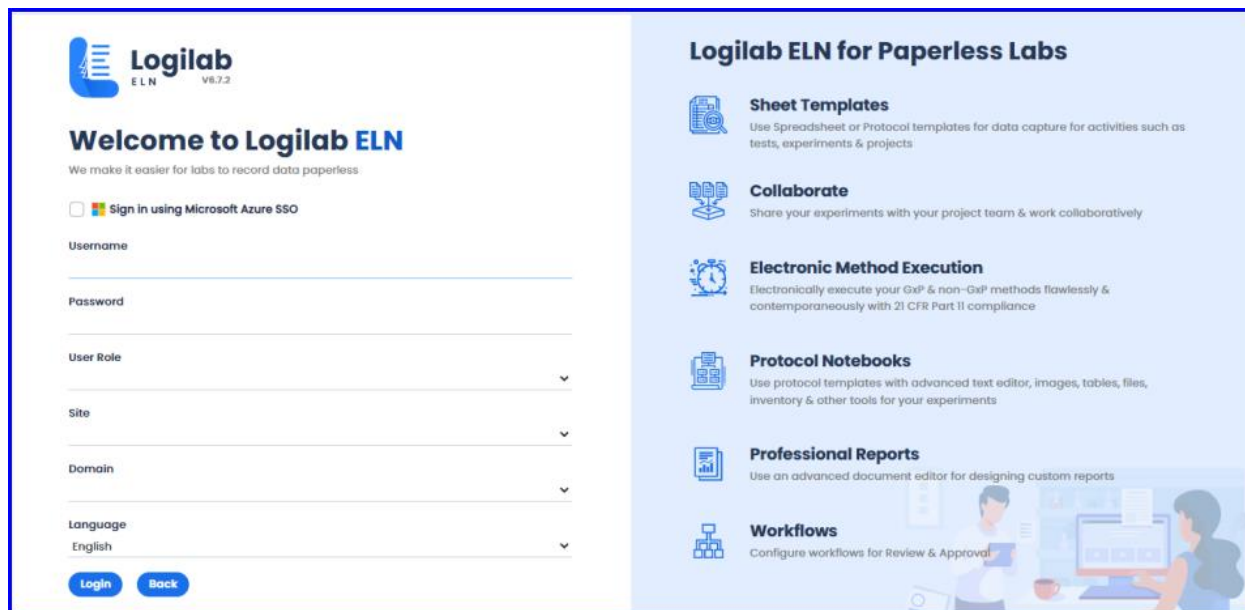
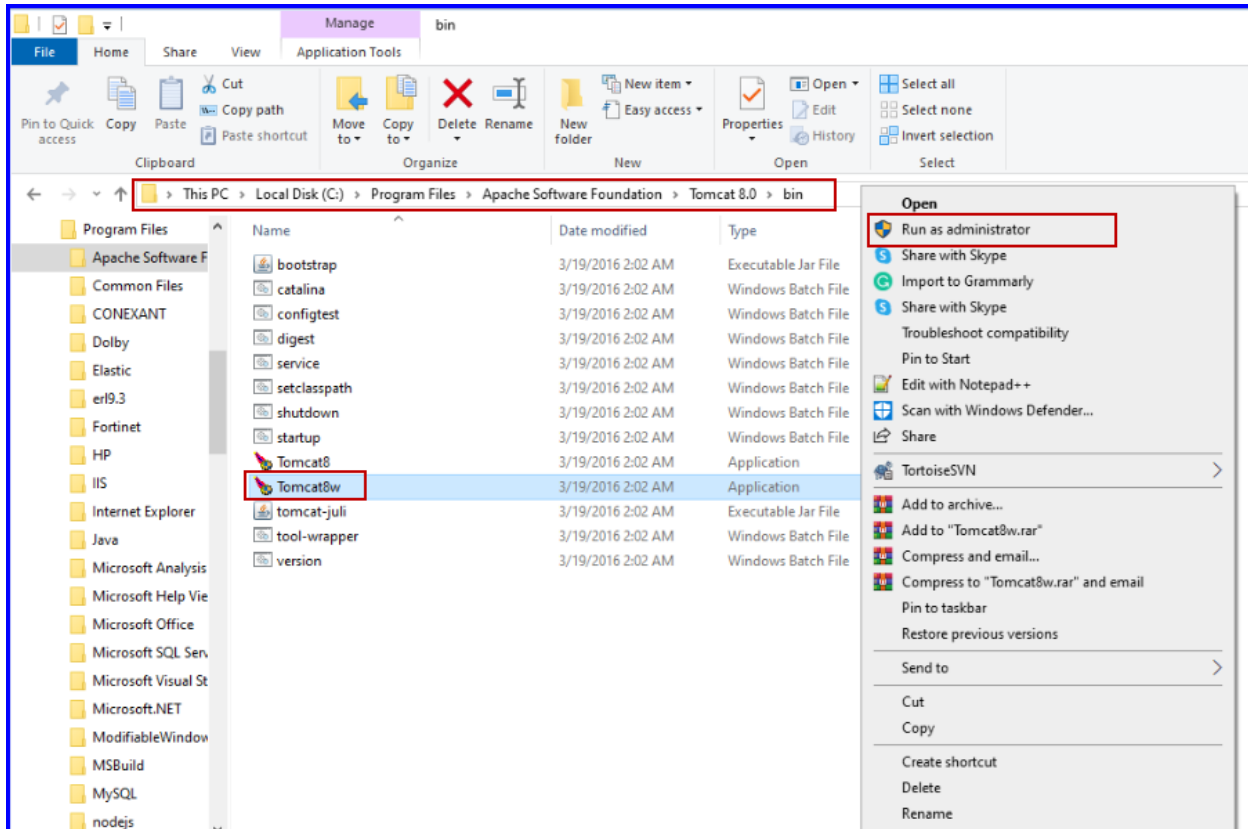


