MT7986 Sigma Daemon Application Note

2021/8/10 Jie Shen

Version History

Version	Date	Author (Optional)	Description
0.1	2021-8-10	Jie Shen	Initial draft
1.0	2022-2-2	Micheal Su	Official release

Outline

- mtk_dut introduction for APUT
- wfa_dut introduction for apcli

Setup Environment

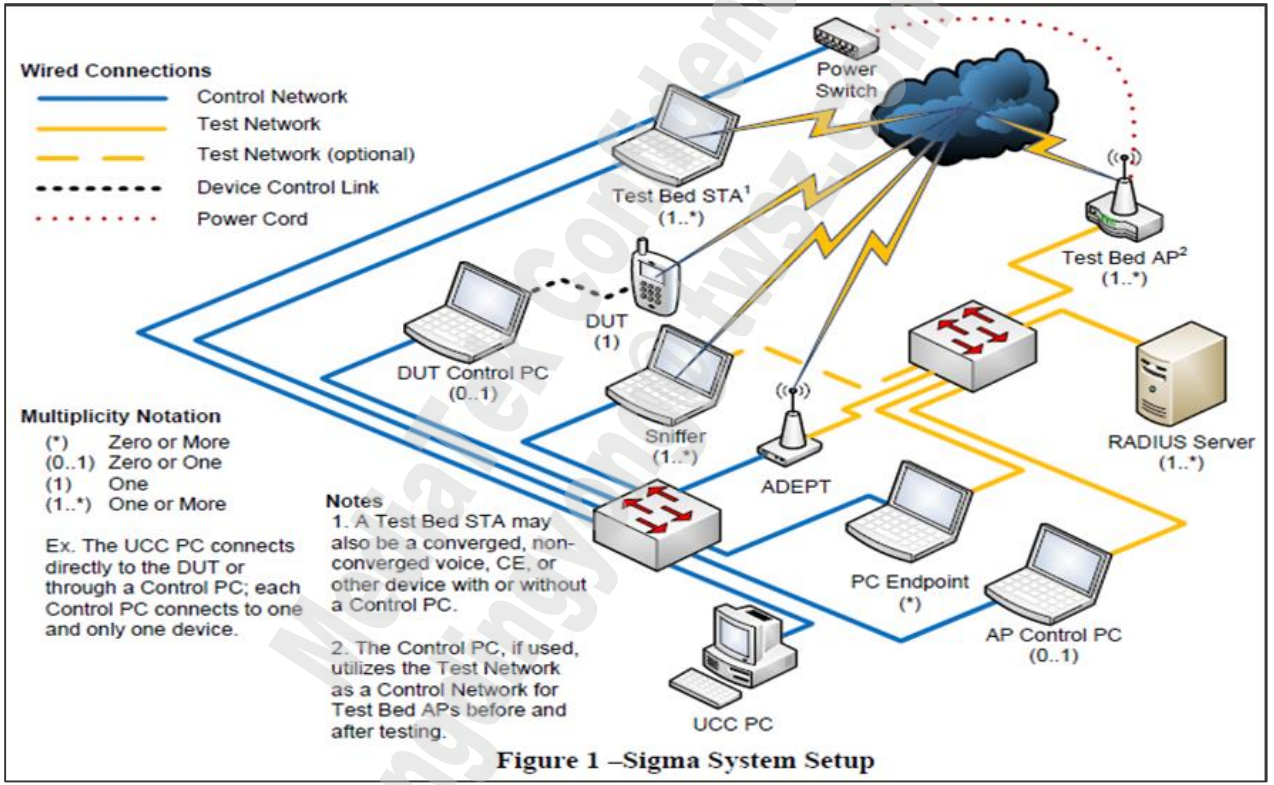
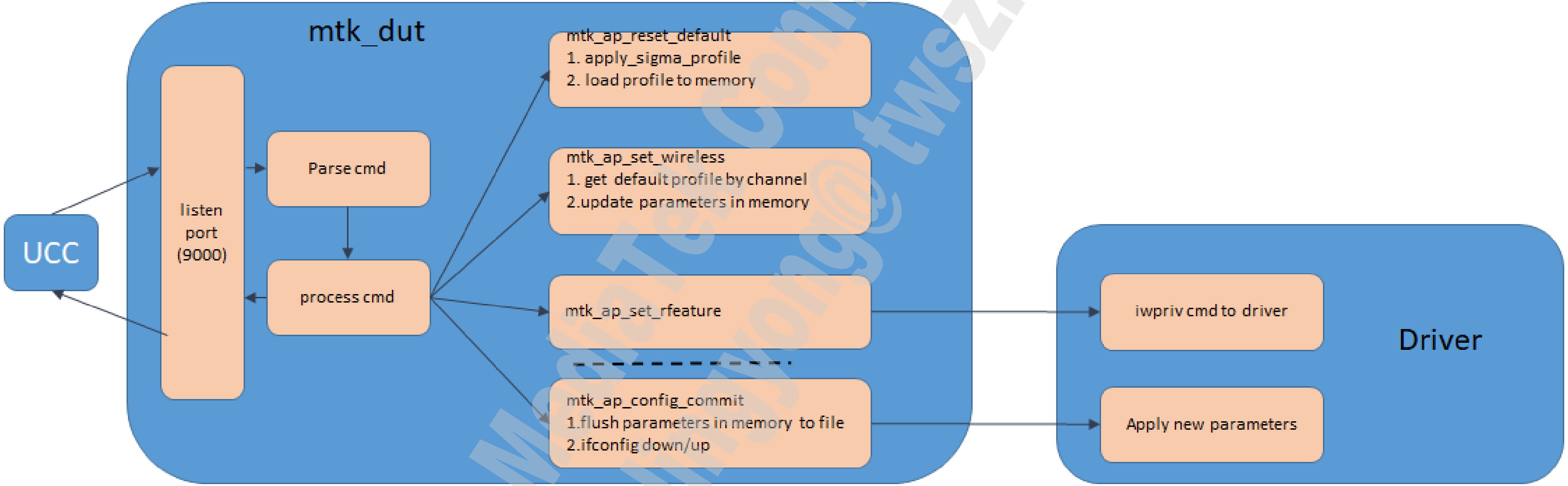


