



MEDIATEK

MT7986 Sigma Daemon Application Note

2021/8/10 Jie Shen

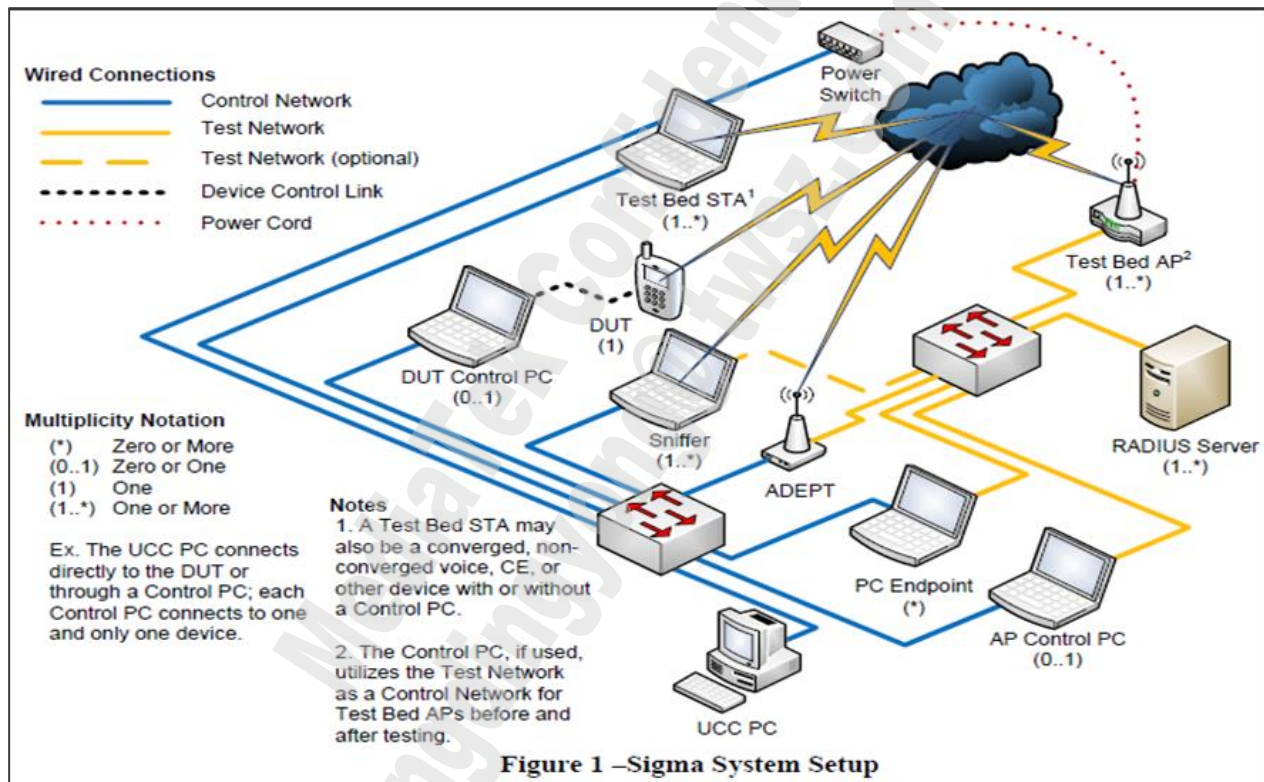
Version History

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

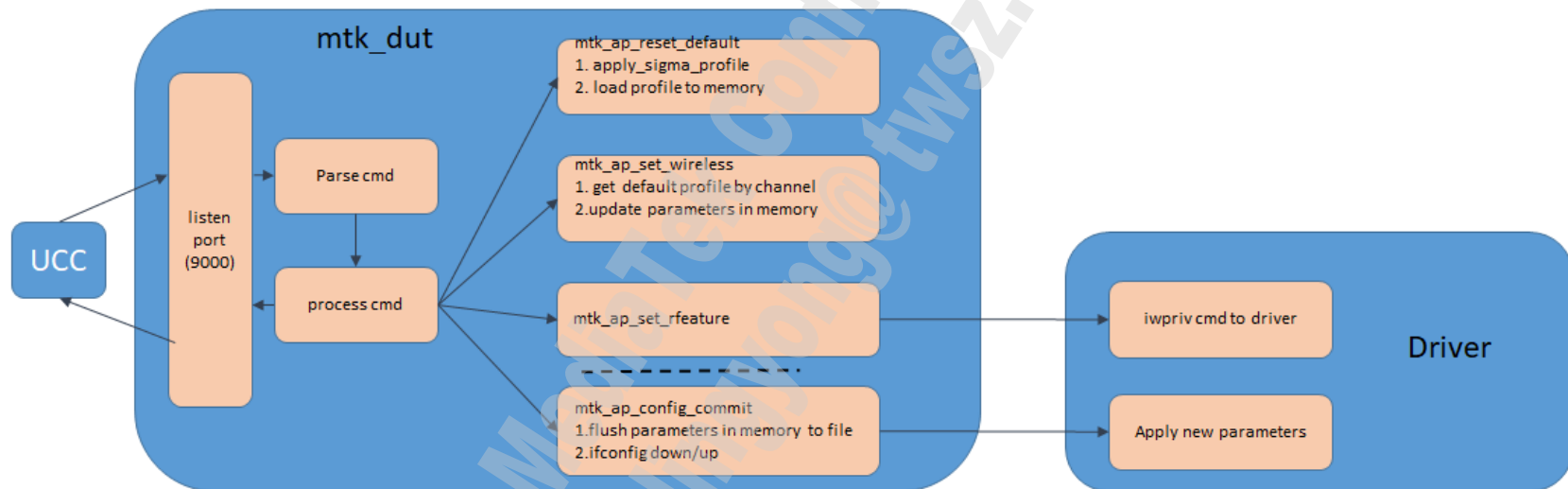
Setup Environment



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.

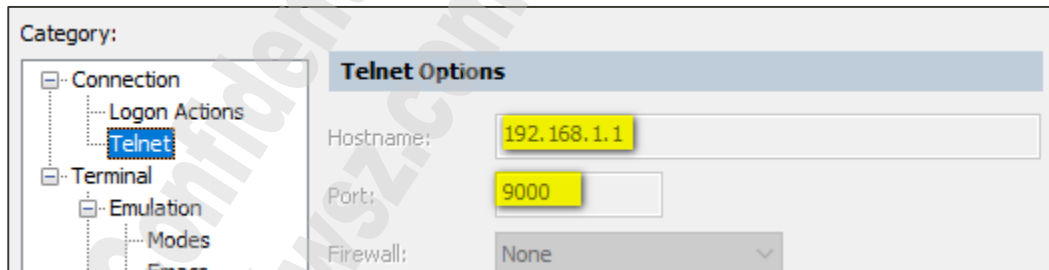


How to Run Daemon

