MeteoCal Project

Installation Manual

Authors:
Claudio Sanna
Walter Samà

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Chapter 1

Introduction

Meteocal web application is an application that provides a calendar and weather forecasting stick together. In this document we present the installation guide in order to use Meteocal web application. A few tools are required before using the application.

Chapter 2

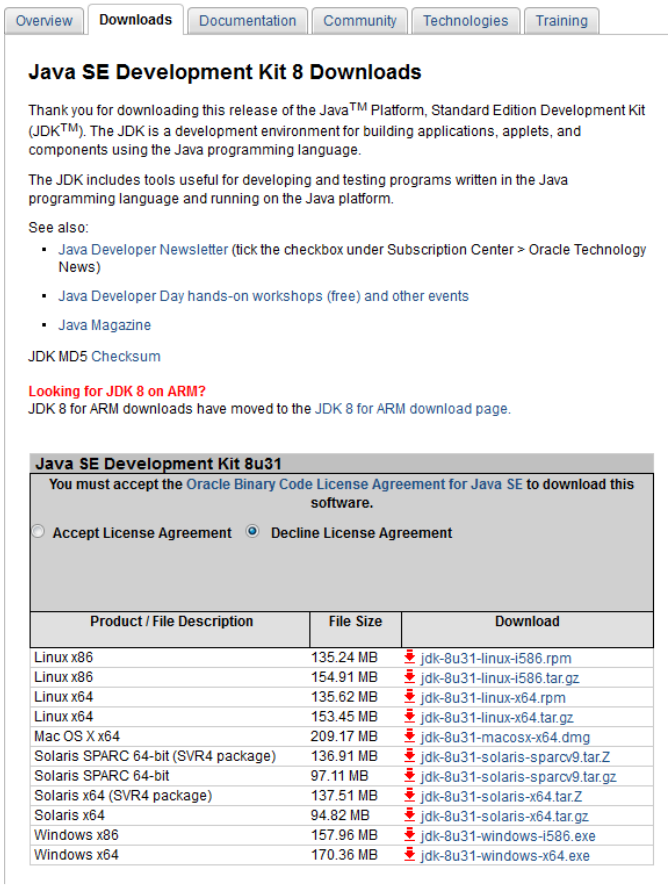
Getting Started

2.1 Download Meteocal war file

First thing to do is to download the meteocal.war file from google code. So go to google code, select Deliveries from the tree folders on the left and download MeteoCalProject.war.

2.2 Install jdk

All the application is base on java, so it is needed the java JDK software. From here it is possible to install java JDK 8 (most recommended). Please pay attention to the version you are installing, based on your operating system (windows, linux, os X) and your system architecture (32 - 64 bit).



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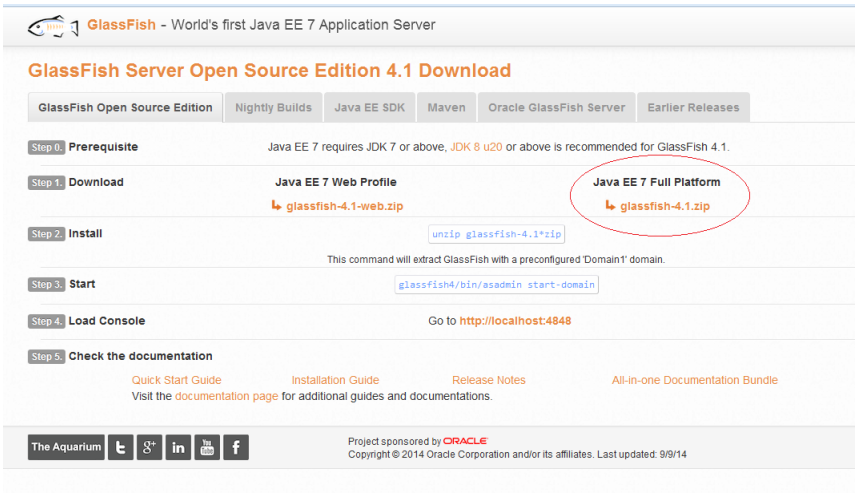
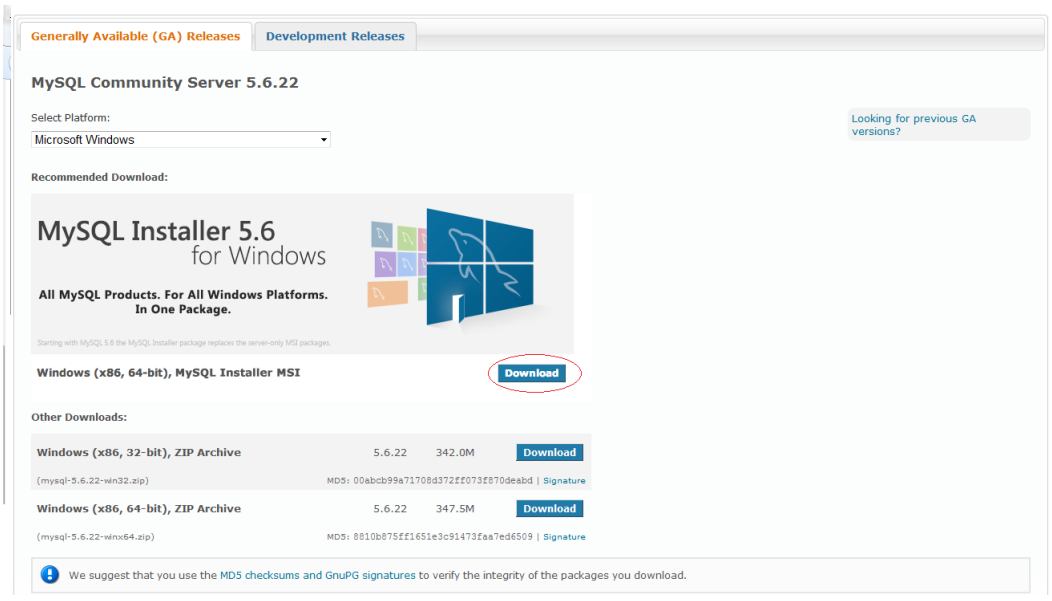
2.3 Install Glassfish Server