Figure 1 –Sigma System Setup

mtk_dut introduction for APUT

Architecture

- **Common CAPI to handle the ucc cmds for all program, just identify profile by channel, and support dual band concurrent at the same time.**

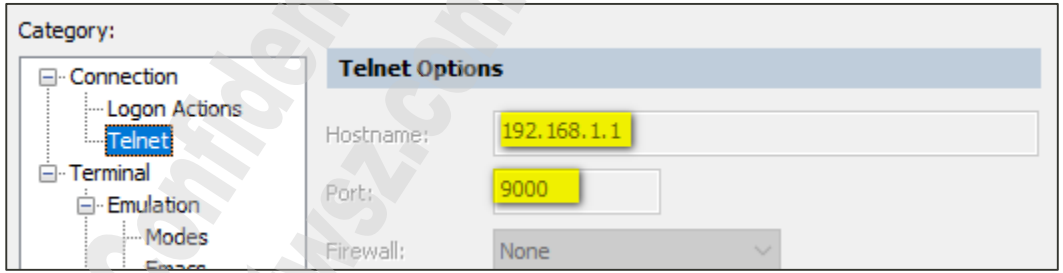


How to Run Daemon

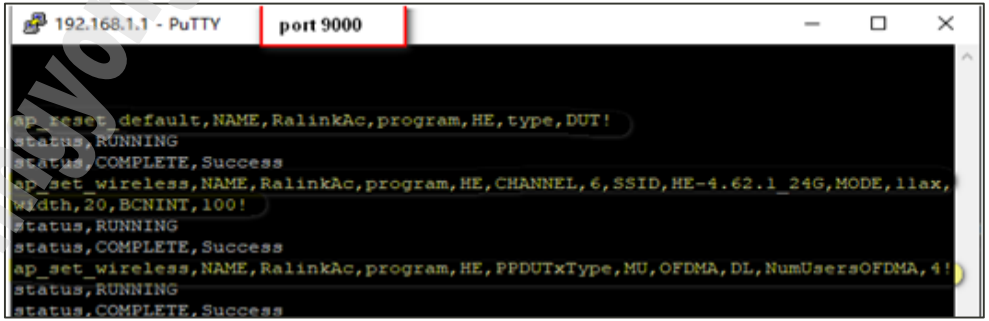
- Usage: mtk_dut <ap> <UCC cmd interface> <UCC cmd port> [-m <mode>] [-d <delay1>] [-z <delay2>] [-l <logfile>]
  - <mode>: efuse|flash
  - <delay1>: delay time in second between interface down/up
  - <delay2>: delay time in second after interface up
  - <logfile>: Log will be redirect to this file from console, the file will be save under "/tmp/log/“
- Example: mtk_dut ap br-lan 9000&