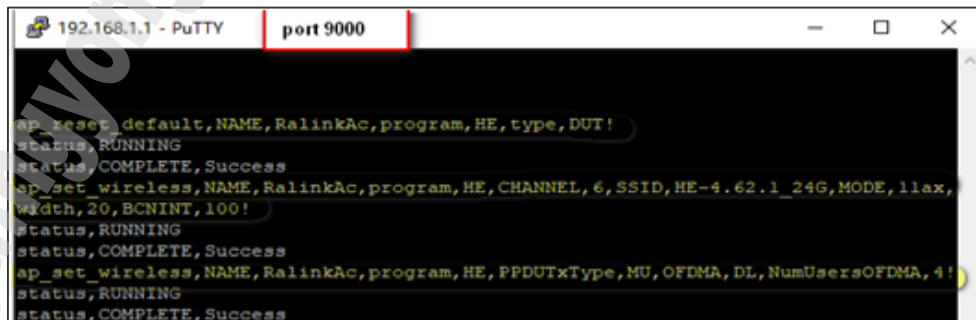
- Usage: `mtk_dut <ap> <UCC cmd interface> <UCC cmd port> [-m <mode>] [-d <delay1>] [-z <delay2>] [-l <logfile>]`
 - `<mode>`: efuse|flash
 - `<delay1>`: delay time in second between interface down/up
 - `<delay2>`: delay time in second after interface up
 - `<logfile>`: Log will be redirect to this 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

