RSB3730 WIFI AP+STA 复现操作步骤

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RECORD OF CHANGES

版本号	修订人	修订日期	修订内容	审核
1.0	胡乐滨	2024.03.15	初步内容撰写	

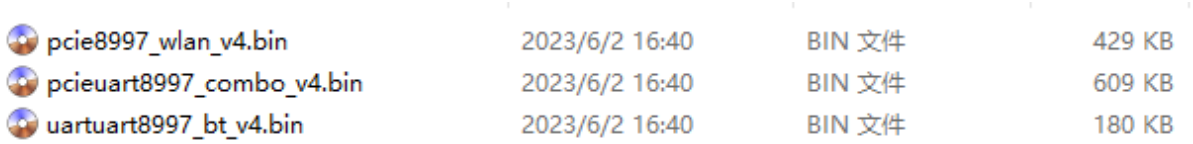
目录

1.配置

1.1.添加驱动固件

(1)解压 PCIE-WLAN-UART-BT-8997-LNX_6_1_55-IMX8-16.92.21.p84.4-16.92.21.p84.4-MM6X16423.P6-GPL.zip 压缩包

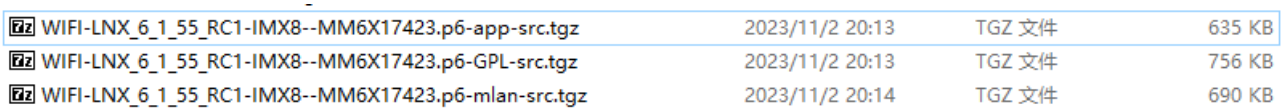
(2)拷贝解压出来的文件夹中 FwImage 文件夹的三个文件到/lib/firmware/nxp



1.2.编译驱动

(1)解压 PCIE-WLAN-UART-BT-8997-LNX_6_1_55-IMX8-16.92.21.p84.4-16.92.21.p84.4-MM6X16423.P6-GPL.zip 压缩包

(2)再次将解压出来的文件夹中的三个.tgz 进行解压



(3)配置交叉编译器，指定内核目录。

```
vi Makefile
```

添加 KERNELDIR 变量

```
#  Alternatively, this software may be distributed under the terms of GPL v2.
#  SPDX-License-Identifier:    GPL-2.0
#

KERNELDIR:=/[redacted]/linux-imx


CONFIG_COMPATDIR=n
ifeq ($(CONFIG_COMPATDIR), y)
COMPATDIR=/lib/modules/$(KERNELVERSION_X86)/build/compat-wireless-3.2-rc1-1/include
CC ?=           $(CROSS_COMPILE)gcc -I$(COMPATDIR)
endif

LD ?=           $(CROSS_COMPILE)ld
BACKUP=         /root/backup
YMD=            `date +%Y%m%d%H%M`

################################################################################
# Configuration Options
################################################################################
# Multi-chipsets
CONFIG_SD8887=n
CONFIG_SD8897=n
"Makefile" 758L, 16401C
```

(4)删除原文件系统中的对应驱动，防止冲突造成无法正常加载

```
rm -r /lib/modules/5.4.70/kernel/drivers/net/wireless/marvell
rm -r /lib/modules/5.4.70/kernel/drivers/net/wireless/nxp/*
```

(5)将编译出来的 mlan.ko 和 moal.ko 拷贝到设备中。

```
cp mlan.ko moal.ko /lib/modules/5.4.70/kernel/drivers/net/wireless/nxp
```

(6)更新内核模块依赖

```
depmod
```

(7)设置开机自启

```
vi /etc/modules-load.d/wifi.conf
```

添加如下内容，设置开机加载 mlan.ko 和 moal.ko 驱动

```
mlan
moal
```

(8)设置开机自启驱动参数

```
vi /etc/modprobe.d/wifi.conf
```

添加如下内容，加载 moal.ko 驱动时指定参数。

```
options moal mod_para=nxp/wifi_mod_para.conf
```

1.3.配置 AP

(1)修改/etc/hostapd.conf，配置 hostapd 参数

```
interface=uap0
driver=nl80211
ieee80211n=1
hw_mode=g
channel=6
wpa=2
ssid=jelina_ap
wpa_passphrase=jelina123
wpa_key_mgmt=WPA-PSK
rsn_pairwise=CCMP TKIP
wpa_pairwise=TKIP CCMP
```

