Wolf Paulus' Journal

Installing Tomcat 8 on OS X 10.11 El Capitan

by Wolf Paulus | Dec 13, 2015 | Mac OS X | 80 comments

The Servlet 4.0 specification is out and Tomcat 9.0.x will support it. However, at this point Tomcat 8.0.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 8u66 is the latest version, available for download here: http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.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_66"
Java(TM) SE Runtime Environment (build 1.8.0_66-b17)
Java HotSpot(TM) 64-Bit Server VM (build 25.66-b17, 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-8.0.30.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-8.0.30
3. Open to Terminal app to move the unarchived distribution to /usr/local

```
sudo mkdir -p /usr/local

sudo mv ~/Downloads/apache-tomcat-8.0.30 /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-8.0.30 /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:

```
47 wolf:~$ /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_60.jdk/Contents/Home
Using CLASSPATH:
/Library/Tomcat/bin/bootstrap.jar:/Library/Tomcat/bin/tomcat-
juli.jar
Tomcat started.
48 wolf:~$ /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_60.jdk/Contents/Home
Using CLASSPATH:
/Library/Tomcat/bin/bootstrap.jar:/Library/Tomcat/bin/tomcat-
juli.jar
49 wolf:~$
```

you may also want to check out Activata's Tomcat Controller, a tiny freeware app, providing a UI to quickly start/stop Tomcat. It may not say so, but Tomcat Controller works on OS X 10.11 just fine.
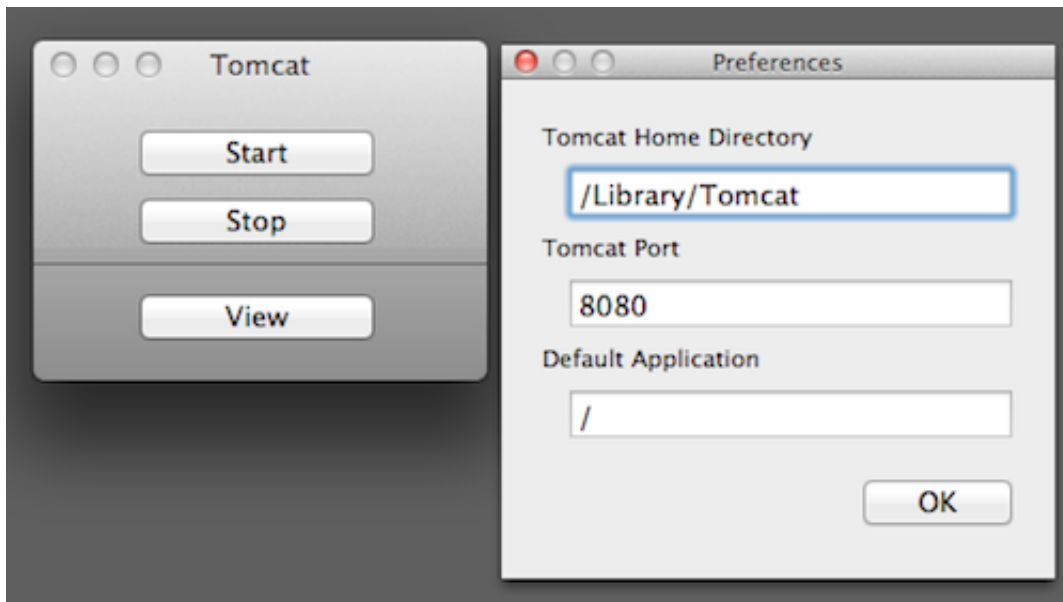
Finally, after your started Tomcat, open your Mac's Web browser and take a look at the default page: http://localhost:8080

80 Comments

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Bernard Farrell on September 12, 2015 at 7:17 am

Thanks so much for these easy to follow directions and the pointers to Unarchiver and Tomcat Controller, both are really useful additions to my Mac arsenal of tools.

Nimish Bhoraniya on September 16, 2015 at 7:23 am

what is username and password for tomcat server

Junior Andrade on September 18, 2015 at 5:26 am

Thank you!!!!

Tom Rowe on September 21, 2015 at 5:45 pm

Thank you! With your help, I was able to get my servlet running on my mac in minutes!

Kind regards,

-Tom

John on September 22, 2015 at 4:10 pm

Looks like Tomcat Controller site is dead 🙁

Wolf Paulus on September 24, 2015 at 11:04 am

just added a download link at the bottom of the post

Ryan on September 25, 2015 at 7:11 pm

Thank u very much. It works for me!

Tarush on September 26, 2015 at 12:58 am

I tried but it gave me error of classnotfound for digest/rule with 8.0.26 version can please suggest some solution…

ro on September 26, 2015 at 9:39 am

Thanks a lot!

Jukka Vuorinen on September 30, 2015 at 10:48 am

I just want to say, thank you. This helped a lot.

marco on October 13, 2015 at 7:43 am

Thanks, nice post.

The link to Tomcat Controller is broken. Here is an older version of the same, which anyway seems to work:
http://www.macupdate.com/app/mac/18706/tomcat-controller/download

Alexander den Engelsman on October 14, 2015 at 1:48 am

Excellent article, thank you!

Jesús on October 14, 2015 at 4:33 pm

Thanks Wolf. That is a practical and simple way to install and startup a Tomcat.
Gracias!

Laurent on October 20, 2015 at 8:59 am

That worked really well, thank you so much!

Dirk Schesmer on October 22, 2015 at 2:49 am

Tomcat 8 now runs seamlessly on my Mac mini under El Capitan (OS X 10.11) !

Thanks for your tutorial!

Surajit Bhattacharjee on October 23, 2015 at 6:00 pm

Thanks a ton! Very clear and precise. I took your advice and got the

controller :).

Kunal on October 31, 2015 at 10:28 pm

thank you !!!!

James on November 5, 2015 at 8:28 am

Easy to follow and highly effective. Thanks!

kristina on November 5, 2015 at 9:03 pm

