

# Appendix H Deploying SOBA on Mac X

My Mac is a MacMini with Intel dual-core i5 @ 2.3 GHz, 8 GB, running on Mac OS X Lion 10.7.3. First, I created a directory `/Users/henry/dev` to hold the entire SOBA stack.

This procedure includes the following steps:

- Installing a JDK
- Installing Tomcat 7.0.29
- Installing MySQL 5.5.22
- Deploying SOBA

## H.1 INSTALLING A JDK

I checked with the command `java -version` and it already has 64-bit JDK 1.6.0\_29 installed, which is quite up-to-date so that I don't have to install a JDK at all. However, I needed to add the `JAVA_HOME` environment variable to the `PATH` environment variable as follows:

- `$ vi ~/.bash_profile`  
`JAVA_HOME=/System/Library/Java/JavaVirtualMachines/1.6.0.jdk/Contents/Home`  
`PATH$PATH:$HOME/bin:${JAVA_HOME}/bin`
- `$ source ~/.bash_profile`

You can verify with the commands `echo $JAVA_HOME` and ``${JAVA_HOME}/bin/java -version`` to make sure the JDK is installed properly.

Install Tomcat next.

## H.2 INSTALLING TOMCAT

I first downloaded and un-archived Tomcat 7.0.29 to my `dev` folder with a few quick and smooth clicks. Then I made all scripts executable by executing the following command:

- `$ sudo +x /Users/henry/dev/apache-tomcat-7.0.29/bin/*.sh`

Then, I configured Tomcat as follows:

- Run “`keytool -genkey -alias tomcat -keyalg RSA`” to create a keystore. This step described in Section 2.4.2 for installing Tomcat on Windows applies to Mac as well.
- Carry out those two steps for Tomcat 7 regarding `server.xml` and `tomcat-users.xml` given in Section 2.4.2 here on Mac – they all apply to Mac as well.

To start/stop Tomcat, cd to its `bin` directory and execute

- `$ ./startup.sh`

or

- `$ ./shutdown.sh`

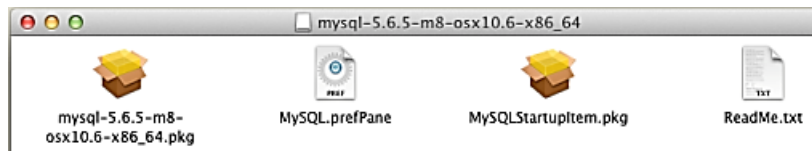
accordingly.

You can check if Tomcat works by trying out <https://localhost:8443/>. If Tomcat home page does not return successfully, fix the issue before moving forward.

The next step is to install MySQL.

### H.3 INSTALLING MYSQL

First, I downloaded MySQL 5.5.22 (AMD64, installer format) named `mysql-5.5.22-osx10.6-x86_64.dmg` from <http://downloads.mysql.com/archives.php?p=mysql-5.5&v=5.5.22>. However, this build did not work on my Mac, saying “... *could not be recognized*” (bad luck). After a few random trials with older and newer versions, finally I found one that worked, which is version 5.6.5 as is shown in Figure H.1.



**Figure H.1** Version of MySQL installable on Mac OS X 10.7.3.

The remaining part was actually smooth. I took a few screenshots for your reference as shown in Figures H.2 – H.4, just in case you encounter problems.

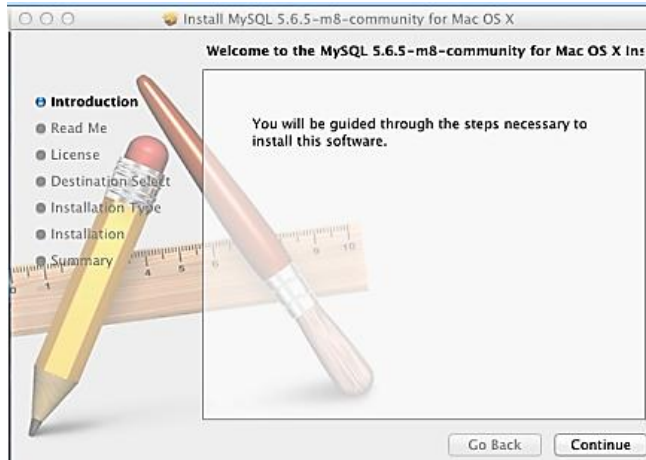


Figure H.2 MySQL 5.6.6 installation kicked off.



Figure H.3 MySQL 5.5.6 installation requesting password to continue.



Figure H.4 MySQL 5.5.6 installed successfully on Mac.

Note the third icon in Figure H.1 labeled `MySQL.StartupItem.pkg`. Double-click on it and install MySQL Startup Item utility. The Startup Item is installed into `/Library/StartupItems/MySQLCOM`. The installation adds a variable `MYSQLCOM=-YES-` to the system configuration file `/etc/hostconfig`. Change it to `MYSQLCOM=-NO-` if you want to disable the automatic startup of MySQL.