(2)启动 hostapd

```
systemctl start hostapd
```

```
root@imx8mmrsb3730a2:~# systemctl start hostapd
[ 4130.247101] wlan: Starting AP
[ 4130.251915] CMD_RESP: cmd 0x121 error, result=0x2
[ 4130.256647] IOCTL failed: 00000000c1ef2090 id=0x200000, sub_id=0x200024 action=2, status_code=0x2
[ 4130.265527] Get multi-channel policy failed
[ 4130.270295] fw doesn't support 11ax
[ 4130.283634] wlan: AP started
[ 4130.289950] Set AC=3, txop=47 cwmin=3, cwmax=7 aifs=1
[ 4130.297199] Set AC=2, txop=94 cwmin=7, cwmax=15 aifs=1
[ 4130.304516] Set AC=0, txop=0 cwmin=15, cwmax=63 aifs=3
[ 4130.311730] Set AC=1, txop=0 cwmin=15, cwmax=1023 aifs=7
```

1.4.配置 wpa_supplicant

(1)设置开机自启

```
systemctl enable wpa_supplicant@mlan0.service
```

(2)添加配置文件

```
vi /etc/wpa_supplicant/wpa_supplicant-mlan0.conf
```

添加如下内容

```
ctrl_interface=/var/run/wpa_supplicant
```

(3)启动服务

```
systemctl start wpa_supplicant@mlan0.service
```

1.5.配置 dhcp

(1)使用 Yocto 编译并安装 dnsmasq

```
bitbake dnsmasq
```

将 rpm 包拷贝至设备中进行安装。

```
rpm –ivh dnsmasq-2.80-r0.aarch64.rpm
```

(2)修改配置文件

```
vi /etc/dnsmasq.conf
```

添加如下内容。

```
port=1983

interface=uap0
dhcp-range=192.168.8.20,192.168.8.254,255.255.255.0,24h
dhcp-option=option:router,192.168.8.1
dhcp-option=option:dns-server,8.8.8.8
```

(3)启动服务

```
systemctl stop dnsmasq
systemctl start dnsmasq
```

1.6.配置 networkd

(1)添加 uap0 配置文件

```
vi /lib/systemd/network/80-uap0.network
```

添加如下内容。

```
[Match]
Name=uap0
```

```
[Network]
Address=192.168.8.1/24
Gateway=192.168.8.1
DNS=8.8.8.8
```

(2)添加 mlan0 配置文件

```
vi /lib/systemd/network/80-mlan0.network
```

添加如下内容。

```
[Match]
Name=mlan0

[Network]
DHCP=yes
```

(3)启动服务

```
systemctl stop systemd-networkd
systemctl start systemd-networkd
```

1.7.重启生效

(1)按照上述步骤完成所有配置之后，重启系统

```
reboot
```

(2)开机之后查看对应的网卡，uap0 以及 mlan0

```
ifconfig
```

```
mlan0     Link encap:Ethernet  HWaddr 00:e9:3a:0d:d2:11
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

uap0      Link encap:Ethernet  HWaddr 02:e9:3a:0d:d3:11
          inet addr:192.168.8.1  Bcast:192.168.8.255  Mask:255.255.255.0
          inet6 addr: fe80::e9:3aff:fe0d:d311/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:36 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)
```

