Aerohive Networks Inc.

Interface map test case

Revision History

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| --- | --- | --- | --- |
| Version | Date | Author | Description |
| 1.0 | 2009/05/23 | LiangfuZhang | Initial version |
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Glossary and Abbreviations

# Introduction

HM interference map feature will visualize AP channel interference conditions on its floor map. The interference map will give user the overall picture of RF interference conditions of the deployment to help user/SE to find problematic locations, and assist the network planning and channel/power distribution.

To support this feature, HiveOS needs export interference related statistical data to HM. These stats include: channel utilizations (TX/RX and interference), CRC error percentage and noise floor readings. HM will use polling method to get interference data from HiveAP. In the meanwhile, if AP detects its interference condition has reached to a certain level, it will proactively send an “Interference Alert” to HM. The purpose of the alert is to ask HM to start to poll more frequently against this AP and its surrounding neighbors, to ensure the interference condition of the particular locations are refreshed as sooner as possible for better monitoring purpose.

HM will use the collected data to against a set of thresholds to determine the AP’s interference condition, use visualized methods (for example, map colors) to reflect the AP’s interference condition. To assist user to find out the interference sources, HiveAP will also need to export its ACSP neighbor list to HM, so that HM can visually display the both co-channel APs and adjacent channel APs, who may have contributed to the interference conditions.

# Test point or strategy

## Configure managerment

### CLI check: [no] radio profile <name> interference-map enable

### CLI check: [no] radio profile <name> interference-map short-term-interval <nimutes)

### CLI check: [no] radio profile <name> interference-map cu-threshold <value>

### CLI check: [no] radio profile <name> interference-map crc-err-threshold <value>

## check interference parameters

### check the channel number

### Check running average RX CU

### Check running average TX CU

### Check running average interference CU

### Check running average noise floor

### Check short term means average TX CU

### Check short term means average RX CU

### Check short term means average interference CU

### Check short term means average noise floor

### Check TX CU snapshot

### Check RX CU snapshot

### Check interference CU snapshot

### Check noise floor snapshot

### Check CRC error rate

### Check interference CU threshold

### Check CRC error rate threshold

### Check interference situation determines the severity level

## Check acsp neighbor list (radio ID, last seem, channel number, TX power, RSSI, SSID length, SSID)

### Check acsp list neighbor radio ID

### Check acsp neighbor last time has seen this neighbor

### Check acsp neighbor channel number

### Check acsp neighbor TX power

### Check acsp neighbor RSSI

### Check acsp neighbor SSID length

### Check acsp neighbor SSID

## Check interference alert and clear alert

### Check alert type (interference alert or clear alert)

### Check alert severity (caused by CRC error rate or running average of interference)

### Check interference CU threshold in alert

### Check running average interference CU in alert

### Check short term interference CU in alert

### Check snapshot interference in alert

### Check CRC error rate threshold in alert

### Check CRC error rate in alert

### When interference CU (snapshot, or short term, or running average) > interference CU threshold, AP should send out interference alert to HM, HM interval

### When CRC error rate > CRC error rate threshold, AP should send out interference alert to HM

### When all last interface parameter (snapshot, short term and running average and CRC error rate) < interference CU threshold, AP should send out clert alert to HM

## When the report record size is bigger than 20KB, DCD/CAPWAP should send the report to HM via file.

## Resource consumption and capacity stress

### When there are many acsp neighbors, check cpu and mem

## Negative/boundary case

### Network disconnect

## Performance

## Stability

## HM case

# Topology

AP under test + many acsp neighbors

# Hardware and software needed

Screen room

SG

# TestCase

## CLI check: stats collect interval

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-1 | | |
| Priority | High | Automation Flag | Yes |
| Topology to use |  | | |
| Description | Check CLI | | |
| Pre-condition |  | | |
| Test procedure | 1. Normal check 2. Invalid value check | | |
| Expect result |  | | |

