**Oak Device Software Image Download**

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| Revision History | | | | |
| Version | Date | Author | Reviewer | Comment |
| V0.5 | 2021/06/17 | Benji Huang |  | Step 7&8 change to nfs |
| V0.4 | 2021/05/28 | Benji Huang |  | Modify step 7&8 |
| V0.3 | 2021/05/25 | Benji\_Huang | Caspar\_Tsai | Add HS part |
| V0.2 | 2021/05/04 | Benji\_Huang | Caspar\_Tsai |  |
| V0.1 | 2021/04/21 | Triffie\_Chang | Caspar\_Tsai |  |

1. Prepare SD-CARD for installation

1.1 Format sd-card

1.2 Copy synergy software image into sd-card

Synergy SD card image是 /media/samba/zc16/6\_Synergy\_image/0116

sd 插進去 slot，執行ffall.sh就可以燒了

1.3 switch jumper for sd-card software

1.4 Connect UART-to-USB for config Oak eth1 IP as 192.168.41.225

1.5 Connect Oak with 192.168.41.xx

2. Set Oak date, and time

$ sudo date -s “2021-MM-DD HH:MM:SS”

$ sudo apt update

3. Add root access right

修改 /etc/ssh/sshd\_config，讓root 帳號能夠登入

root@olympus:/etc/ssh# sudo vim /etc/ssh/sshd\_config

permitRootLogin yes

4. Oak 套件更新

修改/etc/apt/sources.list

指定所有deb 為arch=arm64 的格式, 請全部取代

deb [arch=arm64] http://us.ports.ubuntu.com/ubuntu-ports/ bionic main

deb [arch=arm64] http://us.ports.ubuntu.com/ubuntu-ports/ bionic-updates main

deb [arch=arm64] http://ports.ubuntu.com/ubuntu-ports bionic-security main

deb [arch=arm64] http://us.ports.ubuntu.com/ubuntu-ports/ bionic universe

deb [arch=arm64] http://us.ports.ubuntu.com/ubuntu-ports/ bionic-updates universe

修改/etc/hosts加入

192.168.41.173 us.ports.ubuntu.com

192.168.41.174 ports.ubuntu.com

安裝 screen, make, cmake

sudo apt-get install make cmake screen

1. 創建 test user

~$ sudo adduser test

[sudo] password for caspar:

Adding user `test' ...

Adding new group `test' (1007) ...

Adding new user `test' (1011) with group `test' ...

Creating home directory `/home/test' ...

Copying files from `/etc/skel' ...

Enter new UNIX password:compal3853

Retype new UNIX password:compal3853

passwd: password updated successfully

Changing the user information for test

Enter the new value, or press ENTER for the default

Full Name []:

Room Number []:

Work Phone []:

Home Phone []:

Other []:

Is the information correct? [Y/n] Y

~$ sudo adduser test sudo

Adding user `test' to group `sudo' ...

Adding user test to group sudo

Done.

1. Netopeer2 installation

scp -r compal@192.168.41.18:~/netopeer2\_install .

執行 ./all.sh

★netopeer2\_install 檔案說明 (需有外網裝apt)

1. apt-install.sh > 安裝會需要用到的apt套件

2. pkg-install.sh > 安裝cmocka libyang libssh sysrepo libnetconf2 netopeer2

3. error-libnetconf2.sh > 遇到libnetconf2連結錯誤可使用

4. no-writable.sh > 遇到sysrepo缺套件可使用

5. no-LN.sh > 遇到netopeer2-server可跑起來，但沒有LN狀態時可用

6. all.sh >> 直接執行這個安裝全部並解決所有問題

(但要有外網不然再apt install就會fail)

1. Download weekly build HS software image

sudo apt install -y nfs-common

sudo mkdir /media/samba/nas\_public

sudo mount -t nfs 192.168.41.5:/volume1/Public /media/samba/nas\_public

cd /home/test/

cp /media/samba/nas\_public/vRAN\_ARM\_1.0.11\_20210610142719/\*.tgz ./

tar -zxf vRAN\_ARM\_HS\_1.0.11\_20210610142719.tgz

mv vran-arm\_hs run

cd run

./vranRecovery.sh

cd ../vranPhyRelease\_hs

./firmwareRecovery.sh

1. Download weekly build LS software image

sudo apt install -y nfs-common

sudo mkdir /media/samba/nas\_public

sudo mount -t nfs 192.168.41.5:/volume1/Public /media/samba/nas\_public

cd /home/test/

cp /media/samba/nas\_public/vRAN\_ARM\_1.0.11\_20210610142719/\*.tgz ./

tar -zxf vRAN\_ARM\_1.0.11\_20210610142719.tgz

mv vran-arm run

cd run

./vranRecovery.sh

cd ../vranPhyRelease

./firmwareRecovery.sh

1. Provision

1-1. MiFi airplane mode ON

type “adb shell” and “atcli at+cfun=0” to turn on the airplane mode (run below commands in UE Terminal NB/PC)

1-2. 透過192.168.1.1進入Oak

MobaXterm → session → ssh → Remotehost\* : 192.168.1.1 ; Specify username : root

Change the console of IP to 192.168.1.X

1-3. 修改 new\_gnb\_ip.xml

Enter /home/test/run folder.

Edit new\_gnb\_ip.sh file which under the /home/test/run folder .

Enter “ESC” key to exit the edit mode and input “:wq!” to save the file.

1-4. 透過netopeer2-cli 導入到 sysrepo

Run the netopeer2-cli and connect to the netopeer2-server (password: root)

Use edit-config to overwrite those IP addresses and copy datastore from running to startup. After copy-config the gNB will automatically reboot itself.

1-5. Oak 自動重新開機

type “reboot” and shut down the power of Oak

([./closer.vran.sh] can delete CU/DU/PHY and restart without rebooting the gNB)

1-6. 確認vran\_phy 有 CELL is UP

type screen -ls to check CU/DU/PHY

screen -r -d gnb\_phy (Autorun run)

cd /home/test (Manual run)

./setup\_n79\_all.sh

Setting Manaul run

1. cd /root

2. vim ip\_cfg\_5g\_gnb

=> sudo … (add # )

3. ps -aux | grep cei