



Installing Tomcat 8.5 on macOS 10.12 Sierra

by Wolf Paulus | Sep 24, 2016 | Mac OS X | 145 comments



The Servlet 4.0 specification is out and Tomcat 9.0.x will support it. However, at this point Tomcat 8.5.x is the best Tomcat version and it is supporting the 3.1 Servlet Spec.

Since OS X 10.7 Java is not (pre-)installed anymore, let's fix that first.

Prerequisite: Java

As I'm writing this, Java 1.8.0_101 is the latest version, available for download

here: <http://www.oracle.com/technetwork/java/javase/downloads/index.html>

The JDK installer package come in an dmg and installs easily on the

Mac; and after opening the Terminal app again,

```
java -version
```

now shows something like this:

```
java version "1.8.0_101"  
Java(TM) SE Runtime Environment (build 1.8.0_101-b13  
)  
Java HotSpot(TM) 64-Bit Server VM (build 25.101-b13,  
mixed mode)
```

Whatever you do, when opening Terminal and running **java -version**, you should see something like this, with a version of at least 1.7.x I.e. Tomcat 8.x requires Java 7 or later.

sudo is a program for Unix-like operating systems, allowing you to run programs with the security privileges of another user (normally the superuser, or root). Since we are creating directories, outside of your home folder, administrator right are required. I.e., when executing *sudo* you will be asked to enter your password; and your Mac User account needs to be an 'Admin' account.

JAVA_HOME is an important environment variable, not just for Tomcat, and it's important to get it right. Here is a trick that allows me to keep the environment variable current, even after a Java Update was installed. In ~/.bash_profile, I set the variable like so:

```
export JAVA_HOME=$(/usr/libexec/java_home)
```

Installing Tomcat

Here are the easy to follow steps to get it up and running on your Mac

1. Download a binary distribution of the core module: apache-tomcat-8.5.5.tar.gz from [here](#). I picked the tar.gz in Binary

Distributions / Core section.

2. Opening/unarchiving the archive will create a folder structure in your *Downloads* folder: (btw, this free [Unarchiver app](#) is perfect for all kinds of compressed files and superior to the built-in Archive Utility.app)

~/Downloads/apache-tomcat-8.5.5

3. Open to Terminal app to move the unarchived distribution to /usr/local

```
sudo mkdir -p /usr/local
```

```
sudo mv ~/Downloads/apache-tomcat-8.5.5 /usr/local
```

4. To make it easy to replace this release with future releases, we are going to create a symbolic link that we are going to use when referring to Tomcat (after removing the old link, you might have from installing a previous version):

```
sudo rm -f /Library/Tomcat
```

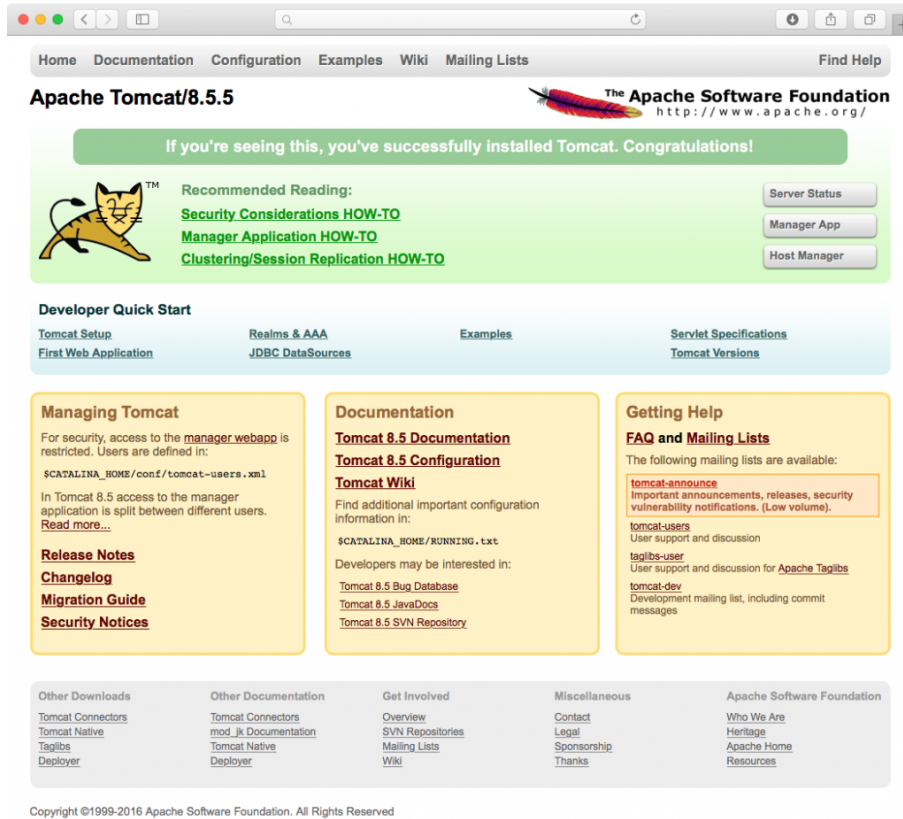
```
sudo ln -s /usr/local/apache-tomcat-8.5.5  
/Library/Tomcat
```