very useful. thanks!

Mark Miranda on November 9, 2015 at 9:48 pm

Great instructions! Nice and easy to follow!

Just a heads up for others, I received an error – "Unsupported major.minor version 51.0" in the Terminal. So make sure you update your JRE/JDK. I went to Oracle's website – http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html.

Once again thanks for the instructions!

Mahdi on November 12, 2015 at 11:46 am

Thank you! it's working.

Lars Van Casteren on November 15, 2015 at 10:03 am

Great guide!
#6 for Tomcat is not really necessary, tar keeps the correct file executable modes.

Glen on November 16, 2015 at 5:24 pm

Sweet. This worked perfectly. Thanks.

BTW: I'm on El Capitan (as of yesterday).
java version "1.8.0_65"
Java(TM) SE Runtime Environment (build 1.8.0_65-b17)
Java HotSpot(TM) 64-Bit Server VM (build 25.65-b01, mixed mode)

Sara on November 19, 2015 at 6:43 pm

Thank you!!! This works and I love the Tomcat Controller. It simplified the process even further! You are a lifesaver! Thanks again!

Sryn on November 27, 2015 at 2:50 am

Thank you very much for the instructions. Two Thumbs Up!!

Ricardo Leme on November 30, 2015 at 8:05 am

You save my day! Thank you, man. Work's very well!

Amal Devasia on December 5, 2015 at 7:43 pm

Works well on OS X 10.11.1 El-Capitan too for Tomcat 9.0.0.M1. Thanks Wolf!

neil on December 9, 2015 at 9:47 pm

thank you

Koushik Karmakar on December 9, 2015 at 11:15 pm

Thanks a ton !!!

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About

My name is **Wolf Paulus**, a photographer, hiker, hacker, technologist based in Ramona, California.
I'm currently working on Android projects, occasionally speak at developer conferences, and work on open source projects (Swixml, HessDroid, …).
You can contact me by email at wolf@wolfpaulus.com
Read More »

Upcoming

On **Saturday, March 7**, I will be speaking at the SoCal Codecamp on "Android Push -

Android Wear - Android Voice".

Hope to see you at the beautiful CSUF Campus in Fullerton.

Upcoming

On **Wednesday, March 11th**, I will be speaking at the San Diego Android Developers Group on 'Wearables, the Internet of Things and Micro Applications'. Hope to see you at Dell Software, 9540 Towne Centre Drive, San Diego, CA

Upcoming

On **Tuesday, April 14th**, I will be speaking at the SDSU Institute of Electronic and Electrical Engineers / IEEE Seminar on Speech Recognition / Synthesis and Natural Language Understanding.
You don't have to put you ear on the ground, and still, can literally hear it coming. The broad introduction of Voice User Interfaces ...

Hope to see you at the beautiful SDSU Campus at the Institute of Electronic and Electrical Engineers in San Diego.

Upcoming

On **April 20-21**, I will be speaking at the Mobile Voice Conference 2015 in San Jose, California on "Natural Language Understanding - Bridging the gap between Speech Recognition and Application/Business Logic" and "VUI in Wearables and the IoT, technical possibilities and challenges"

Upcoming

On **Tuesday, June 16th**, I will be speaking at the San Diego Java User Group on 'Wearables, the Internet of Things and Micro Applications'. Hope to see you at their new location, at ResMed 9001 Spectrum Center Blvd., San Diego, CA 92123

Upcoming

On **June 27th**, I will be speaking at the UC San Diego Code Camp on Speech Recognition and Push-Notifications on Android and Android Wear.
Hope to see you at the UCSD Campus in San Diego.

Upcoming

On **August 19**, I will be speaking at the SpeechTEK 2015 in New York City on "Bridging the Gap Between Speech Recognition and Business Logic"

Upcoming

On **September 15**, I will be speaking at the San Diego .NET User Group on "Bridging the Gap Between Speech Recognition and Business Logic"

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