## Check interface channel frequency

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-2 | | |
| Priority | Accept | Automation Flag | Yes |
| Topology to use | Topology-1 | | |
| Description |  | | |
| Pre-condition | -create ssid and bind it to wifi0  -set wifi0 channel 1  -set wifi1 channel to 36  -AP connect to HM  -set stats collect interval to 1 | | |
| Test procedure | 1. After one minute, check interface Frequency(in KHz) on HM, wifi0 frequency should be 2412000, wifi1 frequency should be 5180000 2. Set wifi0 channel to 11, wifi1 channel to 165 3. After one minute, check interface frequency(in KHz) on HM, wifi0 frequency should be 2462000, wifi1 frequency should be 5825000 | | |
| Expect result | Show in wifi0/wifi1 check whether exist channel and power info. | | |

## check interface max TX power

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-3 | | |
| Priority | Accept | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | -create ssid and bind it to wifi0  -AP connect to HM  -set interface power to 1dBm  -set stats collect interval to 1 | | |
| Test procedure | 1. after one minutes, check interface power on HM. 2. Set power to 20 dBm, check interface power on HM 3. Set power to auto, check interface power on HM | | |
| Expect result | Sh acsp check power | | |

## check interface noise floor

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-4 | | |
| Priority | Accept | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | -create ssid and bind it to wifi0  -AP connect to HM | | |
| Test procedure | 1. terminate all RF ports of Ap340 2. after one minutes, check interface noise floor 3. remove all terminator on RF ports and add antenna 4. after one minutes, check interface noise floor, should be higher than before value | | |
| Expect result | \_sh report snapshot interface, exist noise floor value, pass | | |
|  |  | | |

## check channel TX utilization

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-5 | | |
| Priority | Accept | Automation Flag | Yes |
| Topology to use | Topology -2 | | |
| Description | This case should be tested in screen room | | |
| Pre-condition | -create ssid and bind it to wifi0  -set wifi1 mode to access  -create ssid and bind to wifi1 | | |
| Test procedure | 1. connect laptop to wifi0 ssid and generate downlink traffic with chariot 2. after one minute, check wifi0 channel TX utilization on Hm 3. disconnect laptop, after one minute, check wifi0 TX utilization on HM 4. connect laptop to wifi1 ssid and generate downlink traffic with chariot 5. after one minute, check wifi1 channel TX utilization on HM 6. disconnect laptop, after one minute, check wifi1 TX utilization on HM | | |
| Expect result | \_sh report snapshot interface, exist tx utilization value, pass | | |

## check channel RX utilization

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-6 | | |
| Priority | Accept | Automation Flag | Yes |
| Topology to use | Topology -2 | | |
| Description |  | | |
| Pre-condition | -create ssid and bind it to wifi0  -set wifi1 mode to access  -create ssid and bind to wifi1 | | |
| Test procedure | 1. connect laptop to wifi0 ssid and generate uplink traffic with chariot 2. after one minute, check wifi0 channel RX utilization on Hm 3. disconnect laptop, after one minute, check wifi0 RX utilization on HM 4. connect laptop to wifi1 ssid and generate uplink traffic with chariot 5. after one minute, check wifi1 channel RX utilization on HM 6. disconnect laptop, after one minute, check wifi1 RX utilization on HMHelp check | | |
| Expect result | \_sh report snapshot interface, exist rx utilization value, pass | | |

## Check total channel utilization

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-7 | | |
| Priority | Accept | Automation Flag | Yes |
| Topology to use | Topology -2 | | |
| Description |  | | |
| Pre-condition | -create ssid and bind it to wifi0  -set wifi1 mode to access  -create ssid and bind to wifi1 | | |
| Test procedure | 1. connect laptop to wifi0 ssid and generate downlink/uplink traffic with chariot 2. after one minute, check wifi0 total channel utilization on Hm 3. disconnect laptop, after one minute, check wifi0 total chanenl utilization on HM 4. connect laptop to wifi1 ssid and generate downlink/uplink traffic with chariot 5. after one minute, check wifi1 channel total channel utilization on HM 6. disconnect laptop, after one minute, check wifi1 total channel utilization on HM | | |
| Expect result | \_sh report snapshot interface, exist total utilization value, pass | | |