5. Change ownership of the /Library/Tomcat folder hierarchy:

```
sudo chown -R <your_username> /Library/Tomcat
```

6. Make all scripts executable:

```
sudo chmod +x /Library/Tomcat/bin/*.sh
```



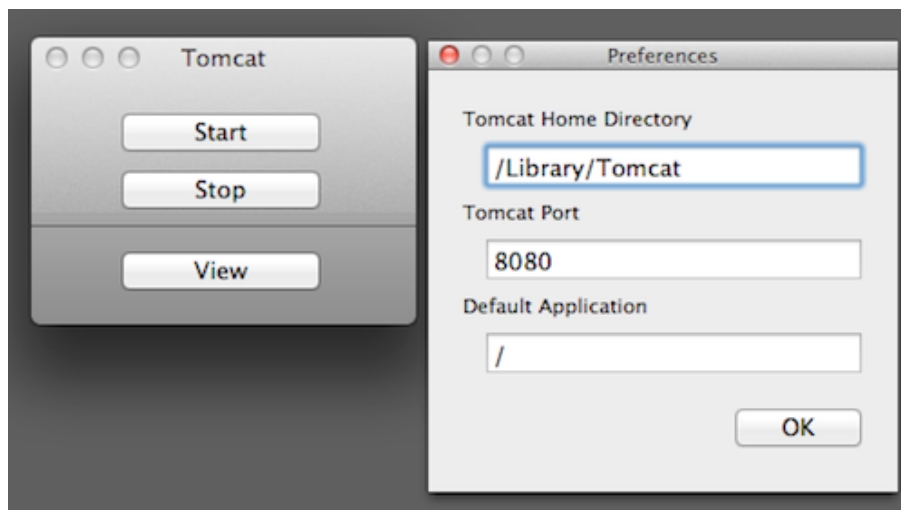
Tomcat 8.x

Instead of using the start and stop scripts, like so:

```
$ /Library/Tomcat/bin/startup.sh
Using CATALINA_BASE: /Library/Tomcat
Using CATALINA_HOME: /Library/Tomcat
Using CATALINA_TMPDIR: /Library/Tomcat/temp
Using JRE_HOME:
/Library/Java/JavaVirtualMachines/jdk1.8.0_101.jdk/C
ontents/Home
Using CLASSPATH:
/Library/Tomcat/bin/bootstrap.jar:/Library/Tomcat/bi
n/tomcat-juli.jar
Tomcat started.
```

```
$ /Library/Tomcat/bin/shutdown.sh
Using CATALINA_BASE: /Library/Tomcat
Using CATALINA_HOME: /Library/Tomcat
Using CATALINA_TMPDIR: /Library/Tomcat/temp
Using JRE_HOME:
/Library/Java/JavaVirtualMachines/jdk1.8.0_101.jdk/C
ontents/Home
Using CLASSPATH:
/Library/Tomcat/bin/bootstrap.jar:/Library/Tomcat/bi
n/tomcat-juli.jar
```

you may also want to check out [Activata's Tomcat Controller](#) (should the site be down, download it here [Tomcat Controller](#)), a tiny freeware app, providing a UI to quickly start/stop Tomcat. It may not say so, but Tomcat Controller works on macOS 10.12 just fine.



