Preparing a macOS Machine for the Labs

This document provides the steps for installing the software required to begin the exercises on a Mac computer. The sequence is as follows:

1. Install Xcode
2. Install Homebrew
3. Install Java 1.8
4. Create JAVA_HOME environment variable
5. Install Gradle
6. Install GIT
7. Install curl
8. Install node.js
9. Install Docker
10. Install IBM Cloud (Bluemix) CLI
11. Install the IBM Container Service plugins
12. Install the Kubernetes kubectl CLI
13. Install the MYSQL client

Step 1: Install Xcode

1. In a browser search engine, type `xcode` and select Xcode on the Mac App Store – iTunes Apple.
2. Click the link **View in Mac App Store**.
3. Click the **Get** button.
4. It changes to an **Install App** button. Click it again.
   NOTE: The download is approximately 4.5GB. It may take a long time.
5. Verify the installation. Open **Xcode**, select **File** > **New** > **Playground**. Create the playground and verify that you see the string **Hello, playground**.

Step 2: Install Homebrew

1. In your browser, go to `https://brew.sh/`. Follow the installation instructions on the web site.
2. Verify the installation by typing

`brew help`
You should see a list of usage examples.

Step 3: Install Java JDK 1.8

1. In a browser, open https://www.oracle.com
2. In the list of menu options, click **Downloads and Trials**.
3. Click **Java for Developers**.
4. In the list, look for the newest version that starts with **Java SE 8**. At the time of writing, the newest version was Java SE 8u171. In that section, click the **DOWNLOAD** button under **JDK** (Note: your minor version may be different)
5. In the section that lists installation files for the various operating systems, click the **Accept License Agreement** radio button at the top.
6. Select the **Mac OS X x64** file (jdk-8u171-macosx-x64.dmg or newer).
7. Double-click the downloaded file to open it.
8. Double-click the package to unpack it. Follow the default installation instructions.
9. Verify that the installation was successful by typing `java` in a terminal window. You should see a list of usage options.

Step 4: Create JAVA_HOME environment variable

1. Open bash_profile in an editor:
   `$ vi ~/.bash_profile`
2. Add the following line to the bottom of the file:
   `export JAVA_HOME=$(/usr/libexec/java_home)`
3. **Save** and **close** the file.
4. In the terminal window, type
   `$ source ~/.bash_profile`
5. Verify that it is set correctly by typing
   `$ echo $JAVA_HOME`
   You should see the full path to the jdk.
6. Verify that your installation of Java is recognized. Type:
   `java -version`
   You should see information about the java version, the runtime environment, and Java HotSpot.

Step 5: Install Gradle

1. Type `brew install gradle`

Step 6: Verify that GIT is installed

1. Type
   `git -version`
2. Verify that the response is 'git version 2.7.x' (your version number may be later).
3. If git is not installed, go to https://git-scm.com/download/mac and follow the instructions to install it.

Step 7: Verify that curl is installed

1. Type `curl http://www.google.com`
2. Verify that the response is the HTML for the Google page.
   NOTE: If the response is **The document has moved**, then curl was successfully installed, but the url is not correct. According to your geography, you need to change the extension.
3. If you do not have curl installed, you can get it from the Mac App Store (http://macappstore.org/curl), or you can find various version binaries and source code at https://curl.haxx.se/download.html .

Step 8: Install node.js

1. Type
   `brew install node`
2. Verify the installation:
   `node -v`
   The response is the version number (for example, v4.2.6).
3. Type
   `npm -v`
   Again, the response is the version number.

Step 9: Install Docker

1. In a browser, open

https://docs.docker.com/docker-for-mac/

2. In the left pane, click `Install Docker for Mac`.
3. Click the button `Download from Docker Store`.
4. Follow the instructions on the web page to install Docker and make sure it is running.

Step 10: Install the IBM Cloud (Bluemix) CLI

1. In a browser, go to https://console.bluemix.net/docs/cli/reference/bluemix_cli/get_started.html
2. Click the installer for MacOS and follow the instructions to install the IBM Cloud CLI.
3. Type `bx -v` to return the version number.

Step 11: Install the IBM Cloud Container Service plugins

There are two plugins associated with the IBM Cloud Container Service that you will need for the labs. They are the plugin for the container service itself (`bx cs` commands) and the plugin for the container registry (`bx cr` commands).

1. Type
   `bx plugin install container-service -r Bluemix`
   `bx plugin install container-registry -r Bluemix`
2. Check that the plugins are installed by typing `bx plugin list`

Step 12: Install the Kubernetes kubectl CLI

1. type `brew install kubectl` More information can be found at https://kubernetes.io/docs/tasks/tools/install-kubectl.

Step 13: Install the MYSQL client

The easiest way to do this is to just install the full MYSQL product, then use the client from it. You should install MYSQL version 5.7.

1. Type `brew install mysql@5.7`

This completes the setup tasks for MacOS.