

React Native configuration

Install Node.js LTS

At the last update of this tutorial, Node.js 10.15.3 is the LTS release available.

```
sudo apt-get install curl python-software-properties  
curl -sL https://deb.nodesource.com/setup_10.x | sudo -E bash -
```

```
sudo apt-get install nodejs
```

Source: <https://tecadmin.net/install-latest-nodejs-npm-on-ubuntu/>
<https://linuxize.com/post/how-to-install-node-js-on-ubuntu-18.04/>

Install React Native

```
sudo npm install -g react-native-cli
```

Install Java 8 manually

Go to Oracle download page:

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

Download the jdk-8u221-linux-x64.tar.gz file

Create a directory:

```
sudo mkdir /usr/lib/jvm-oracle
```

Untar the downloaded file content into this directory:

```
sudo tar -xvzf jdk-8u221-linux-x64.tar.gz -C /usr/lib/jvm-oracle/
```

Set the Java symbolic links:

```
sudo update-alternatives --install /usr/bin/java java  
/usr/lib/jvm-oracle/jdk1.8.0_221/bin/java 1
```

```
sudo update-alternatives --install /usr/bin/javac javac  
/usr/lib/jvm-oracle/jdk1.8.0_221/bin/javac 1
```

```
sudo update-alternatives --install /usr/bin/javaws javaws  
/usr/lib/jvm-oracle/jdk1.8.0_221/bin/javaws 1
```

Check everything went fine:

```
java -version
javac -version
javaws -version
```

Source:

<https://rtmccormick.com/2018/04/29/how-to-manually-install-java-8-on-ubuntu-18-04-lts/>

Set JAVA_HOME path and JAVA bin directory to the PATH variable

At the end of the .bashrc file append:

```
export JAVA_HOME=/usr/lib/jvm-oracle/jdk1.8.0_221
export PATH=$PATH:$JAVA_HOME/bin
```

Check that everything is ok:

```
echo $JAVA_HOME
echo $PATH
```

Source:

https://vitux.com/how-to-setup-java_home-path-in-ubuntu/

Install Android SDK

Go to Android download page:

<https://developer.android.com/studio>

Scroll down to the "Command line tools only" section.

Download the sdk-tools-linux-4333796.zip file

Create an Android directory in the Public directory:

```
mkdir /home/username/Public/Android
```

Unzip the downloaded file content into this directory

Go to:

```
cd Public/Android/tools/bin/
```

Display the help

```
./sdkmanager --help
```

Accept the license agreements:

```
./sdkmanager --licenses
```

Type y to all the questions.

More on sdkmanager:

<https://developer.android.com/studio/command-line/sdkmanager>

Set ANDROID_HOME path and Android tools directory to the PATH variable

At the end of the .bashrc file append:

```
export ANDROID_HOME=$HOME/Public/Android
export PATH=$PATH:$ANDROID_HOME/tools
```

Check that everything is ok:

```
echo $ANDROID_HOME
echo $PATH
```

Install Android Debug Bridge (ADB) & Fastboot

```
sudo apt-get install android-tools-adb android-tools-fastboot
```

Enter the `lsusb` command to find out the Android device ID:

```
Bus 002 Device 002: ID 8087:0024 Intel Corp. Integrated Rate Matching Hub
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 001 Device 004: ID 064e:e330 Suyin Corp.
Bus 001 Device 002: ID 8087:0024 Intel Corp. Integrated Rate Matching Hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 004: ID 046d:c062 Logitech, Inc. M-UAS144 [LS1 Laser Mouse]
Bus 003 Device 003: ID 046d:c31c Logitech, Inc. Keyboard K120
Bus 003 Device 002: ID 1a40:0101 Terminus Technology Inc. Hub
Bus 003 Device 005: ID 0e8d:201c MediaTek Inc.
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
```

Grab the first four digits from the device ID: `0e8d`:201c

Input this into the udev rules in order to get up and running:

```
echo 'SUBSYSTEM=="usb", ATTR{idVendor}=="0e8d", MODE="0666", GROUP="plugdev"' |
sudo tee /etc/udev/rules.d/51-android-usb.rules
```

Running Metro Bundler on port 8081

```
react-native start
or
npm start
```

Check the device is attached:

```
adb devices
```

Run the app:

```
react-native run-android
```

To enable Live reloading:

```
adb reverse tcp:8081 tcp:8081
```

To reload code:

```
adb shell input keyevent 82
```

Display logs:

```
adb logcat | grep ReactNativeJS
```

or

```
react-native log-android
```

In case of error: `device offline`

```
adb kill-server
```

```
adb start-server
```

More on running and debugging:

<https://facebook.github.io/react-native/docs/running-on-device>

<https://facebook.github.io/react-native/docs/debugging#accessing-the-in-app-developer-menu>

Check React Native version

```
react-native --version
```

Create a project

Initialize the project:

```
react-native init MyProject
```

Go to the project directory:

```
cd MyProject
```

Run Metro bundler:

```
npm start
```

Build the project:

```
react-native run-android
```

Push notifications with Firebase Cloud Messaging (FCM)

```
npm install --save react-native-firebase
```

Files settings

android/build.gradle

```
...
dependencies {
    classpath("com.android.tools.build:gradle:3.4.2")
    classpath 'com.google.gms:google-services:4.2.0' // <= Add this line
    ...
}
```

android/app/build.gradle

```
...
dependencies {
    implementation fileTree(dir: "libs", include: ["*.jar"])
    implementation "com.facebook.react:react-native:+" // From node_modules
    implementation "com.google.android.gms:play-services-base:17.0.0" // <= add these lines
    implementation "com.google.firebase:firebase-core:17.0.0" // <=
    implementation "com.google.firebase:firebase-messaging:19.0.1" // <=
    ...
}
```

apply plugin: 'com.google.gms.google-services' <= add this line at the bottom of the file

android/app/src/main/java/com/project_name/MainApplication.java

```
import io.invertase.firebase.messaging.RNFBirebaseMessagingPackage; // <= add these lines
import io.invertase.firebase.notifications.RNFBirebaseNotificationsPackage; // <=
```

```
...
```

```
@Override
protected List<ReactPackage> getPackages() {
    @SuppressWarnings("UnnecessaryLocalVariable")
    List<ReactPackage> packages = new PackageList(this).getPackages();
    ...
    packages.add(new RNFBirebaseMessagingPackage()); // <= add these lines
    packages.add(new RNFBirebaseNotificationsPackage()); // <=
    ...
}
```

android/app/src/main/AndroidManifest.xml

```
<activity android:name="com.facebook.react.devsupport.DevSettingsActivity" />
...
<service android:name="io.invertase.firebase.messaging.RNFirebaseMessagingService">
  <intent-filter>
    <action android:name="com.google.firebase.MESSAGING_EVENT" />
  </intent-filter>
</service>

<meta-data
  android:name="com.google.firebase.messaging.default_notification_channel_id"
  android:value="@string/default_notification_channel_id" />
...
```

android/app/src/main/res/values/strings.xml

```
<resources>
  <string name="app_name">JoomApp</string>
  <string name="default_notification_channel_id" translatable="false">fcm_default_channel</string>
</resources>
```