

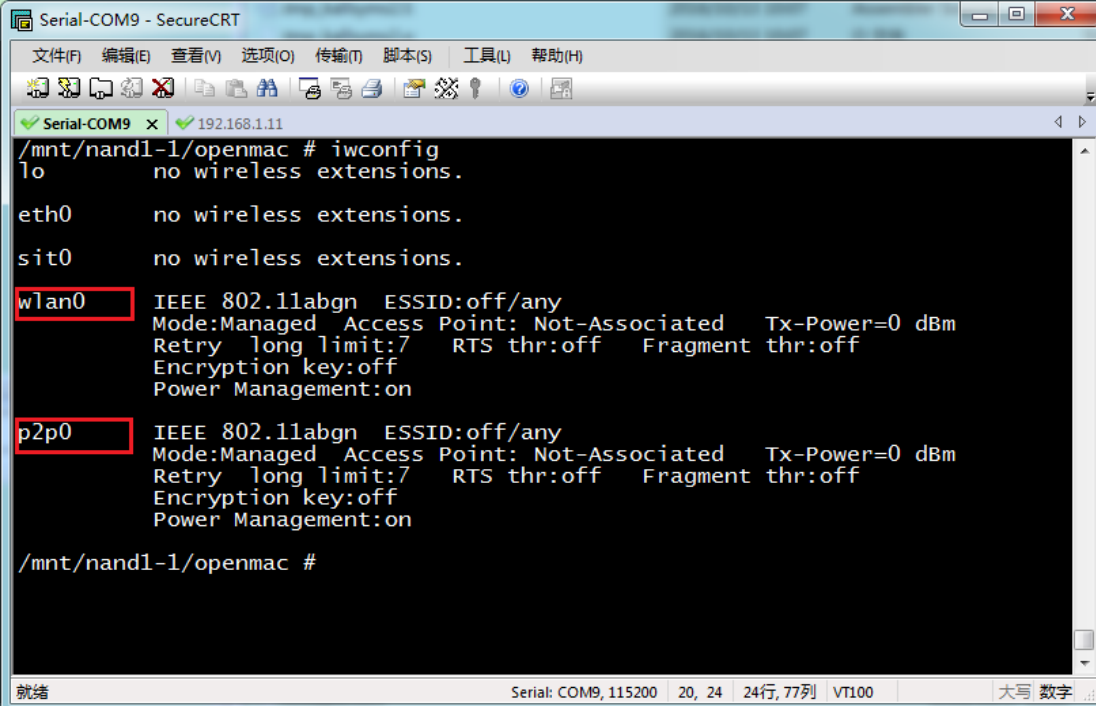
Tools and files

- 1 hostapd(for softAP), dnsmasq(for DHCP server)
- 2 hostapd.conf is the configuration file for hostapd and dnsmasq.conf for dnsmasq
- 3 dnsmasq.leases is a file for dnsmasq(DHCP function) to keep its lease database

We put these files on Nuvoton EVB.