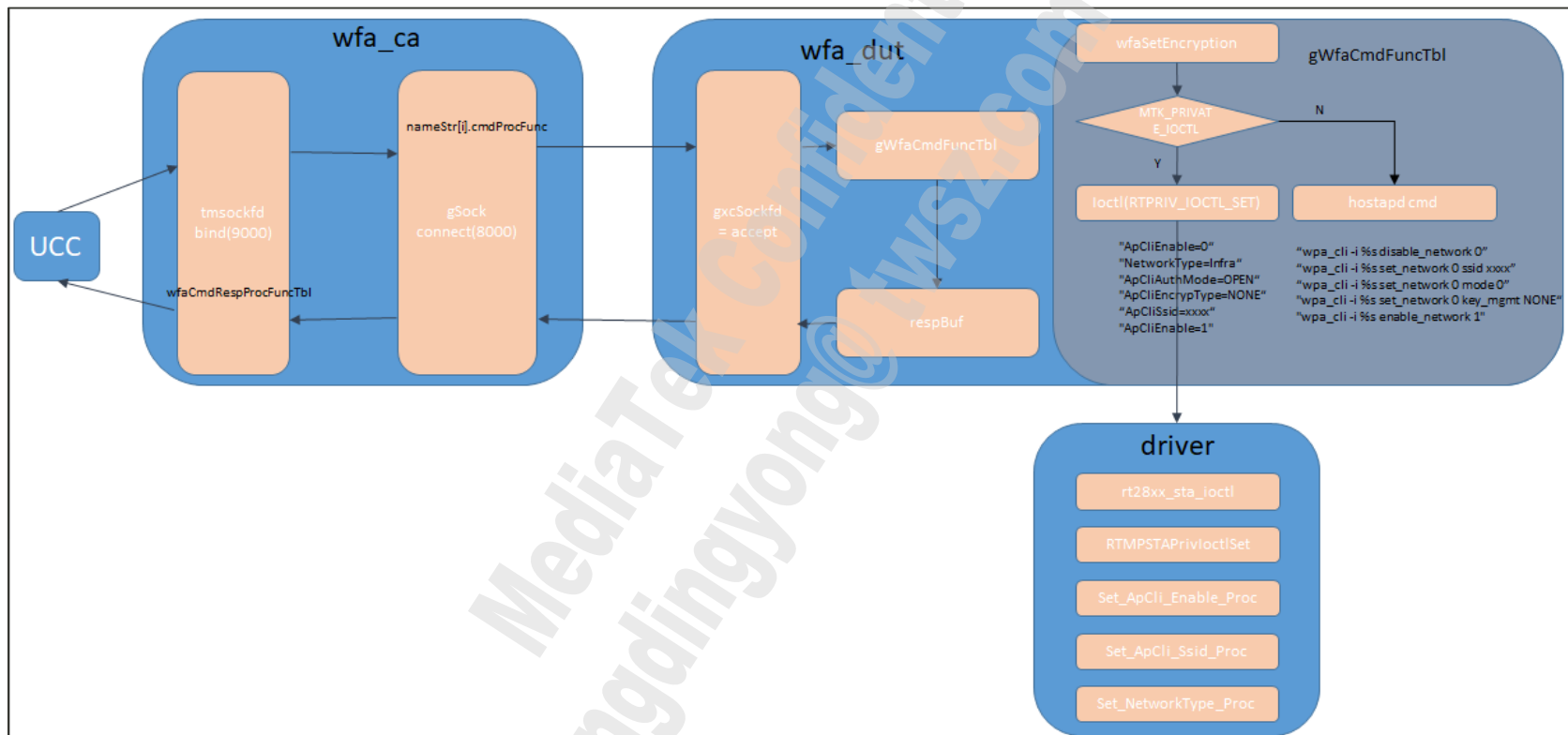


- Run ucc cmd to check if dat saved correctly or iwpriv cmd processed successfully
 - input your ucc cmds session of port 9000, end with "!"
 - refer to the console log of sigma daemon
 - check xxx.dat.cmt after giving cmd:ap_config_commit



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!!
```


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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