**B2G OS Build steps**

**Pre-requisites:**

ubuntu16.04 os

8GB RAM

120 GB HDD SPACE

PYTHON 3.7 above versions

**Packages needed to be install**

**sudo apt-get install make=3.81-8.2ubuntu3**

**sudo apt-mark hold make**

First, run the following commands to set the required architectures:

**sudo dpkg --add-architecture i386**

**sudo dpkg --add-architecture amd64**

Then, run the following command in Terminal:

**sudo apt-get install --no-install-recommends autoconf2.13 bison bzip2 ccache curl flex gawk gcc g++ g++-multilib git lib32ncurses5-dev lib32z1-dev libgconf2-dev zlib1g:amd64 zlib1g-dev:amd64 zlib1g:i386 zlib1g-dev:i386 libgl1-mesa-dev libx11-dev make zip lzop libxml2-utils openjdk-8-jdk nodejs unzip python**

**Installing Java setup**

sudo add-apt-repository ppa:openjdk-r/ppa  
sudo apt-get update

sudo apt-get install openjdk-8-jdk

install jack

**Java Downgrade/Upgrade in Ubuntu 16.04**

**downgrading to 1.7 in ubuntu 16.04**

sudo add-apt-repository ppa:openjdk-r/ppa

sudo apt-get update

sudo apt-get install openjdk-7-jdk

sudo update-java-alternatives --list

sudo update-alternatives --config java

select open jdk 7

sudo update-alternatives --config javac

select open jdk 7

sudo update-alternatives --config javap

select open jdk 7

sudo update-alternatives --config javadoc

select open jdk 7

**upgrading java from 1.7 to 1.8 in ubuntu 16.04**

sudo add-apt-repository ppa:openjdk-r/ppa

sudo apt-get update

sudo apt-get install openjdk-8-jdk

sudo update-java-alternatives --list

sudo update-alternatives --config java

select open jdk 8

sudo update-alternatives --config javac

select open jdk 8

sudo update-alternatives --config javap

select open jdk 8

sudo update-alternatives --config javadoc

select open jdk 8

**Upgradation of python**

upgrade python to 3.7 by following steps

sudo apt install software-properties-common

sudo add-apt-repository ppa:deadsnakes/ppa

sudo apt update -y

sudo apt install python3.7

sudo update-alternatives --install /usr/bin/python3 python3 /usr/bin/python3.6 1

sudo update-alternatives --install /usr/bin/python3 python3 /usr/bin/python3.5 1

sudo update-alternatives --install /usr/bin/python3 python3 /usr/bin/python3.7 2

sudo update-alternatives --config python3

**check python version**

python3 -V

sudo apt-get install -y python3-pip

sudo apt-get install build-essential libssl-dev libffi-dev python3-dev

sudo apt install python3.7-gdbm

**Cloning of the code :**

Following are the source code links

**Sync the below codes**

**Ls5030 with Android 8 and B2G**

LS5030-Android8 (B2G porting): git clone <http://192.168.2.220:1800/quoin/canopus/ls5030/uranus.git> -b LS5030\_MSM8909\_LA.3.1.1\_B2G

**LS5030(Android M base-B2G) :git clone ssh://caerus@192.168.2.154:/crux/stable\_b2g/BBF300B -b BBF300B\_MSM8905.LF.1.4\_STAB**

**Building of B2G Code:**

Build the clone source code in regular manner by following steps

source build/envsetup.sh

lunch ----> option 10

make -j8

After build successful , it generates out folder and images.

**Issues may Occur :**

while building ls5030 baseline , if it fails at 82% , please use following commands

1.go to kernel/msm3.8 give make mr proper

2. return back to android folder and give make update-api

3. now build the  code with make -j8 or -j4

**NOTE: This build doesn't include B2G code i.e. Gecko , Gaia, Gonkmisc folders**

**To include B2G code, please follow below steps**

**For First time build**

1. add .mozbuild folder in home directory from Kaifota JIO-Mbase-patch-LS5030

2. add .cargo folder in home directory from Kaifota JIO-Mbase-patch-LS5030

4. open .bashrc file in home directory and add **export PATH=$PATH:/home/<username>/.cargo/bin/** in

last line . **---Give username as your pc username**

**or**

**export RUST\_HOME=/home/chegukee/.cargo/bin**

5. sudo apt remove rustc

source build/envsetup.sh

lunch ----> option 10

6. goto gonkmisc and give following commands

rustup install stable

rustup default stable

rustup target add thumbv7neon-linux-androideabi

7. in gonk misc give mma

After successfull building of gonk misc

remove surfaceflinger.rc in out folder

6. After that come to android folder and give **make snod**

7 . after building pack all images.

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**For Incremental Build**

source build/envsetup.sh

lunch ----> option 10

4. goto gonkmisc and give mma

After successful build

remove surfaceflinger.rc in out folder

6. After that come to android folder and give **make snod**

7 . after building pack all images.

**Building of B2G emulator code**

**For Android10 with b2g (emulator ) :**

git clone <https://github.com/kaiostech/B2G>

Please follow the instructions given at the bottom of the page.

<https://github.com/kaiostech/B2G>

For first time build

git clone https://github.com/kaiostech/B2G

1. Fetch the code: REPO\_INIT\_FLAGS="--depth=1" ./config.sh emulator-10-arm or emulator-10-x86\_64

2. Git pull .

3. Git log –oneline ( fixes for objdir)

4. Setup your environment to fetch the custom NDK: export LOCAL\_NDK\_BASE\_URL='ftp://ftp.kaiostech.com/ndk/android-ndk'

5. Install Gecko dependencies: cd gecko && ./mach bootstrap, choose option 4 (arm) (Android Geckoview).

6. Integrate gaia if need from another code and in gecko/moxconfig-b2g file comment sccahe

7.Build: ./build.sh

8.Run the emulator: source build/envsetup.sh && lunch aosp\_arm-userdebug && emulator -writable-system -selinux permissive

**For Repetetive build**

1. Just give ./build.sh in top directory

**NOTE:**  If you clone code from any of the pc , following issues occurs while building code .

permission denied /home/chegukee/

**solution :**

please do following chnages in config file top directory B2G

1. search .config file in B2G folder and in that file remove GECKO\_OBJ\_Directory path and add you path.

While errors like in emulator build :::

ERROR 1:

subprocess.CalledProcessError:Command'('/usr/bin/python3', '/home/chegukee/Workspace/B2G\_EMU/B2G/gecko/mach','install-moz-phab')' returned non-zero exit status 1.

Then use below commands

and sometimes closew current terminal and open new terminal.

$ python -m pip install --upgrade --force-reinstall pip

$ pip install --upgrade pip

ERROR 2 :

thread" "-lgcc\_s" "-lc" "-lm" "-lrt" "-lpthread" "-lutil" "-ldl" "-lutil"

= note: /usr/bin/ld: cannot find -lselinux

collect2: error: ld returned 1 exit status

error: linking with `cc` failed: exit code: 1

Caused by:

process didn't exit successfully: `rustc --crate-name build\_script\_build --edition=2018 services/audiovolumemanager/build.rs --error-format=json

sudo apt install libpq-dev libmysqlclient-dev

cargo install diesel\_cli --no-default-features --features postgres

sudo apt install libhwloc-dev

sudo apt-get install wget ca-certificates

sudo apt-get update

sudo apt-get install postgresql postgresql-client

sudo apt-get install curl -y

curl https://sh.rustup.rs -sSf | sh