(3)查看 hostapd 及 wpa_supplicant 服务是否启动正常

```
root@imx8mmrsb3730a2:~# systemctl status hostapd
* hostapd.service - Hostapd IEEE 802.11 AP, IEEE 802.1X/WPA/WPA2/EAP/RADIUS Authenticator
   Loaded: loaded (/lib/systemd/system/hostapd.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2024-03-18 03:16:25 UTC; 2min 20s ago
  Process: 956 ExecStart=/usr/sbin/hostapd /etc/hostapd.conf -P /run/hostapd.pid -B (code=exited, status=0/SUCCE
 Main PID: 964 (hostapd)
    Tasks: 1
   Memory: 2.4M
   CGroup: /system.slice/hostapd.service
           `-964 /usr/sbin/hostapd /etc/hostapd.conf -P /run/hostapd.pid -B

Mar 18 03:16:25 imx8mmrsb3730a2 systemd[1]: Starting Hostapd IEEE 802.11 AP, IEEE 802.1X/WPA/WPA2/EAP/RADIUS Aut
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: Configuration file: /etc/hostapd.conf
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: rfkill: Cannot open RFKILL control device
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: Using interface uap0 with hwaddr 02:e9:3a:0d:d3:11 and ssid "jelin
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: random: Only 18/20 bytes of strong random data available
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: random: Not enough entropy pool available for secure operations
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: WPA: Not enough entropy in random pool for secure operations - upd
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: uap0: interface state UNINITIALIZED→ENABLED
Mar 18 03:16:25 imx8mmrsb3730a2 hostapd[956]: uap0: AP-ENABLED
Mar 18 03:16:25 imx8mmrsb3730a2 systemd[1]: Started Hostapd IEEE 802.11 AP, IEEE 802.1X/WPA/WPA2/EAP/RADIUS Auth
root@imx8mmrsb3730a2:~# ps -ef | grep hostapd
root         964       1  0 03:16 ?        00:00:00 /usr/sbin/hostapd /etc/hostapd.conf -P /run/hostapd.pid -B
root        1025    1001  0 03:18 ttymxc1  00:00:00 grep hostapd
```

```
root@imx8mmrsb3730a2:~# systemctl status wpa_supplicant@mlan0
* wpa_supplicant@mlan0.service - WPA supplicant daemon (interface-specific version)
   Loaded: loaded (/lib/systemd/system/wpa_supplicant@.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2024-03-18 03:16:24 UTC; 2min 39s ago
 Main PID: 923 (wpa_supplicant)
    Tasks: 1
   Memory: 6.2M
   CGroup: /system.slice/system-wpa_supplicant.slice/wpa_supplicant@mlan0.service
           `-923 /usr/sbin/wpa_supplicant -c/etc/wpa_supplicant/wpa_supplicant-mlan0.conf -imlan0

Mar 18 03:16:24 imx8mmrsb3730a2 systemd[1]: Started WPA supplicant daemon (interface-specific version).
Mar 18 03:16:24 imx8mmrsb3730a2 wpa_supplicant[923]: Successfully initialized wpa_supplicant
Mar 18 03:16:24 imx8mmrsb3730a2 wpa_supplicant[923]: rfkill: Cannot open RFKILL control device
root@imx8mmrsb3730a2:~# ps -ef | grep wpa_supplicant
root         923       1  0 03:16 ?        00:00:00 /usr/sbin/wpa_supplicant -c/etc/wpa_supplicant/wpa_supplicant-mlan0.conf -imlan0
root         954       1  0 03:16 ?        00:00:00 /usr/sbin/wpa_supplicant -u
root        1029    1001  0 03:19 ttymxc1  00:00:00 grep wpa_supplicant
```

2.测试

2.1.AP 测试

查看 AP 是否正常开启，能否正常连接。

使用对应的密码成功连接。

属性

SSID:	jelina_ap
协议:	Wi-Fi 4 (802.11n)
安全类型:	WPA2-个人
网络频带:	2.4 GHz
网络通道:	6
链接速度(接收/传输):	130/130 (Mbps)
本地链接 IPv6 地址:	fe80::f52d:2395:9123:c020%6
IPv4 地址:	192.168.8.47
IPv4 DNS 服务器:	8.8.8.8
制造商:	Intel Corporation
描述:	Intel(R) Wi-Fi 6 AX200 160MHz
驱动程序版本:	21.10.2.2

