

# How to Install Spark on Mac with Homebrew

Elaborated by Yudith Cardinale

## Step 1: Install Java

Open the terminal and enter *java -version* to check the current Java version. If no version is returned then go for the **official website** (<https://www.oracle.com/java/technologies/downloads/#java8>) to install it

After the installation is complete, configure the environment variables of JAVA. JDK is installed in the directory */Library/Java/JavaVirtualMachines*

```
ls /Library/Java/JavaVirtualMachines
adoptopenjdk-8.jdk jdk1.8.0_291.jdk
```

Enter *vim ~/.bash\_profile* or *vim ~/.zprofile* in the terminal to configure the Java path.

Place the following statement in the blank line *export*

*JAVA\_HOME="/Library/Java/JavaVirtualMachines/jdk version.jdk/Contents/Home"*

```
export JAVA_HOME=/Library/Java/JavaVirtualMachines/adoptopenjdk-8.jdk/Contents/Home
```

Then, execute *source ~/.bash\_profile* or *source ~/.zprofile* in the terminal to make the configuration file effective.

```
source .zprofile
```

Then enter the *java -version* in the terminal, you can see the Java version.

```
yudithcardinale@MacBookYudith% java -version
openjdk version "1.8.0_292"
OpenJDK Runtime Environment (AdoptOpenJDK) (build 1.8.0_292-b10)
OpenJDK 64-Bit Server VM (AdoptOpenJDK) (build 25.292-b10, mixed mode)
```

## Step 2: Install Homebrew

Homebrew is very commonly used on mac, not much to describe, installation method, it is just to execute the following command:

```
/bin/bash -c "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

Enter *vim ~/.bash\_profile* or *vim ~/.zprofile* in the terminal to add the following statement:

```
eval "$(/opt/homebrew/bin/brew shellenv)"
```

### Step 3: Install Spark

Execute the following command in the terminal:

```
brew install apache-spark
```

After installation is completed verify spark path

```
yudithcardinale@MacBookYudith% cd /opt/homebrew/Cellar/apache-spark/3.2.1/libexec
```


```
yudithcardinale@MacBookYudith% ls
R          bin          data          jars          licenses  python       work
RELEASE    conf          examples  kubernetes    logs      sbin         yarn
```

Note: latest apache-spark will be installed. In this case apache-spark 3.2.1 at the time of writing this document.

After the installation is complete, enter “`spark-submit --version`” to view the version. If there is an information receipt, the installation is successful.

```
yudithcardinale@MacBookYudith% spark-submit --version
```

```
2023-05-21 12:50:39,396 WARN util.Utills: Your hostname, MacBook-Pro-de-Yudith.local
resolves to a loopback address: 127.0.0.1; using 10.88.2.113 instead (on interface
en0)
2023-05-21 12:50:39,400 WARN util.Utills: Set SPARK_LOCAL_IP if you need to bind to
another address
Welcome to
```



version 3.2.1

```
Using Scala version 2.12.15, OpenJDK 64-Bit Server VM, 1.8.0_292
Branch HEAD
Compiled by user hgao on 2022-01-20T19:26:14Z
Revision 4f25b3f71238a00508a356591553f2dfa89f8290
Url https://github.com/apache/spark
Type --help for more information.
```

### Step 4: Spark path configuration

Make sure that all environment variables are well set. Your `.bash` profile or `.zprofile` looks like:

```
eval "$(/opt/homebrew/bin/brew shellenv)"
export JAVA_HOME=/Library/Java/JavaVirtualMachines/adoptopenjdk-8.jdk/Contents/Home
```

```
export PATH=$PATH:$JAVA_HOME/bin

## HADOOP env variables
export HADOOP_HOME="/opt/homebrew/Cellar/hadoop/3.3.3/libexec"
export PATH=$PATH:$HADOOP_HOME/bin
export PATH=$PATH:$HADOOP_HOME/sbin
export HADOOP_CONF_DIR=$HADOOP_HOME/etc/hadoop
export HADOOP_MAPRED_HOME=$HADOOP_HOME
export HADOOP_COMMON_HOME=$HADOOP_HOME
export HADOOP_HDFS_HOME=$HADOOP_HOME
export YARN_HOME=$HADOOP_HOME
export HADOOP_COMMON_LIB_NATIVE_DIR=$HADOOP_HOME/lib/native
export HADOOP_OPTS="-Djava.library.path=$HADOOP_HOME/lib"
export HADOOP_CLASSPATH=${JAVA_HOME}/lib/tools.jar

export SPARK_HOME=/opt/homebrew/Cellar/apache-spark/3.2.1/libexec
export PATH="$SPARK_HOME/bin/:$PATH"
```

## **Step 5: Spark test with command line interfaces**

### **Scala:**

```
yudithcardinale@MacBookYudith% spark-shell
```

### **Python:**

```
yudithcardinale@MacBookYudith% pyspark
```