How to Debug

- telnet br-lan ip @ port 9000

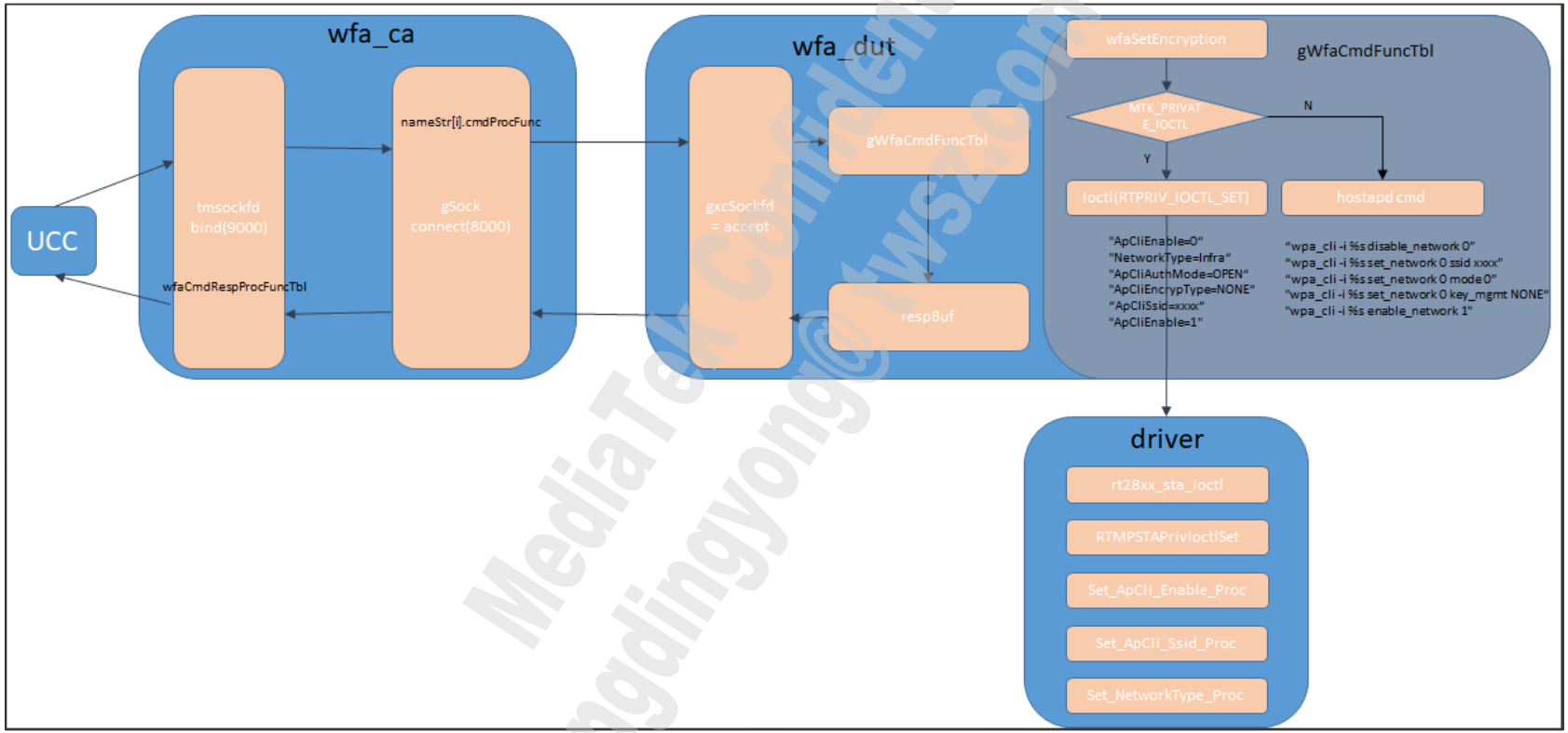


- Run ucc cmd to check if dat saved correctly or iwpriv cmd processed successfully
  - input your ucc cmds session of port 9000, end with "!"
  - refer to the console log of sigma daemon
  - check xxx.dat.cmt after giving cmd:ap_config_commit



wfa_dut introduction for apcli

Architecture



How to Run Daemon(1)

- **####wfa_dut#####(used to receive cmds from ucc)**
  - **"Usage: wfa_dut <command interface> <Local Control Port> \n“**
    - <command interface>: eth1, IP address for the control link interface, 192.168.250.70
    - <Local Control Port>: PORT of DUT, 8000,etc
- **####wfa_ca#####(used to receive cmds from wfa_dut and config DUT)**
  - **"Usage: wfa_ca <control interface> <local control agent port> <DUT IP ADDRESS> <DUT PORT>\n“**
    - <control interface>:control link interface, usb0 etc.
    - <local control agent port>: CA port, 9000,etc.
    - <DUT IP ADDRESS>: IP address of DUT
    - <DUT PORT>: PORT of DUT

How to Run Daemon(2)

