



Note Server Installation

The NoteServer software is provided with source code and is built using gradle.

1 Operating environments (hardware, OS, platform)

The NoteServer will work on any platform that has a Java 1.7 SE JDK. It has been tested on Linux and Mac OS X.

2 Software dependencies

For following software is needed to install and run the NoteServer.

Software	Installation	URL
MySQL	manual	http://www.mysql.com/
Java SE JDK	manual	http://www.oracle.com/technetwork/java/javase/downloads/index.html
gradle	automatic	http://gradle.org/
spring.io	automatic	http://spring.io/

Only the first two need to be installed manually, since gradle and spring.io will be installed automatically by the gradle wrapper.

3 Installation

This installation is for Mac OS and Linux only. For Windows, adjust the command line instructions accordingly. These instructions assume that you have Java installed.

3.1 MySQL installation and setup

In the terminal:

1. Download MySQL.

```
$ wget http://dev.mysql.com/get/Downloads/MySQL-5.7/mysql-5.7.16-osx10.11-x86_64.tar.gz
```

2. Extract tarball and rename directory (optional).

```
$ tar xzf mysql-5.7.16-osx10.11-x86_64.tar.gz
$ mv mysql-5.7.16-osx10.11-x86_64 mysql
```

3. Initialize the mysql data directory inside the installation.

```
$ cd mysql
$ BASEDIR=$(pwd)
$ ./bin/mysqld --initialize --basedir=$BASEDIR
```

4. Start mysqld.

```
$ ./bin/mysqld --basedir=$BASEDIR &
```

5. Login to mysql and reset the root password. Use the initial root password created and printed to stderr in the initialization step.

```
$ ./bin/mysql -u root -p
```

6. Change the root password to something memorable.

```
ALTER USER 'root'@'localhost' IDENTIFIED BY 'abc123';
```

3.2 Setup database for server.

1. Create a regular MySQL user for the server to connect with

```
CREATE USER 'foo'@'%' IDENTIFIED BY 'bar';
```

2. Create a database for the note server and allow access to the user just created.

```
CREATE DATABASE notes CHARACTER SET utf8 COLLATE utf8_bin;
GRANT ALL PRIVILEGES ON notes.* TO 'foo'@'%';
FLUSH PRIVILEGES;
```

4 Install Server

With the database setup, perform the following to install the server. In the terminal:

1. Change directories to the location of the NoteServer.
2. Run the note database script to initialize the database with tables and data.

```
$ ./bin/mysql -u foo -p notes < script/notes.sql
```

3. The server configuration file is located here:

```
src/main/resources/application.properties
```

Update the settings with the MySQL connection information.

```
spring.datasource.url=jdbc:mysql://localhost/notes  
spring.datasource.username=foo  
spring.datasource.password=bar  
spring.datasource.driverClassName=com.mysql.jdbc.Driver
```

4. Set the the port that the server will listen on.

```
server.port=9999
```

5 Start the Server

Starting the server is easy:

```
$ ./gradlew bootRun
```

A lot happens with this command:

1. The gradle wrapper downloads gradle.
2. Gradle downloads spring.io and dependencies.
3. The server code is compiled by the Java compiler, generating a .jar library.
4. It runs the server using the settings in `application.properties`.