## Check total CCK demodulation errors

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-8 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | -create ssid and bind it to wifi0  This case should do in noisy environment or AP is near to client | | |
| Test procedure | 1. Set laptop wireless adapter to 11b mode. 2. Laptop connect to AP, and generate traffic 3. Check CCK error on HM.（where to check） | | |
| Expect result |  | | |

## Check total OFDM demodulation errors

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-9 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | -create ssid and bind it to wifi0  -set wifi1 mode to access  -create ssid and bind to wifi1  -this case should be done in noisy environment | | |
| Test procedure | 1. Laptop connect to wifi0 ssid 2. Generate traffic 3. After one minute, check OFDM errors on HM 4. Laptop connect to wifi1 ssid 5. Generate traffic 6. After one minute, check OFDM error on HM | | |
| Expect result |  | | |

## Check radar events

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-10 | | |
| Priority | Accept | Automation Flag | Yes |
| Topology to use | Topology-1 | | |
| Description |  | | |
| Pre-condition | Dfs channel | | |
| Test procedure | 1. Check AP radar events on HM, the number of radar is n 2. Generate radar events by CLI: interface wifi1 \_bang 3. Check AP radar events on HM, the number should be n+1 | | |
| Expect result | \_debug capwap trap check channel switch | | |

## Check HT20 baseband hangs

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-11 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure | Don’t know how to test this case | | |
| Expect result |  | | |

## Check HT40 baseband hangs

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-12 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure | Don’t know how to test this case | | |
| Expect result |  | | |

## check radio interface fatal interrupts count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-13 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure | Don’t know how to test | | |
| Expect result |  | | |

## Check radio interface MIB interrupt counts

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-14 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure | Don’t know how to test | | |
| Expect result |  | | |

## Check radio interface calibration count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-15 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure | Don’t know how to test | | |
| Expect result |  | | |

## Check radio interface calibration failure count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-16 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure | Don’t know how to test | | |
| Expect result |  | | |

## Check radio interface beacon miss count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-17 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0 | | |
| Test procedure | 1. Put AP in noisy environment 2. After 1 minutes, check wifi0 and wifi1 beacon miss count on HM | | |
| Expect result |  | | |

## Check interface RX overrun count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-18 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check radio interface RX run out of descriptor count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-19 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check radio interface TX under run count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-20 | | |
| Priority | Middle | Automation Flag | Yes |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check radio interface Frame CRC error count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-21 | | |
| Priority | High | Automation Flag | Yes |
| Topology to use | Topology -2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Put AP to noisy environment | | |
| Test procedure | 1. Laptop connect to wifi0 ssid 2. Generate uplink traffic 3. After one minute, check wifi0 CRC error count on HM 4. Laptop connect to wifi1 ssid 5. Generate uplink traffic 6. After one minute, check wifi1 CRC error count on HM | | |
| Expect result |  | | |

## check radio interface RX FIFO error count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-22 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## check radio interface RX frame with duplicate sequence number

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-23 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## check radio interface RX decrypt error count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-24 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## check radio interface RX frame with MIC error count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-25 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## check radio interface RX frame failed crypto replay check count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-26 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check radio interface TX excessive retry drop count.