The second resource needed to start the application is Glassfish server. Glassfish server is an open-source application server project for the Java EE platform; it is necessary to deploy and start the application. It can be downloaded at this page by choosing GlassFish 4 - Full Platform Zip (most recommended one). After the end on the download just extract the zip folder anywhere you want.



2.4 Install MySQL Community Server

The last thing needed for the application is MySQL Community Server, the free version of MySQL that we used to construct and manage the database. It can be download from this page; as said before, be careful to install the correct version due to your operating system. Be careful when



installing to add mysql to windows services in order to make it runnable from there.

Chapter 3

Setting Up the Database

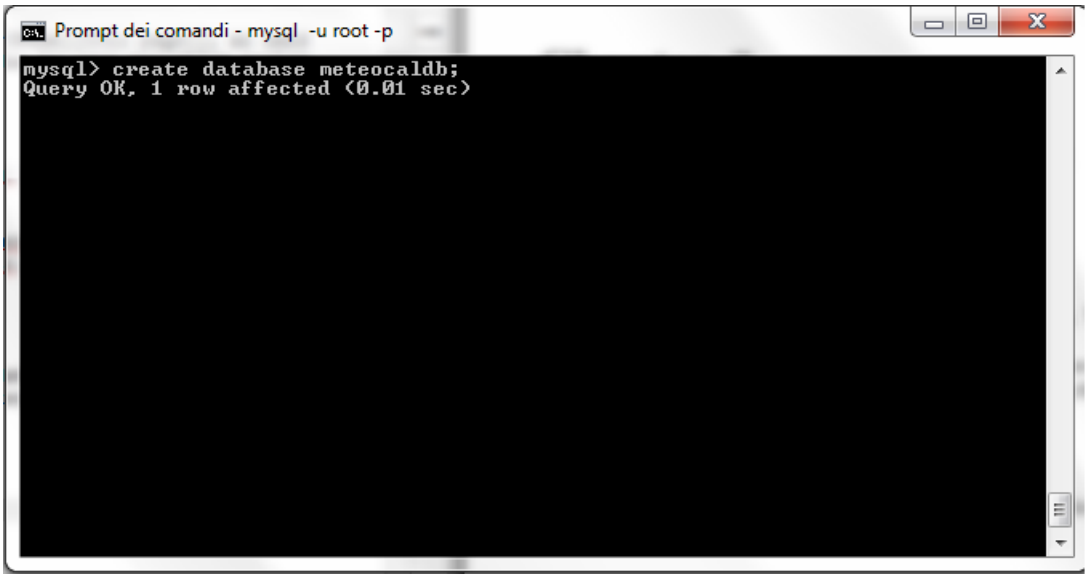
3.1 Start mysql

First step in creating the database is to make mysql running. You can do this by using the command line:

- LINUX : "sudo /usr/local/mysql/support-files/mysql.server" [start—stop—restart]
- WINDOWS : run C:/Windows/System32/services.msc. From there search for MySQL56 (or the name you gave to the application while installing it) and start the service.