调试串口打印输出如下内容。

```
root@imx8mmrsb3730a2:~# [  253.934569] uap0:
[  253.934577] wlan: HostMlme Auth received from 38:XX:XX:XX:a8:13
[  253.942854] wlan: HostMlme uap0 send Auth
[  253.954836] uap0:
[  253.954843] wlan: HostMlme MICRO_AP_STA_ASSOC 38:XX:XX:XX:a8:13
[  253.962879] uap0:
[  253.962883] wlan: HostMlme MICRO_AP_STA_ASSOC 38:XX:XX:XX:a8:13
[  253.971508] wlan: UAP/GO add peer station, address =38:XX:XX:XX:a8:13
[  253.978728] wlan: HostMlme uap0 send assoc/reassoc resp
[  253.984275] wlan: deauth station 38:XX:XX:XX:a8:13
[  253.989683] wlan: UAP/GO add peer station, address =38:XX:XX:XX:a8:13
[  253.996632] wlan: HostMlme uap0 send assoc/reassoc resp
[  254.003207] uap0:
[  254.003213] wlan: Send EAPOL pkt to 38:XX:XX:XX:a8:13
[  254.010784] wlan: hostmlme notify deauth station 38:XX:XX:XX:a8:13
[  254.017037] uap0:
[  254.017040] wlan: EVENT: MICRO_AP_STA_DEAUTH reason=0x4003 38:XX:XX:XX:a8:13
[  254.026463] wlan: deauth station 38:XX:XX:XX:a8:13
[  254.031522] CMD_RESP: cmd 0xb5 error, result=0x1
[  254.036186] IOCTL failed: 00000000ec52c917 id=0x20000, sub_id=0x2000d action=1, status_code=0x1
[  254.045059] wlan: deauth station 38:XX:XX:XX:a8:13 failed
[  254.521627] wlan: hostmlme notify deauth station 38:XX:XX:XX:a8:13
[  254.527870] uap0:
[  254.527874] wlan: EVENT: MICRO_AP_STA_DEAUTH reason=0x4003 38:XX:XX:XX:a8:13
[  254.529629] uap0:
[  254.529632] wlan: HostMlme Auth received from 38:XX:XX:XX:a8:13
[  254.545433] wlan: HostMlme uap0 send Auth
[  254.552531] uap0:
[  254.552536] wlan: HostMlme MICRO_AP_STA_ASSOC 38:XX:XX:XX:a8:13
[  254.561883] wlan: UAP/GO add peer station, address =38:XX:XX:XX:a8:13
[  254.569093] wlan: HostMlme uap0 send assoc/reassoc resp
[  254.577406] uap0:
[  254.577413] wlan: Send EAPOL pkt to 38:XX:XX:XX:a8:13
[  254.597202] uap0:
[  254.597208] wlan: Send EAPOL pkt to 38:XX:XX:XX:a8:13
```

2.2.STA 测试

2.2.1. 正常的 SSID 密码连接

(1)新增一个连接配置

```
wpa_cli -i mlan0 add_network
```

这里返回值 0 是 network id，下面所有配置命令中的 0 均是 network id，此命令执行结果不同时，下述所有命令均需修改为对应的值。

```
root@imx8mmrsb3730a2:~# wpa_cli -i mlan0 add_network
0
```

(2)配置要连接的 ssid 和密码

```
wpa_cli -i mlan0 set_network 0 key_mgmt 'WPA-PSK'
wpa_cli -i mlan0 set_network 0 ssid '""'
wpa_cli -i mlan0 set_network 0 psk '""'
```