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-27 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology -2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Put AP to noisy environment | | |
| Test procedure | 1. Laptop connect to wifi0 ssid 2. Generate downlink traffic 3. After one minute, check wifi0 TX excessive retry count on HM 4. Laptop connect to wifi1 ssid 5. Generate downlink traffic 6. After one minute, check wifi1 TX excessive retry count on HM | | |
| Expect result |  | | |

## Check radio interface TX retry count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-28 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Put AP to noisy environment | | |
| Test procedure | 1. Laptop connect to wifi0 ssid 2. Generate downlink traffic 3. After one minute, check wifi0 TX retry count on HM 4. Laptop connect to wifi1 ssid 5. Generate downlink traffic 6. After one minute, check wifi1 TX retry count on HM | | |
| Expect result |  | | |

## check radio interface RX retry.

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-29 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## check radio interface TX packet count on per data rate.

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-30 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate downlink traffic 3. check wifi0 tx packets per AC on HM 4. laptop connect to wifi1 ssid 5. generate downlink traffic 6. check wifi1 tx packets per AC on HM | | |
| Expect result |  | | |

## check radio interface TX byte count on per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-31 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology -2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate downlink traffic 3. check wifi0 tx byte per AC on HM 4. laptop connect to wifi1 ssid 5. generate downlink traffic 6. check wifi1 tx byte per AC on HM | | |
| Expect result |  | | |

## check radio interface RX packet count on per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-32 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate uplink traffic 3. check wifi0 rx packets per AC on HM 4. laptop connect to wifi1 ssid 5. generate uplink traffic 6. check wifi1 rx packets per AC on HM | | |
| Expect result |  | | |

## check radio interface RX byte count on per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-33 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate uplink traffic 3. check wifi0 rx bytes per AC on HM 4. laptop connect to wifi1 ssid 5. generate uplink traffic 6. check wifi1 rx bytes per AC on HM | | |
| Expect result |  | | |

## check radio interface TX packet count on per AC

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-34 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate downlink traffic 3. check wifi0 tx bytes per AC on HM 4. laptop connect to wifi1 ssid 5. generate downlink traffic 6. check wifi1 tx bytes per AC on HM | | |
| Expect result |  | | |

## check radio interface tx byte count on per ac

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-35 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate downlink traffic 3. check wifi0 tx bytes per AC on HM 4. laptop connect to wifi1 ssid 5. generate downlink traffic 6. check wifi1 tx bytes per AC on HM | | |
| Expect result |  | | |

## check radio interface rx packet count on per ac

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug-Test-36 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology -2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate uplink traffic 3. check wifi0 rx packets per AC on HM 4. laptop connect to wifi1 ssid 5. generate uplink traffic 6. check wifi1 rx packets per AC on HM | | |
| Expect result |  | | |

## check radio interface rx byte count on per ac

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_37 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1 | | |
| Test procedure | 1. laptop connect to wifi0 ssid 2. generate uplink traffic 3. check wifi0 rx bytes per AC on HM 4. laptop connect to wifi1 ssid 5. generate uplink traffic 6. check wifi1 rx bytes per AC on HM | | |
| Expect result |  | | |

## check radio interface TX beacon count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_38 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology -1 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. after one minute, check wifi0 beacon count on HM, should be 600 2. Check wifi1 beacon count oh HM, should be 600 | | |
| Expect result |  | | |

## check radio interface TX mgmt frame count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_39 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description | In screen room | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. set AP to channel 1, and capture management packets with OminiPeek in channel 1 2. connect laptop to wifi0 3. after one minute, check wifi0 management frame count, and compare with the count captured by OminiPeek. 4. connect laptop to wifi1 5. after one minute, check wifi1 management frame count, and compare with the count captured by OminiPeek. | | |
| Expect result |  | | |

## Check radio interface RX management frame count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_40 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. set AP to channel 1, and capture management packets(exclude packets from AP) with OminiPeek in channel 1 2. connect laptop to wifi0 3. after one minute, check wifi0 RX management frame count, and compare with the count captured by OminiPeek. 4. connect laptop to wifi1 5. after one minute, check wifi1 RX management frame count, and compare with the count captured by OminiPeek. | | |
| Expect result |  | | |

