# **Compile JAVA API on Raspberry Pi**

**Version 01**

**Tested on :**

* **M6e, USB Pro, Nano**

## **Raspberry Pi 2 Model B V1.1**

**Mercury API version- 1.31.1.36**

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## **Introduction**

## This document describes how to configure, compile Java API and run sample application for Raspberry Pi 2 Model B V1.1

## **Steps to Compile and run Java Mercury API on raspberry Pi**

1.Download latest version of java from oracle website.

2.Then copy downloaded file into Raspberry Pi.

3.Untar the file .

cmd :tar xvf <location to the file>

example :

tar xvf jdk-8u101-linux-arm32-vfp-hflt.tar.gz

4.Then add java installed location /etc/profile file like below

example :

export JAVA\_HOME=/home/debian/jdk1.8.0\_101

export PATH=$PATH:$JAVA\_HOME/bin

Then save the file and reboot the reader

5.Then check java installed or not with below commands

cmd: which java, java -version, java , javac

6.Download the latest mercuryapi available from the ThingMagic website using the below link:

<http://www.thingmagic.com/index.php/manuals-firmware#Mercury_API>

7.Extract the API SDK .

8.Edit the sample java application (example:read.java) and comment out the line “PACKAGES=samples;”. Save the file.

9.Compile the application using the following command.

javac -cp .:ltkjava-1.0.0.6.jar:mercuryapi.jar <sampleapplication.java>

Example- javac -cp .:ltkjava-1.0.0.6.jar:mercuryapi.jar read.java

\*\*The general error you could see if when Java complains about missing linux-arm.lib. When Java complains about missing linux-arm.lib, it can't find the required libraries for using the serial ports on your system. here is how to recompile them:

* In the C folder of the mercury API there is a folder:

c/proj/jni

* That has the Makefile for compiling the proper lib driver.
* Next find the jni.h file on your system:

$ sudo find / -name "jni.h"

/usr/lib/jvm/jdk-8-oracle-arm32-vfp-hflt/include/jni.h

add that directory to the Makefile.jni like this:

CFLAGS += -I/usr/lib/jvm/jdk-8-oracle-arm32-vfp-hflt/include -I/usr/lib/jvm/jdk-8-oracle-arm32-vfp-hflt/include/linux

(jni.h needs a file called jni\_md.h, hence the 2nd include)

* Then run make -f Makefile.jni. The result will be libSerialTransportNative.so.0, which you rename to linux-arm.lib
* Now traverse back to mercuryapiX.X.X/java
* Extract the mercuryapi.jar file using command jar xf mercuryapi.jar or use the instructions available at <https://docs.oracle.com/javase/tutorial/deployment/jar/unpack.html>
* Now you will have a folder named “com” in the current(java) folder.
* Copy the mercuryapi.jar file from the java directory into com/thingmagic.
* Copy the linux-arm.lib file you created before into java/com/thingmagic (there are a few other .lib files there).

10.Run the application using following command.

java -cp .:ltkjava-1.0.0.6.jar:mercuryapi.jar <sampleapplication> <comport> <--ant 1,2>

Note: Use sudo to compile and run the Mercury API

## **Setup**