Finally, after you started Tomcat, open your Mac's Web browser and take a look at the default page: <http://localhost:8080>

145 Comments

← [Older Comments](#)

Bachi on March 17, 2016 at 7:28



am

Many thanks for this wonderful step-by-step installation instructions. Was able to get tomcat up and running in no time. Appreciate "Tomcat Controller" recommendation.



Mahsan on March 22, 2016 at 10:27 am

Well done on this kick-ass tutorial! I've set up mine in less than 10 minutes!



Carlos Cordero on March 25, 2016 at 9:52 pm

Thank you very much, Wolf! Your instructions are working perfectly for OSX El Capitan 10.11.4 (15E65) and with Tomcat 9.0.0 M4.

I had to configure ZAP to use a different port to 8080 in order to avoid a conflict (which has nothing to do with your instructions but with the configuration requirements of Tomcat) but once I did that Tomcat was running perfectly at localhost:8080
Very much appreciated!



leon on March 31, 2016 at 6:18 pm

Thanks a lot for your tutorial 😊



Karol on April 4, 2016 at 6:41 pm

Thanks for this. Tomcat up and running in 10 minutes.



VJ on April 7, 2016 at 9:37 am

This is a very nice explanation, but I have a question –

Why Tomcat has to be installed under the root library and not the user's library or root Applications folder and why /usr/local is preferred for storing the tomcat installation?



Taejong Yoo on April 8, 2016 at 2:23 am

Thank you so much! Congrats on Google top result



Miguel Miranda de Mattos on April 18, 2016 at 6:04 pm

Perfect Wolf! Thanks a lot! I had to setup tomcat on my mbp 13 and your instructions were the perfect match.



Jean-Luc Barat on April 19, 2016 at 12:02 pm

Many Thanks.
Easy steps.



Santhosh on April 22, 2016 at 10:03 am

Why not use 'homebrew' to install tomcat – as described at:
<http://superuser.com/questions/702063/how-to-setup-apache-tomcat-on-os-x?>



Samir on May 5, 2016 at 2:48 am

Thanks a ton!!



Ilya Fedorov on May 5, 2016 at 3:18 am

I followed this tutorial.
But localhost on browser is not working.
Please help me.



Tony on May 10, 2016 at 2:59 pm

I have a question, osx has two locations for the Library.
One is access (in the terminal) by /Library and the other is with ~/Library

Since my previous install of Tomcat was in the ~/Library, that's the one I deleted and assuming is where I'm suppose to install?

Your instructions say the /Library directory so I'm confused.

Thanks for any help.



Berenice on May 11, 2016 at 11:38 am

Awesome guide! Thank you!!!



saad on May 15, 2016 at 10:53 am

Great Tutorial, really thanking you for such a great help



Gabriel Tadeo del Campo Aceves

on May 19, 2016 at 6:31 pm

Thanks...

Great Tutorial



aaa on May 23, 2016 at 3:34 am

thankyou

Great Tutorial



Toro on May 31, 2016 at 8:08 am

can i ask a question ?

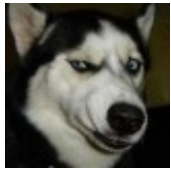
i have two errors when i run java servlet code .

1.error: package javax.servlet does not exist.

2.error: package javax.servlet.http does not exist.

how can i solve these problem ?

thanks for your help~



edward on June 1, 2016 at 5:21 pm

Great tutorial! Thanks!



Kaushik Das on June 4, 2016 at 11:44 am

Thank you so much. Your tutorial opened doors for me..! 😊



wiki on June 7, 2016 at 1:32 pm

Perfect, Great Tutorial ! my apache tomcat installed correctly. But i cannot login into the app from the default page. It doesn't accept the username & password i entered. Plz Note: I have edited the tomcat-users.xml file to some username&password.