## check radio interface TX aggr frames per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_41 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Enable aggregation  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After one minute, check wifi0 TX aggr frames on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After one minute, check wifi1 TX aggr frames on HM | | |
| Expect result |  | | |

## check radio interface RX aggr frames per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_42 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Enable aggregation  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate uplink traffic 3. After one minute, check wifi0 RX aggr frames on HM 4. Connect laptop to wifi1 5. Generate uplink traffic 6. After one minute, check wifi1 RX aggr frames on HM | | |
| Expect result |  | | |

## Check radio interface TX block ACK request count per AC

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_43 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check radio interface TX block ACK request count per AC

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_44 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check radio interface TX mcast/bcast frame count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_45 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | Check wifi0 mcast/bcast frame count on HMCheck wifi1 mcast/bcast frame count on HM | | |
| Expect result |  | | |

## Check radio interface TX frame count using short preamble

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_46 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Set wifi0 preamble to short 2. Connect laptop to wifi0 3. Generate downlink traffic 4. After one minute, check wifi0 RX aggr frames on HM 5. Connect laptop to wifi1 6. Generate downlink traffic 7. After one minute, check wifi1 RX aggr frames on HM | | |
| Expect result |  | | |

## Check radio interface TX frame count using long preamble

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_47 | | | |
| Priority | | High | Automation Flag | No |
| Topology to use | | Topology-2 | | |
| Description | |  | | |
| Pre-condition | | Create ssid and bind to wifi0  Set collect information interval to 1 minute | | |
| Test procedure | | 1. Set wifi0 preamble to long 2. Connect laptop to wifi0 3. Generate downlink traffic 4. After one minute, check wifi0 RX aggr frames on HM | | |
| Expect result | |  | | |

## Check radio interface TX CTS count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_48 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Set BG scan interval to 1 minute 2. After 5 minutes, check wifi0 TX CTS count on HM 3. After 5 minute, check wifi1 TX CTS on HM | | |
| Expect result |  | | |

## Check radio interface TX frame count using short preamble

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_49 | | |
| Priority | High | High | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Set BG scan interval to 1 minute 2. After 5 minutes, check wifi0 TX RTS count on HM 3. After 5 minute, check wifi1 TX RTS on HM | | |
| Expect result |  | | |

## Check antenna TX (per antenna or per TX chain)

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_50 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check antenna TX (per antenna or per TX chain)

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_51 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check radio interface TX drop due to q full

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_52 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After 5 minutes, check wifi0 TX drop due to q full on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After 5 minutes, check wifi1 TX drop due to q full on HM | | |
| Expect result |  | | |

## Check radio interface TX drop due to no skb

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_53 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After 5 minutes, check wifi0 TX drop due to no skb on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After 5 minutes, check wifi1 TX drop due to no skb on HM | | |
| Expect result |  | | |

## Check radio interface TX drop due to no TX descriptor

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_54 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After 5 minutes, check wifi0 TX drop due to no tx descriptor on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After 5 minutes, check wifi1 TX drop due to no tx descriptor on HM | | |
| Expect result |  | | |

## Check radio interface TX drop due to no txop quota

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_55 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After 5 minutes, check wifi0 TX drop due to no txop on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After 5 minutes, check wifi1 TX drop due to no txop on HM | | |
| Expect result |  | | |

## Check radio interface reset count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_56 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-1 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute  Put ap to noisy environment | | |
| Test procedure | 1. After 5 minute, check wifi0 reset count on HM 2. After one minute, check wifi1 reset count on HM | | |
| Expect result |  | | |

## Check radio interface BG scan count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_57 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-1 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute  Put ap in screen room | | |
| Test procedure | 1. After 5 minute, check wifi0 bgscan count on HM 2. After 5 minute, check wifi1 bgscan count on HM | | |
| Expect result |  | | |

## Check radio interface TX power to the client

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_58 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client average RSSI