1. **ifconfig br0 192.168.250.70**
2. **Run wfa_dut**
   - **(Non-DBDC)**
     - ./wfa_dut apcli0 8000 &
   - **(DBDC)**
     - 5G : ./wfa_dut apcli0 8000 &
     - 2.4G : ./wfa_dut apclix0 8000 &

   Note: DBDC mode: apcli0 is 5G,apclix0 is 2.4G. Please note interface name for wfa_dut daemon
3. **Run wfa_ca**
   1) **export WFA_ENV_AGENT_IPADDR=192.168.250.70**
      export WFA_ENV_AGENT_PORT=8000
      ./wfa_ca br0 9000 &
   2) **./wfa_ca br0 9000 192.168.250.70 8000&**
4. **Enable cert mode in driver**
   - **iwpriv apcli0 set ApCliCertEnable=1 (Since apcli will affect by ap, so this flag is for certification purpose)**

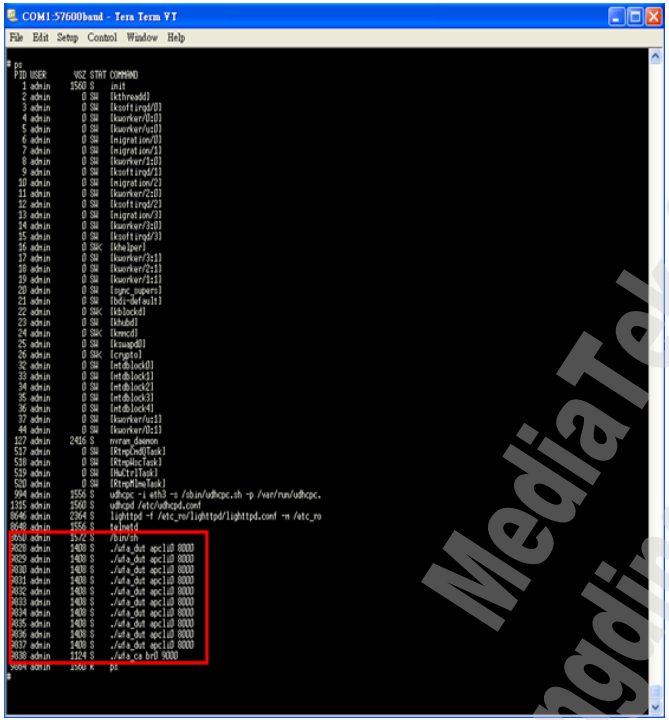
UCC setting

init_VHT.txt

```
1  #########Modified for VHT-5G#########################
2
3  info! VHT-5G Testbed Qualification !
4  #
5  #Loading Enviornment
6  info![Initializing the Test]!
7  wfa_test_commands_init!AP_MAC_Addresses.txt!
8  wfa_test_commands_init!InitEnv.txt!
9  wfa_test_commands_init!EAP-Credentials.txt!
10
11 ######### Testbed Qualification mode ######################
12
13 define!$TestQualMode!1!
14
15
16 ######### DUT (Device Under Test) ##########################
17
18 ## DUT can be either STA or AP
19
20 info!Connecting to DUT Control Agent!
21
22 # DUT Control Agent
23 wfa_control_agent_dut!ipaddr=192.168.250.70,port=9000!
24
25 #Wireless IP of DUT
26 dut_wireless_ip!192.165.140.33!
27
28 ## Name of the DUT(used in case of APUT)
29 define!$DUT_Name!RalinkAc!
30
31 define!$APUT_uname!!
32 define!$APUT_pword!!
33 define!$APUT_hostname!!
```

DUT Check

- Daemon check



- IP check

UCC Script

- MasterTestInfo.xml
  - Description of TB Device Name, channel, security, SSID, band, bw, and referencing configuration file name in each test case
- AP_MAC_Addresses.txt
  - Defined 2G & 5G DUT MAC Address
- init_802.11n.txt, init_VHT.txt(you need to modify it when DUT changed)
  - All the IP scheme and device Name of DUT & TB & CA, including Sniffer, TG, DUT, CA, TB …etc.
  - needs to modify DutMacAddress as APC DUT MAC
- DUTInfo.txt
  - SQA will request this file before every Certi. QC
  - Defining this DUT's capabilities.
  - AP_Concurrent!0! for DBDC/Non DBDC
- How to run tests
  - In Windows cmd terminal
    - Switch to ..\Wi-FiTestSuite_UCC-Windows_v9.x.y\bin>
  - Command format: >wfa_ucc.exe [catalog] [test_case]
    - TGn : C:\...\ucc\bin> wfa_ucc.exe N N-5.2.2
    - TGac : C:\...\ucc\bin> wfa_ucc.exe VHT VHT-5.2.2

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