3.2 Create the database

The first step for using Meteocal is creating its database. This is possible by going to Go to "%Your MYSQL community server folder%/bin/" and execute "mysql -u root -p" command. You will then be requested to insert the root password.
After that execute the command "create database meteocaldb;".



3.3 Install the J-connector

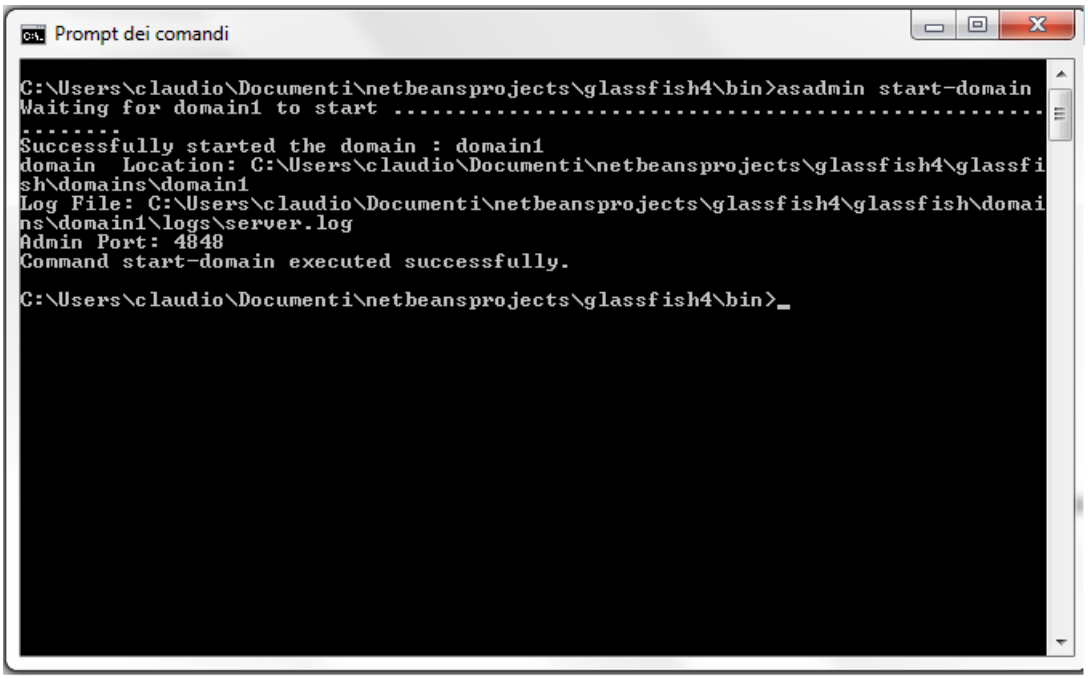
The final step is to install the J-connect in the glassfish folder. To do this, copy the MySQL-folder/Connector.j/jar-file to the C:/glassfish-install-path/domains/domain1/lib.

Chapter 4

Setting Up the Server

4.1 Start the server

In order to start the server you have to go to the folder "%your glassfish folder%/bin/" and execute the command "asadmin start-domain". When the server is started you should have an output like this:



In order to stop the server you have to execute the command "asadmin stop-domain" in the same folder.
After starting the server you can access you control panel by opening on an Internet browser and going to http://localhost:4848/.

4.2 Create the Connection Pool

The next step is to create the connection pool and resource to connect the glassfish server and the application to your, previously created, database. To create the connection pool:

1. In the GlassFish Administration Console, using the navigation tree navigate go to Resources, JDBC, Connection Pools.

2. In the JDBC Connection Pools frame click New. You will enter a two step wizard.
3. In the Name field under General Settings put **MeteocalPool**.
4. In the Resource Type field, select javax.sql.DataSource from the drop-down list-box.
5. In the Database Vendor field, select MySQL from the drop-down list-box. Click Next to go to the next page of the wizard.
6. Accept the default settings for General Settings, Pool Settings and Transactions. Scroll down to Additional Properties.
7. In Additional Properties you will need to ensure the following properties are set (if other properties all already set you can delete them, there are not necessary):
   - ServerName - The server to connect to. For local testing this will be localhost.
   - User - The user name with which to connect to MySQL. (The standard user is root)
   - Password - The corresponding password for the user. (Password for the root created when installing mysql community server)
   - DatabaseName - meteocaldb.
8. Click Finish to exit the wizard. You will be taken to the JDBC Connection Pools page where all current connection pools, including the one you just created, will be displayed.
9. In the JDBC Connection Pools frame click on the connection pool you just created. Here, you can review and edit information about the connection pool. Because Connector/J does not support optimized validation queries, go to the Advanced tab, and under Connection Validation, configure the following settings:
   - Connection Validation - select Required.
   - Validation Method - select table from the drop-down menu.
   - Table Name - enter DUAL.
10. To test your connection pool click the Ping button at the top of the frame. A message will be displayed confirming correct operation or otherwise. If an error message is received recheck the previous steps, and ensure that MySQL Connector/J has been correctly copied into the previously specified location.