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_59 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate uplink traffic 3. After one minute, check client RSSI on HM 4. Connect laptop to wifi1 5. Generate uplink traffic 6. After 5 minute, check wifi1 client RSSI on HM | | |
| Expect result |  | | |

## Check radio interface TX frame count using short preamble

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_60 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate uplink traffic 3. After one minute, check client last RSSI on HM 4. Connect laptop to wifi1 5. Generate uplink traffic 6. After 5 minute, check wifi1 client last RSSI on HM | | |
| Expect result |  | | |

## Check client association ID

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_61 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. After one minute, check wifi0 client association ID on HM 3. Connect laptop to wifi1 4. After one minute, check wifi1 client association ID on HM | | |
| Expect result |  | | |

## Check client RX frames with duplicated sequence number

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_62 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate uplink traffic 3. After one minute, check wifi0 client frames with duplicated sequence number on HM 4. Connect laptop to wifi1 5. Generate duplink traffic 6. After one minute, check wifi1 client frames with duplicated sequence number on HM | | |
| Expect result |  | | |

## Check client RX probe request count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_63 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client RX 802.11 auth frame count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_64 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx assoc request frame count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_65 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx deauth frame count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_66 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check rx disassoc frame count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_67 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx decrypt error count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_68 | | |
| Priority | High | Automation Flag | No |
| Topology to use |  | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx MIC errors

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_69 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx frame failed cryto replay check count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_70 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client tx probe resps count

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_71 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. After 5 minute, check wifi0 client tx probe resps count on HM 3. Connect laptop to wifi1 4. After one minute, check wifi1 client tx probe resps count on HM | | |
| Expect result |  | | |

## Check client tx auths

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_72 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. After one minute, check wifi0 client tx auths on HM 3. Connect laptop to wifi1 4. After one minute, check wifi1 client tx auths on HM | | |
| Expect result |  | | |

## Check client tx deauths

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_73 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Disconnect client 3. After one minute, check wifi0 client tx deauths on HM 4. Connect laptop to wifi1 5. Disconnect client 6. After one minute, check wifi1 client tx deauths on HM | | |
| Expect result |  | | |

## Check client tx assoc resps

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_74 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. After one minute, check wifi0 client assoc resps on HM 3. Connect laptop to wifi1 4. After one minute, check wifi1 client assoc resps on HM | | |
| Expect result |  | | |

## Check client tx last deauth code

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_75 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Capture packets with Ominipeek 3. Disconnect client 4. After one minute, check wifi0 client last deauth code on HM 5. Connect laptop to wifi1 6. Capture packets with Ominipeek 7. Disconnect client 8. After one minute, check wifi1 client last deauth code on HM | | |
| Expect result |  | | |

## Check client last deauth code

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_76 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Capture packets with Ominipeek 3. Disconnect client 4. After one minute, check wifi0 client last disassoc code on HM 5. Connect laptop to wifi1 6. Capture packets with Ominipeek 7. Disconnect client 8. After one minute, check wifi1 client last disassoc code on HM | | |
| Expect result |  | | |

## Check client tx drop due to PS q full, flush

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_77 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client tx frame triggered by uapsd

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_78 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client tx packets per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_79 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After 5 minute, check wifi0 client tx packets per data rate on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After 5 minute, check wifi1 client tx packets per data rate on HM | | |
| Expect result |  | | |

## Check client tx bytes per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_80 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After 5 minute, check wifi0 client tx bytes per data rate on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After 5 minute, check wifi1 client tx bytes per data rate on HM | | |
| Expect result |  | | |

## Check client tx retries per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_81 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate downlink traffic 3. After 5 minute, check wifi0 client tx retries per data rate on HM 4. Connect laptop to wifi1 5. Generate downlink traffic 6. After 5 minute, check wifi1 client tx retries per data rate on HM | | |
| Expect result |  | | |

## Check client rx packets per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_82 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx bytes per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_83 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx retries per data rate