(3)启用配置

```
wpa_cli -i mlan0 enable_network 0
```

(4)选择当前使用的网络配置

```
wpa_cli -i mlan0 select_network 0
```

wpa_supplicant 开始连接 ssid。

```
root@imx8mmrsb3730a2:~# [ 1210.715188] wlan: SCAN COMPLETED: scanned AP count=38
[ 1210.724838] wlan: HostMlme mlan0 send auth to bssid 70:XX:XX:XX:d5:f0
[ 1210.756722] mlan0:
[ 1210.756727] wlan: HostMlme Auth received from 70:XX:XX:XX:d5:f0
[ 1210.764800] uap0:
[ 1210.764803] wlan: HostMlme Auth received from 70:XX:XX:XX:d5:f0
[ 1210.776755] CMD_RESP: cmd 0x121 error, result=0x2
[ 1210.781492] IOCTL failed: 000000008a46ae51 id=0x200000, sub_id=0x200024 action=2, status_code=0x3
[ 1210.790369] Get multi-channel policy failed
[ 1211.723299] CSA/ECSA: Switch to new channel 60 complete!
[ 1211.728655] OLD BW = 1 NEW BW = 0
[ 1211.729158] wlan: HostMlme mlan0 Connected to bssid 70:XX:XX:XX:d5:f0 successfully
[ 1211.742006] mlan0:
[ 1211.742011] wlan: Send EAPOL pkt to 70:XX:XX:XX:d5:f0
[ 1211.754749] mlan0:
[ 1211.754755] wlan: Send EAPOL pkt to 70:XX:XX:XX:d5:f0
[ 1211.772256] IPv6: ADDRCONF(NETDEV_CHANGE): mlan0: link becomes ready
[ 1211.779695] woal_cfg80211_set_rekey_data return: gtk_rekey_offload is DISABLE
[ 1211.952800] uap0:
[ 1211.952805] wlan: Send EAPOL pkt to 38:XX:XX:XX:a8:13
[ 1212.460606] uap0:
[ 1212.460614] wlan: Send EAPOL pkt to 38:XX:XX:XX:a8:13
[ 1213.468018] uap0:
[ 1213.468026] wlan: Send EAPOL pkt to 38:XX:XX:XX:a8:13
[ 1214.475652] uap0:
[ 1214.475660] wlan: Send EAPOL pkt to 38:XX:XX:XX:a8:13
[ 1215.483496] wlan: HostMlme uap0 send deauth/disassoc
[ 1215.490606] uap0:
[ 1215.490612] wlan: EVENT: MICRO_AP_STA_DEAUTH reason=0x0 38:XX:XX:XX:a8:13
[ 1215.499784] wlan: deauth station 38:XX:XX:XX:a8:13
[ 1215.500997] wlan: hostmlme notify deauth station 38:XX:XX:XX:a8:13
[ 1215.510831] uap0:
[ 1215.510835] wlan: EVENT: MICRO_AP_STA_DEAUTH reason=0x4003 38:XX:XX:XX:a8:13
[ 1215.520099] CMD_RESP: cmd 0xb5 error, result=0x1
[ 1215.524744] IOCTL failed: 0000000038292762 id=0x20000, sub_id=0x2000d action=1, status_code=0x1
[ 1215.533482] wlan: deauth station 38:XX:XX:XX:a8:13 failed
[ 1215.539565] wlan: deauth station 38:XX:XX:XX:a8:13
[ 1215.544572] CMD_RESP: cmd 0xb5 error, result=0x1
[ 1215.549212] IOCTL failed: 000000002ed3456f id=0x20000, sub_id=0x2000d action=1, status_code=0x1
[ 1215.558182] wlan: deauth station 38:XX:XX:XX:a8:13 failed
[ 1215.918644] wlan: hostmlme notify deauth station 38:XX:XX:XX:a8:13
[ 1215.924893] uap0:
[ 1215.924898] wlan: EVENT: MICRO_AP_STA_DEAUTH reason=0x4003 38:XX:XX:XX:a8:13
```