Working steps

1. After drivers installed successfully, two wireless interfaces can be found: interface wlan0 and interface p2p0. These interfaces can work as a STA/TON or an AP separately. We take interface p2p0 working as an AP as an example below.



```
Serial-COM9 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) 工具(L) 帮助(H)
Serial-COM9 x 192.168.1.11
/mnt/nand1-1/openmac # iwconfig
lo          no wireless extensions.

eth0       no wireless extensions.

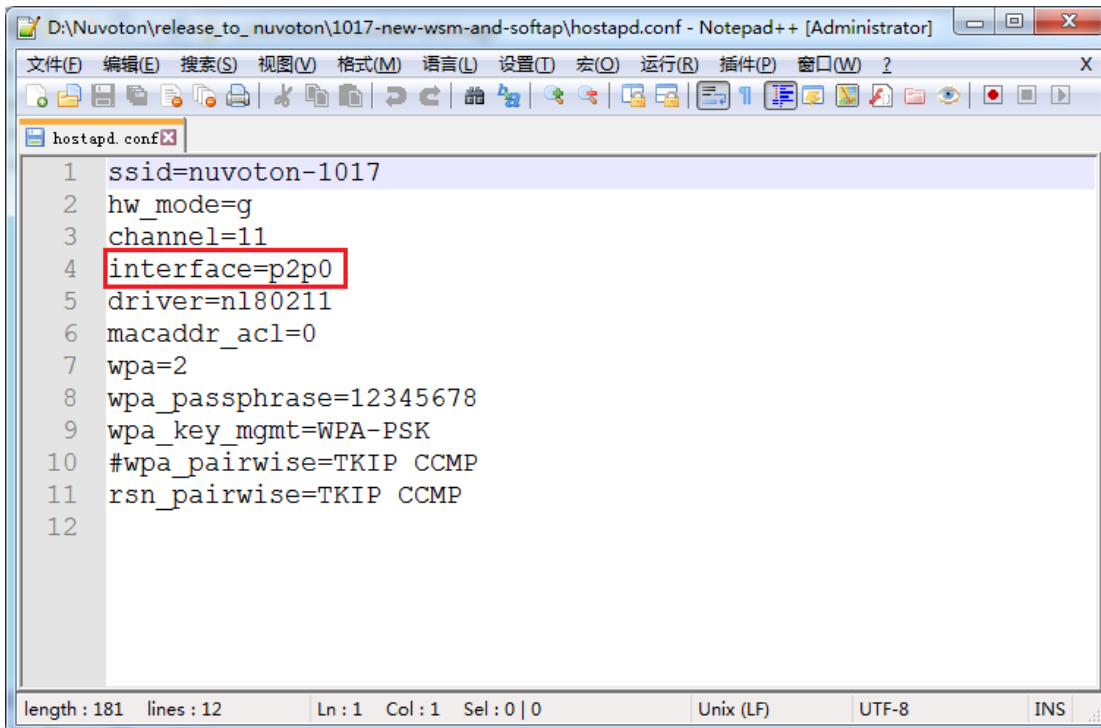
sit0       no wireless extensions.

wlan0      IEEE 802.11abgn  ESSID:off/any
           Mode:Managed  Access Point: Not-Associated  Tx-Power=0 dBm
           Retry long limit:7   RTS thr:off   Fragment thr:off
           Encryption key:off
           Power Management:on

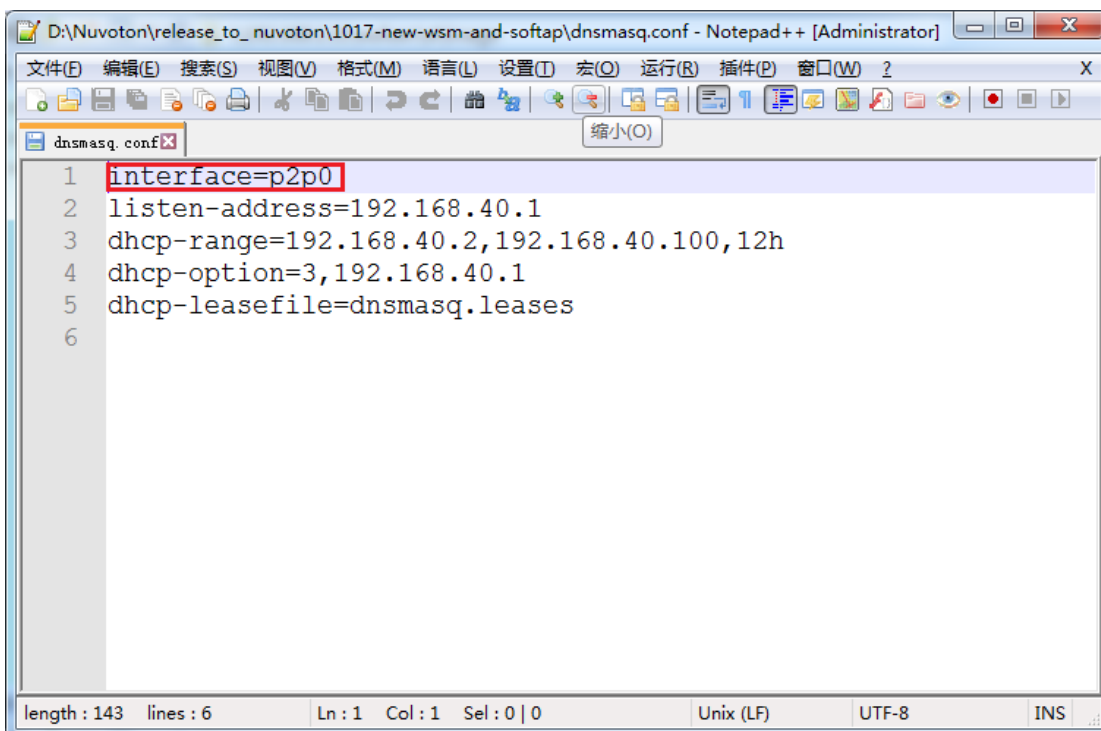
p2p0       IEEE 802.11abgn  ESSID:off/any
           Mode:Managed  Access Point: Not-Associated  Tx-Power=0 dBm
           Retry long limit:7   RTS thr:off   Fragment thr:off
           Encryption key:off
           Power Management:on

/mnt/nand1-1/openmac #
```

