

Deploy on MAC

Step 1 Download JDK package from below link:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

Tips: Please use JDK 1.7 or greater version

Step 2 Install JAVA environment by JDK package.

Below link is how to install Mac application with DMG file.

<http://www.ofzenandcomputing.com/how-to-install-dmg-files-mac/>

<http://www.howtogeek.com/177619/how-to-install-applications-on-a-mac-everything-you-need-to-know/>

Step 3 Test Java environment

open terminal and run “ java -version” you will see like below message:

java version “1.7.0_17”

Java(TM) SE Runtime Environment (build 1.7.0_17-b02)

Java HotSpot(TM) 64-Bit Server VM (build 23.7-b01, mixed mode)

If your java version is lesser than 1.7, please upgrade your java version.

Below link to tell you how to upgrade java to 1.7:

<http://www.cc.gatech.edu/~simpkins/teaching/gatech/cs2340/guides/java7-macosx.html>

Step 4: Download binary-release from github:

<https://github.com/jiangzhen1984/ChatServer/tree/master/release>

Step 5: prepare to run server:

Identify your IP first. You can refer to below link for how to get IP on Mac:

<http://www.wikihow.com/Find-Your-IP-Address-on-a-Mac>

Setp 6: run server:

- open terminal

- go to release dir

Single mode:

```
java -jar chatserver-0.5-SNAPSHOT.jar -p port -h listenIp
```

Cluster mode:

```
java -jar chatserver-0.5-SNAPSHOT.jar -p port -h listenIp -mp cluster-port -mh cluster-address -mi "Cluster network interface name"
```

Tip:

Port(-p parameter) : should be 2- 65534 (recommend 9399)

listen IP(-h parameter) : should be IPv4, like 192.168.1.1 or 10.147.16.22 format.

Cluster port(-mi parameter) : should be 2- 65534 (recommend 9499)

Cluster address(-mh parameter) : should be multicast address(recommend 234.254.254.254)

Cluster network interface name (-mi parameter): should be network interface name which IP address is listen IP.

Example Single mode:

```
java -jar chatserver-0.5-SNAPSHOT.jar -p 9399 -h 192.168.1.3
```

Example Cluster mode:

```
java -jar chatserver-0.5-SNAPSHOT.jar -p 9399 -h 192.168.1.3 -mi eth0 -mp 9499 -mh 234.254.254.254
```

Note: should never run two instance in same physical PC or server.

FAQ:

Run Successfully:

```
[INFO] [CONNECTOR] starting listener:
[INFO] [CONNECTOR] address ==> :localhost
[INFO] [CONNECTOR] port ==> :9399
[INFO] [CONNECTOR] ##### start listener successfully #####
```

Run failed for incorrect multicast network interface in cluster mode:

```
[WARN] [MulticastSelectorConnector] server socket bind failed
java.lang.IllegalArgumentException: Cannot set IP_MULTICAST_IF to 'null'
    at sun.nio.ch.DatagramChannelImpl.setOption(DatagramChannelImpl.java:208)
    at
co.weebly.connector.MulticastSelectorConnector$ListenWorker.run(MulticastSelectorConnector.java:182)
[WARN] [MulticastSelectorConnector] worker start failed PREPARED_FAILED
```

Run failed for incorrect multicast address:

```
[WARN] [main] ==>multicast address is incorrect
[WARN] [main] ==> java -jar jarname -p port -h listen -mp multicast-port -mh group -mi
groupiface
```

Run failed for port already in use:

```
[INFO] [CONNECTOR] starting listener:

[INFO] [CONNECTOR] address ==> :localhost

[INFO] [CONNECTOR] port ==> :9399

[WARN] [CONNECTOR] server socket bind failed java.net.BindException: Address already
in use

    at sun.nio.ch.Net.bind0(Native Method)

    at sun.nio.ch.Net.bind(Net.java:445)

    at sun.nio.ch.Net.bind(Net.java:437)

    at sun.nio.ch.ServerSocketChannelImpl.bind(ServerSocketChannelImpl.java:223)

    at java.nio.channels.ServerSocketChannel.bind(ServerSocketChannel.java:154)

    at co.weebly.connector.SelectorConnector$ListenWorker.run(SelectorConnector.java:156)

[WARN] [CONNECTOR] worker start failed PREPARED_FAILED
```

How to get network interface name:

Open terminal and input “ ifconfig -a”, you will see below information, red block is network interface name

lo0: flags=8049 mtu 16384

```
gif0: flags=8010 mtu 1280
stf0: flags=0 mtu 1280
en0: flags=8863 mtu 1500
    inet6 xxxx%en0 prefixlen 64 scopeid 0x4
    inet 192.168.0.110 netmask 0xffffffff broadcast 192.168.0.255
    ether xx:xx:xx:xx:xx:xx
    media: autoselect (100baseTX ) status: active
    supported media: none autoselect 10baseT/UTP 10baseT/UTP 10baseT/UTP 10baseT/UTP
100baseTX 100baseTX 100baseTX 100baseTX 1000baseT 1000baseT 1000baseT
fw0: flags=8863 mtu 4078
    lladdr xx:xx:xx:xx:xx:xx
    media: autoselect status: inactive
    supported media: autoselect
en1: flags=8863 mtu 1500
    inet6 xxxx%en1 prefixlen 64 scopeid 0x6
    inet 192.168.0.110 netmask 0xffffffff broadcast 192.168.0.255
    ether xx:xx:xx:xx:xx:xx
    media: autoselect status: active
    supported media: autoselect
```

More questions for install java on MAC:

https://java.com/en/download/faq/java_mac.xml

<http://docs.oracle.com/javase/7/docs/webnotes/install/mac/mac-jdk.html>