Now you can start/stop MySQL using MySQL StartupItem by executing the following commands:

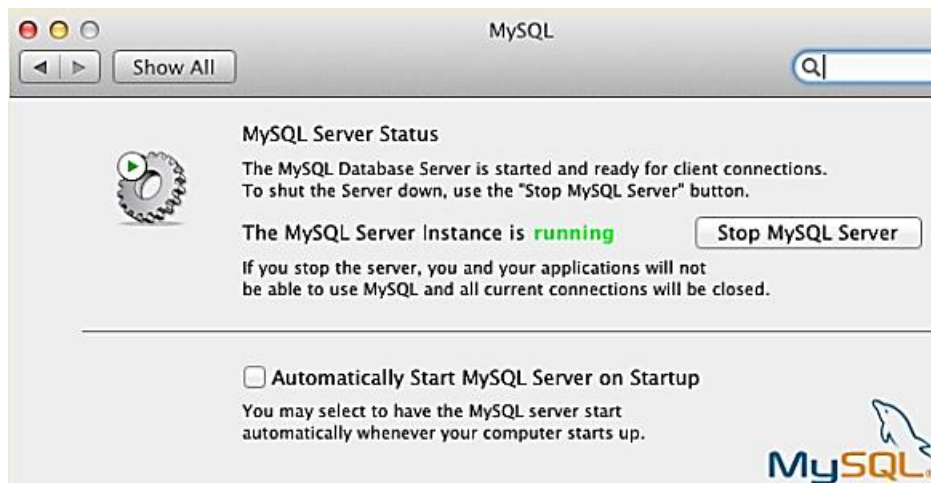
- `$ sudo /Library/StartupItems/MySQLCOM/MySQLCOM start`

Or

- `$ sudo /Library/StartupItems/MySQLCOM/MySQLCOM stop`

You might be prompted for a password when you start up MySQL the first time.

You can also install the MySQL PreferencePane shown as the second icon in Figure H.1. Then, you can start/stop MySQL from the System Preferences tray, as is shown in Figure H.5.



**Figure H.5** MySQL PreferencePane.

Next, you can install MySQL Workbench if you want. I downloaded `mysql-workbench-gpl-5.2.40-osx-i686.dmg` and installed it by simply dragging and dropping it in my Applications folder, but it's optional.

Now execute the following commands to create a `my.cnf` in the `/etc` directory:

```
$ cp /usr/local/mysql-5.6.5-m8-osx10.6-x86_64/support-files/my-medium.cnf .
$ mv my-medium.cnf my.cnf
$ sudo cp my.cnf /etc
```

By default, MySQL sets up two users on Mac, `root` with no password and a blank user account, which allows you to access MySQL without any password. Execute the following commands to reset `root`'s password and delete the blank user account:

```
$ /usr/local/mysql/bin/mysqladmin -u root password 'MySql565'
```

```
$ /usr/local/mysql/mysql -u root -p
mysql>use mysql;
mysql>delete from user where User=' ';
mysql>exit
$
```

Then I downloaded *soba\_db\_scripts.zip* file from my website <http://www.perfmath.com> and unzipped it to my */Users/henry/dev* directory on my Mac.

To create the SOBA database, I executed the following two scripts (Note: need to enter the *root* password for the first command and *soba31admin*'s password of "*soba31admin*" for the second command):

- `$ /usr/local/mysql/bin/mysql -h 127.0.0.1 -u root -p < create_soba31_mysql.sql`
- `$ /usr/local/mysql/bin/mysql soba31 -h 127.0.0.1 -u soba31admin -p < create_all.sql`

Next, deploy SOBA on your Mac computer.

## H.4 DEPLOYING SOBA

I created a directory named *soba* in the */Users/henry/dev/apache-tomcat-7.0.29/webapps* directory for deploying SOBA on Tomcat. I used my Maven 3 build of *soba3.2-3.2-mvn* and moved its contents to Tomcat's *soba* directory created above. In addition, I copied *mysql-connector-java-5.1.10.jar* from SOBA's *WEB-INF/lib* directory to Tomcat's *lib* directory. Then, I changed to Tomcat's *bin* directory and started up Tomcat using the following command

- `$ ./startup.sh`

At last, I tried <https://localhost:8443/soba> and it worked like on Windows and Linux. This is the entire procedure I tested on my Mac. You may want to continue testing your SOBA deployment using the procedures given in Section 2.7 of the main text. After populating some data into your SOBA database, you might want to back up your database with the following command:

```
$ /usr/local/mysql/bin/mysqldump --user=root --password=MySql565 --databases soba31
>soba_dump_0.sql
```

To import your SOBA database, execute the following command:

```
$ /usr/local/mysql/bin/mysql --verbose --user=root --password=MySql565 soba31
<soba_dump_0.sql
```