查看 mlan0 是否正确获取到对应的 ip。

```
mlan0     Link encap:Ethernet  HWaddr 00:e9:3a:0d:d2:11
          inet addr:192.168.210.103  Bcast:192.168.210.255  Mask:255.255.255.0
          inet6 addr: fe80::2e9:3aff:fe0d:d211/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:5 errors:0 dropped:0 overruns:0 frame:0
          TX packets:37 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:987 (987.0 B)  TX bytes:5795 (5.6 KiB)
```

使用 ping 命令，查看网络是否正常。

```
ping -I mlan0 192.168.210.92
```

```
root@imx8mmrsb3730a2:~# ping -I mlan0 192.168.210.92
PING 192.168.210.92 (192.168.210.92) from 192.168.210.103 mlan0: 56(84) bytes of data.
64 bytes from 192.168.210.92: icmp_seq=1 ttl=128 time=20.8 ms
64 bytes from 192.168.210.92: icmp_seq=2 ttl=128 time=45.8 ms
64 bytes from 192.168.210.92: icmp_seq=3 ttl=128 time=50.8 ms
64 bytes from 192.168.210.92: icmp_seq=4 ttl=128 time=67.1 ms
64 bytes from 192.168.210.92: icmp_seq=5 ttl=128 time=6.46 ms
64 bytes from 192.168.210.92: icmp_seq=6 ttl=128 time=63.9 ms
64 bytes from 192.168.210.92: icmp_seq=7 ttl=128 time=41.5 ms
64 bytes from 192.168.210.92: icmp_seq=8 ttl=128 time=34.1 ms
64 bytes from 192.168.210.92: icmp_seq=9 ttl=128 time=49.2 ms
64 bytes from 192.168.210.92: icmp_seq=10 ttl=128 time=10.3 ms
64 bytes from 192.168.210.92: icmp_seq=11 ttl=128 time=6.38 ms
64 bytes from 192.168.210.92: icmp_seq=12 ttl=128 time=16.0 ms
64 bytes from 192.168.210.92: icmp_seq=13 ttl=128 time=22.9 ms
64 bytes from 192.168.210.92: icmp_seq=14 ttl=128 time=5.81 ms
64 bytes from 192.168.210.92: icmp_seq=15 ttl=128 time=35.4 ms
64 bytes from 192.168.210.92: icmp_seq=16 ttl=128 time=6.17 ms
64 bytes from 192.168.210.92: icmp_seq=17 ttl=128 time=63.0 ms
64 bytes from 192.168.210.92: icmp_seq=18 ttl=128 time=258 ms
64 bytes from 192.168.210.92: icmp_seq=19 ttl=128 time=4.28 ms
64 bytes from 192.168.210.92: icmp_seq=20 ttl=128 time=30.4 ms
64 bytes from 192.168.210.92: icmp_seq=21 ttl=128 time=7.65 ms
64 bytes from 192.168.210.92: icmp_seq=22 ttl=128 time=7.38 ms
64 bytes from 192.168.210.92: icmp_seq=23 ttl=128 time=15.4 ms
64 bytes from 192.168.210.92: icmp_seq=24 ttl=128 time=24.5 ms
64 bytes from 192.168.210.92: icmp_seq=25 ttl=128 time=37.0 ms
64 bytes from 192.168.210.92: icmp_seq=26 ttl=128 time=71.2 ms
64 bytes from 192.168.210.92: icmp_seq=27 ttl=128 time=27.6 ms
64 bytes from 192.168.210.92: icmp_seq=28 ttl=128 time=16.7 ms
64 bytes from 192.168.210.92: icmp_seq=29 ttl=128 time=34.8 ms
```

