

# INSTALLATION MANUAL

## MeteoCal



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# 1. System

In order to use the application, we need to have the following software components:

## 1.1 JDK8

It is not required to use the latest version, but if possible this is the best solution, especially for Glassfish 4.1. However, all would work also with a previous version. You can find the JDK8 on the Oracle web site: <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>. The installation is very simple, it is only necessary to follow the instructions step by step.

## 1.2 Glassfish 4.1

You can find two different versions of Glassfish 4.1 from this link: <https://glassfish.java.net/download.html>. You can choose indifferently one of the two and, after having downloaded it, you have to decompress it.

## 1.3 MySQL

You have to download MySQL Server Community Edition: you can find it on the official website: <http://dev.mysql.com/downloads/mysql/>. There are several distinct installation packages for different operating systems (Mac OS, Windows, Ubuntu, Linux), you have to choose one of them and, after the download, you have to install it.

### 1.3.1 Database configuration

Now we explain how to configure the database that will be used by the application. It is possible to do it also in another way, using any mysql GUI client (for example, MySQL Workbench).

#### Setting the password

First you have to set the root password: in this example we use "root" as password, you can replace "root" with your own password.

- **Access the MySQL command line:**  
shell>mysql -u root -p
- **Insert the password**
- **Modify account password:**  
mysql>SET PASSWORD = PASSWORD("YOUR\_OWN\_PASSWORD");

If you have problems with this steps, try to follow this guide:  
<http://dev.mysql.com/doc/refman/5.0/en/resetting-permissions.html>

#### Create the database

All the following instruction must be inserted from the command line:

- **Access the MySQL command line:**  
shell>mysql -u root -p
- **Insert the password**
- **Create a database:**  
mysql>create database mydb;

If the database already exists, you have to drop all its tables.

## 1.4 Install MySQL connector

You have to download the file from this link:

<http://dev.mysql.com/downloads/connector/j/>.

Once you have downloaded it, you have to follow the instruction from this link, until step 6:

<http://dev.mysql.com/doc/connector-j/en/connector-j-usagenotes-glassfish-config.html>

Skip the displayed step 7, and execute this:

STEP 7 \* : In Additional Properties you will need to ensure the following properties are set:

- DatabaseName: mydb;
- User: root (or any user granted to access mydb);
- Password: the root password (or the password of the exploited user);
- URL: url to the db (e.g., jdbc:mysql://localhost:3306/mydb);
- ServerName: localhost.

Then return to the previous link and execute step 8, 9 and 10. If all is ok, the connection pool is created. Now it is necessary to create a JDBC Resource (data source).

## 1.5 Creating a JDBC Resource.

Using the navigation tree in GlassFish Administrator Console, navigate to Resource, JDBC, JDBC Resources. A list of resources will be displayed in the JDBC Resources frame.

Press “New” button in order to create a new JDBC Resource. In the JNDI Name field, insert “jdbc/Mydb”. You also have to select the Pool created in the previous step.

Finally, click “Ok” button to create the new JDBC resource.

## 1.6 Creating a JDBC Realm

Now you need to follow this steps:

- enter Glassfish control panel;
- navigate to Configuration/server-config/security/Realms/new;
- use the following configuration:

Configuration:

- Name: jdbcRealRegistration
- ClassName: com.sun.enterprise.security.auth.realm.jdbc.JDBCRealm
- JAAS Context: jdbcRealm
- JNDI: jdbc/Mydb
- User Table: users
- User Name Column: email
- Password Column: password
- Group Table: users
- Group Table User Name Column: email
- Group Name column: groupname
- Password Encryption Algorithm: MD5
- Digest Algorithm: SHA-256

When you have inserted all these data, you have to “save”. There is no problem if the other fields are not fulfilled.

Now restart your server.

## 1.7 JavaMail Session Configuration

MeteoCal provides also a mail service. In order to configure it, follow this steps:

- enter Glassfish control panel;
- navigate to: Resources/JavaMail Session;
- press: “New”
- use the following configuration:

Configuration:

- **JNDI Name:** mail/sendMail
- **Mail Host:** smtp.gmail.com
- **Default User:** meteocalwebapp
- **Default Sender Address:** meteocalwebapp@gmail.com
- **Store Protocol:** imap
- **Store Protocol Class:** com.sun.mail.imap.IMAPStore
- **Transport Protocol:** smtp
- **Transport Protocol Class:** com.sun.mail.smtp.SMTPTransport

Add these properties:

- **Name:** mail.smtp.port **Value:** 465
- **Name:** mail.smtp.auth **Value:** true
- **Name:** mail.smtp.starttls.enable **Value:** true
- **Name:** mail.smtp.socketFactory.class **Value:** javax.net.ssl.SSLSocketFactory
- **Name:** mail.smtp.socketFactory.port **Value:** 465
- **Name:** mail.smtp.password **Value:** mmdmdm92

Press “OK”.

## 1.8 Application Deployment

First of all, you have to restart MySQL Server and GlassFish Server. Access GlassFish control panel (<http://localhost:4848>) and click on “Applications” and then on “Deploy...”.

In “Location” you have to select the MeteoCal.war from the provided archive. If all is ok, you can see the “Context Root” setted as “MeteoCal”.

Click “Ok” in the top-right of the page. Now MeteoCal appears among the applications. Click “Launch” and then select the first link to access the application.