It shows the authentication screen asking for username&password, when i enter the username&password i have given the dialog box appears again and again. When i press Cancel button it shows a 401 Unauthorized



Shri on June 8, 2016 at 8:33 am

Thank you very much for this tutorial



Parbati Bose on June 8, 2016 at 12:47 pm

Thanks a lot for the instruction. It worked perfectly !



PCjuser on June 9, 2016 at 10:16 pm

Seriously perfect setup. No complaints at all. More tutorials please.



Sundari on June 17, 2016 at 3:16 pm

Hi Wolf, I'm trying to configure tomcat in my eclipse kepler, but could not get successful connection . This kepler allow only tomcat v7.0 .. please advice how to configure this. Thank you 😊



nick on June 25, 2016 at 8:45 am
should I download 32bit or 64 bit version? Why there are some so many version?



Anton Shabatin on July 6, 2016 at 7:40 am

Wonderful article. Thanks a lot!

Thad Humphries on July 8, 2016 at 8:39 am



If you want to run Tomcat at startup, add the plist `org.apache.tomcat.plist` to `/Library/LaunchDaemons`. The one I use (below) has worked for me since Mavericks (10.9.x). Note that I also separate `CATALINA_HOME` and `CATALINA_BASE` as described in Tomcat's `RUNNING.txt` file. I also have a `setenv.sh` and `tomcat-juli.jar` in `$CATALINA_BASE/bin`.

Disabled

GroupName

staff

Label

org.apache.tomcat

ProgramArguments

`/Library/Tomcat/catalina/bin/catalina.sh`
run

EnvironmentVariables

`CATALINA_HOME`

`/Library/Tomcat/catalina`

`CATALINA_BASE`

`/Library/Tomcat/tomcat_BASE`

QueueDirectories

RunAtLoad

UserName

thad

WatchPaths

Satish on July 10, 2016 at 11:20 pm



Super cool. it worked as it is..very good, thank you very much.



Lynn Joseph on July 13, 2016 at 12:52 am

Awesome !! Thanks a lot.



Era Chaudhary on July 17, 2016 at 8:14 am

Its very helpful.thanks for posting it.



Nubia Levon on July 17, 2016 at 10:13 pm

Thanks a million. I was able to successfully start Tomcat, although I do have a question. When I click on the Server Status button, the browser asks me for a user and password. I tried my password but got an error page, that told me I needed to add the admin-gui and admin-script roles to cone/tomcat-users.xml. Is this something I should be concerned about?



David Vial on July 18, 2016 at 6:14 pm

Hi Wolf,
I'm getting the following message...?

chmod: /Library/Tomcat/bin/*.sh:

No such file or directory

If you can assist that would be very appreciated.

Regards



David on July 21, 2016 at 6:50 pm

It's very clear, thank you!



Rado on July 21, 2016 at 7:23 pm

Very cool man. Took me 5 min to install everything as described by you without any hiccups. Two thumbs up!!!



Rogério S. Silva on July 24, 2016 at 3:40 pm

Thank's a lot.... It's worked perfectly....



Prajwal K on July 27, 2016 at 12:11 am

Thank you sooo much



Manuel DT on August 4, 2016 at 6:48 pm

Thanks a lot. !!!



Thien B Tran on August 17, 2016
at 8:58 pm

Thank you very much. This works
flawlessly on El Capitan 10.11.6.



ss on August 18, 2016 at 12:00 pm
thank you



Piotr on August 22, 2016 at 8:19
am

Greetings from Poland!



Wendell Souza on August 22,
2016 at 9:17 am

Thanks! This a great simple and
eficient turtorial!!



Francisco on September 24, 2016
at 8:57 am

Thank you very much!



Wang Jian on October 6, 2016 at
2:14 am

Great tutorial, thank you!

Wilson Mar on October 17, 2016
at 7:52 am



What about using Homebrew with
`brew install tomcat`?
It installed to
/usr/local/Cellar/tomcat/8.5.6/libexec/webapps

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