2.2.2. 错误的 SSID 密码连接

使用错误的 SSID 密码尝试连接，并确保主机已连接到 AP，并使用 ping 命令检查与 AP 的连通状态。

(1)关闭原先的配置连接

```
wpa_cli -i mlan0 disable_network 0
```

(2)设置错误的密码

```
wpa_cli -i mlan0 set_network 0 psk ’"errorPSK"’
```

(3)重新启用配置连接

```
wpa_cli -i mlan0 enable_network 0
```

(4)尝试重连几次后出现报错信息，此时主机的 AP 连接也被迫断开

```
[  599.488683] sp : ffff80001217bc10
[  599.491994] x29: ffff80001217bc10 x28: ffff000072478000
[  599.497303] x27: ffff8000116fafe8 x26: 0000000000000000
[  599.502613] x25: ffff80001217bd28 x24: ffff00007274e000
[  599.507922] x23: ffff000072bb8108 x22: ffff00007660aa00
[  599.513231] x21: ffff00006e679014 x20: ffff000072b2c900
[  599.518540] x19: ffff80001217bd28 x18: 0000000000000000
[  599.523848] x17: 0000000000000000 x16: 0000000000000000
[  599.529158] x15: 0000000000000000 x14: 0000000000000000
[  599.534467] x13: 0000000000000000 x12: 0000000000000001
[  599.539776] x11: 0000000000000000 x10: 0000000000000002
[  599.545085] x9 : ffff00007dbb8e50 x8 : ffff00006e67901c
[  599.550394] x7 : 0000000000000000 x6 : ffff00006e67901c
[  599.555704] x5 : 0000000000000967 x4 : 0000000000000985
[  599.561013] x3 : 0000000000000000 x2 : 0000000000000003
[  599.566322] x1 : ffff80001217bd28 x0 : 0000000000000000
[  599.571631] Call trace:
[  599.574076]  nl80211_send_chandef+0x150/0x160
[  599.578432]  nl80211_ch_switch_notify.isra.0.constprop.0+0xe4/0x178
[  599.584696]  cfg80211_ch_switch_notify+0x7c/0xb0
[  599.589336]  woal_cfg80211_notify_channel+0xb8/0xf8 [moal]
[  599.594840]  woal_evt_work_queue+0x214/0x278 [moal]
[  599.599717]  process_one_work+0x198/0x320
[  599.603724]  worker_thread+0x48/0x420
[  599.607385]  kthread+0x138/0x158
[  599.610612]  ret_from_fork+0x10/0x1c
[  599.614184] ---[ end trace 68f3a81f7b79c364 ]---
[  600.927341] ASSOC_RESP: Association Failed, status code = 1, error = 0xfffc, a_id = 0xffff
[  600.935641] IOCTL failed: 00000000a5e51650 id=0x20000, sub_id=0x20001 action=1, status_code=0xfffc0001
[  600.944967] HostMlme mlan0: bss_start Fails
[  600.949179] wlan: HostMlme mlan0 Failed to connect to bssid 70:XX:XX:XX:d5:e0
[  601.957647] wlan: mlan0 START SCAN
[  602.290692] wlan: SCAN COMPLETED: scanned AP count=38
[  602.300152] wlan: HostMlme mlan0 send auth to bssid 70:XX:XX:XX:dc:40
[  602.313026] mlan0:
[  602.313030] wlan: HostMlme Auth received from 70:XX:XX:XX:dc:40
[  602.321078] uap0:
[  602.321081] wlan: HostMlme Auth received from 70:XX:XX:XX:dc:40
[  602.329566] CMD_RESP: cmd 0x121 error, result=0x2
[  602.334346] IOCTL failed: 0000000056cd1271 id=0x200000, sub_id=0x200024 action=2, status_code=0x3
[  602.343237] Get multi-channel policy failed
[  603.323764] CSA/ECSA: Switch to new channel 1 complete!
[  603.329030] OLD BW = 3 NEW BW = 3
[  603.329124] ------------[ cut here ]------------
[  603.337066] WARNING: CPU: 3 PID: 935 at net/wireless/nl80211.c:3157 nl80211_send_chandef+0x150/0x160
```

```
来自 192.168.8.1 的回复: 字节=32 时间=8ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=13ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=117ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=139ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=21ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=9ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=10ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=10ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=9ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=11ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=3ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间<1ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=5ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=3ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=2ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=9ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=3ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=22ms TTL=64
来自 192.168.8.1 的回复: 字节=32 时间=110ms TTL=64
请求超时。
请求超时。
一般故障。
```