FIGURE: Logilab ELN Login Screen

## 4 Annexure

### 4.1 Tomcat Maximum Memory Setting

1. Open the **bin** folder inside Tomcat server as shown in the figure:



2. Right-click **Tomcat8w** application file and then click **Run as administrator**. The **Apache Tomcat Properties** dialog appears.
3. Go to the **Java** tab. In the **Initial Memory Pool** and in the **Maximum Memory Pool** fields type **4000** as shown in the figure:

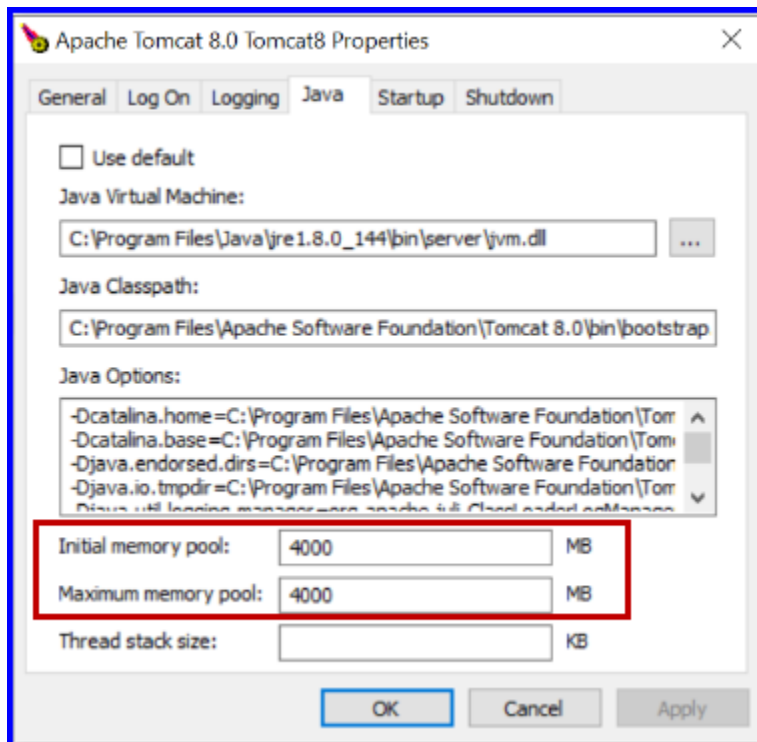


FIGURE: Apache Tomcat Properties – Java Tab

4. Click **Apply**.
5. Click **Ok**.
6. Restart Tomcat server.