Remember to set the 'interface' item of hostapd.conf and dnsmasq.conf.



```
D:\Nuvoton\release_to_nuvoton\1017-new-wsm-and-softap\hostapd.conf - Notepad++ [Administrator]
文件(F) 编辑(E) 搜索(S) 视图(V) 格式(M) 语言(L) 设置(O) 宏(O) 运行(R) 插件(P) 窗口(W) ?
hostapd.conf
1 ssid=nuvoton-1017
2 hw_mode=g
3 channel=11
4 interface=p2p0
5 driver=nl80211
6 macaddr_acl=0
7 wpa=2
8 wpa_passphrase=12345678
9 wpa_key_mgmt=WPA-PSK
10 #wpa_pairwise=TKIP CCMP
11 rsn_pairwise=TKIP CCMP
12
length: 181 lines: 12 Ln: 1 Col: 1 Sel: 0 | 0 Unix (LF) UTF-8 INS
```



```
D:\Nuvoton\release_to_nuvoton\1017-new-wsm-and-softap\dnsmasq.conf - Notepad++ [Administrator]
文件(F) 编辑(E) 搜索(S) 视图(V) 格式(M) 语言(L) 设置(O) 宏(O) 运行(R) 插件(P) 窗口(W) ?
dnsmasq.conf
1 interface=p2p0
2 listen-address=192.168.40.1
3 dhcp-range=192.168.40.2,192.168.40.100,12h
4 dhcp-option=3,192.168.40.1
5 dhcp-leasefile=dnsmasq.leases
6
length: 143 lines: 6 Ln: 1 Col: 1 Sel: 0 | 0 Unix (LF) UTF-8 INS
```

2. Configure IP address of interface p2p0:

ifconfig p2p0 192.168.40.1 netmask 255.255.255.0

3. Start hostapd and dnsmasq

For 2.4GHz Soft AP:

```
./hostapd -B hostapd.conf
```

```
./dnsmasq -C dnsmasq.conf
```

For 5GHz Soft AP:

```
./hostapd -B hostapd-5G.conf
```

```
./dnsmasq -C dnsmasq.conf
```

4. See AP named 'nuvoton-24G' for 2.4GHz, 'nuvoton-5G' for 5GHz, using any network card or phone. Join it.

Note

Hostapd and dnsmasq configuration files offered are basic. More advanced configuration and further explanations of these two files can be found in their source code.