Pool Name: MeteocalPool

Additional Properties (4)

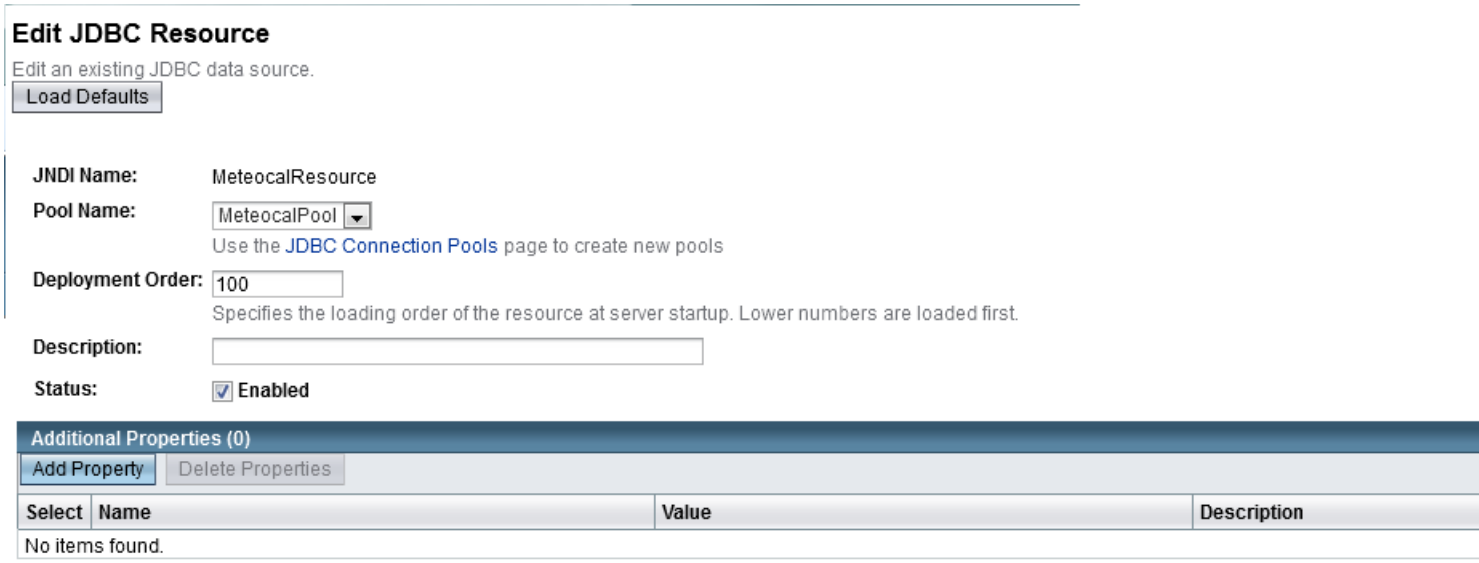
Add Property | Delete Properties

Select	Name	Value	Description
☐	DatabaseName	meteocaldb	
☐	Password	root	
☐	ServerName	localhost	
☐	User	root	

4.3 Create the Resources

To create the resources:

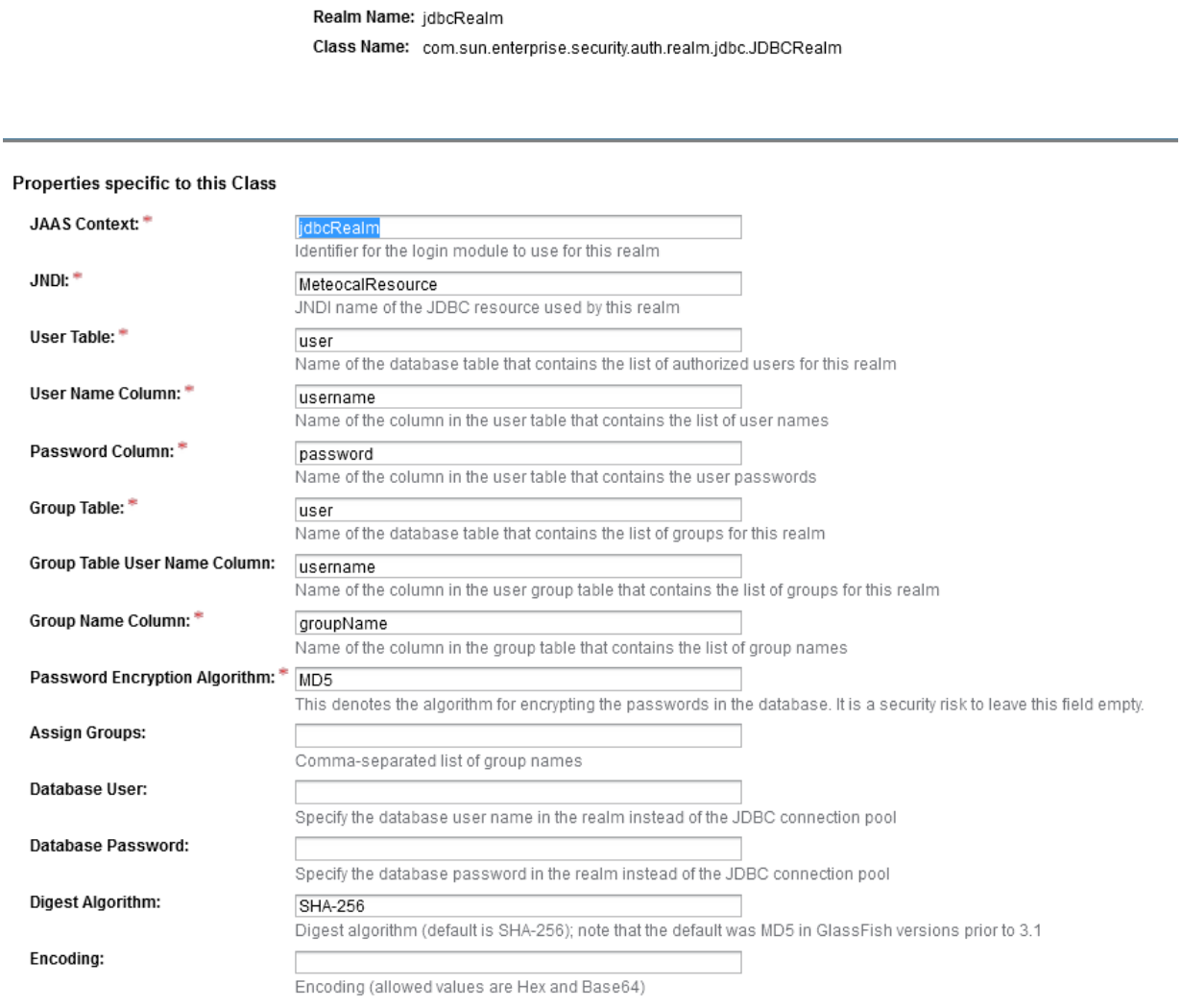
- Using the navigation tree in the GlassFish Administration Console, navigate to Resources, JDBC, JDBC Resources. A list of resources will be displayed in the JDBC Resources frame.
- Click New. The New JDBC Resource frame will be displayed.
- In the JNDI Name field, enter MeteocalResource.
- In the Pool Name field, select MeteocalPool.
- Optionally, you can enter a description into the Description field.
- Click OK to create the new JDBC resource. The JDBC Resources frame will list all available JDBC Resources.



4.4 Create the Realm

In order to use e perform the login it is necessary to create a JDBC realm; Follow these steps for creating a JDBCRealm:

- enter Glassfish control panel
- Configurations -> server-config -> security -> Realms -> new...
- From the scrool tab select com.sun.enterprise.security.auth.realm.jdbc.JDBCRealm.
- Use the following configuration:
  - Realm Name: jdbcRealm
  - JAAS Context: jdbcRealm
  - JNDI: MeteocalResource
  - User Table: user
  - User Name Column: username
  - Password Column: password
  - Group Table: user
  - Group Table User Name Column: username
  - Group Name Column: groupName
  - Password Encryption Algorithm: MD5
  - Digest Algorithm: SHA-256
- Click ok; you will see your new JDBC realm in the realms section.



Chapter 5

Start the application

5.1 Deploy meteocal web app

This is the final step in order to make Meteocal web app working. After starting glassfish server and MySql, go to the administrator panel of glassfish. In the selection tree go to application, select deploy, chose Packaged File to Be Uploaded to the Server, and set the path of the downloaded war file and click ok. After that you will see MeteoCalProject in your applications list and just click on launch. You will be asked to choose between links: choose host:8080. Now you can use your metetocal application!