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_84 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client tx packets per AC

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_85 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate uplink traffic 3. After one minute, check wifi0 client tx packets per ac on HM 4. Connect laptop to wifi1 5. Generate uplink traffic 6. After one minute, check wifi1 client tx packets per ac on HM | | |
| Expect result |  | | |

## Check client tx bytes per ac

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_86 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate uplink traffic 3. After one minute, check wifi0 client tx bytes per ac on HM 4. Connect laptop to wifi1 5. Generate uplink traffic 6. After one minute, check wifi1 client tx bytes per ac on HM | | |
| Expect result |  | | |

## Check client rx packets per ac

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_87 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx bytes per ac

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_88 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client TX airetime

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_89 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client rx airtime

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_90 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check channel change event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_91 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Set wifi0 channel to 1 2. Change wifi0 channel to 6 3. After one minute, check wifi0 channel change event on HM 4. Set wifi1 channel to 36 5. Change wifi1 channel to 165 6. After one minute, check wifi1 channel change event on HM | | |
| Expect result |  | | |

## Check noise floor spike/decline event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_92 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Generate noise in wifi0 channel 2. After one minute, check wifi0 noise floor spike/decline event on HM 3. Generate noise in wifi1 channel 4. After one minute, check wifi1 noise floor spike/decline event on HM | | |
| Expect result |  | | |

## Check total channel utilization increase/decrease event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_93 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Set ap wifi0 to channel 1 2. Set interference ap to cont transmit in channel1 3. After one minute, check wifi0 channel utilization increase/decrease event on HM 4. Set ap wifi1 to channel 36 5. Set interference ap to cont transmit in channel 36 6. After one minute, check wifi1 channel utilization increase/decrease event on HM | | |
| Expect result |  | | |

## Check max tx power change event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_94 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Set wifi0 power to auto 2. After power control is enable, check wifi0 tx power change on HM 3. Set wifi0 power to manual 4. After one minute, check wifi0 tx power change on HM 5. Set wifi1 power to auto 6. After power control is enable, check wifi1 tx power change on HM 7. Set wifi1 power to manual 8. After one minute, check wifi1 tx power change on HM | | |
| Expect result |  | | |

## Check CCK error rate change event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_95 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Set laptop to 11b mode 2. Connect laptop to wifi0 3. Generate uplink traffic 4. Generate burst noisy when run traffic 5. After one minute, check wifi0 cck error rate change on HM | | |
| Expect result |  | | |

## Check OFDM error rate change event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_96 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Connect laptop to wifi0 2. Generate uplink traffic 3. Generate burst noise when run traffic 4. After one minute, check wifi0 OFDM error rate change event on HM 5. Connect laptop to wifi1 6. Generate uplink traffic 7. Generate burst noise when run traffic 8. After one minute, check wifi1 OFDM error rate change event on HM | | |
| Expect result |  | | |

## Check interface reset event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_97 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Put ap to noisy enviroment 2. After 5 minute, check wifi0 interface reset event on HM 3. check wifi1 interface reset event on HM | | |
| Expect result |  | | |

## Check max tx power change event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_98 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Wifi0 configuration change 2. After power control is enable, check wifi0 configuration change event on HM 3. Wifi1 configuration change 4. After power control is enable, check wifi1 configuration change event on HM | | |
| Expect result |  | | |

## Check interface fatal interupt event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_99 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check interface beacon suck event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_100 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure | 1. Put ap to noisy environment 2. After 5 minutes, check wifi0 beacon stuck event 3. Check wifi1 beacon stuck event | | |
| Expect result |  | | |

## Check PCI errors

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_101 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client probe event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_102 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client auth event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_103 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client auth accept/reject event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_104 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition | Create ssid and bind to wifi0  Set wifi1 mode to access  Create ssid and bind to wifi1  Set collect information interval to 1 minute | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client assoc request event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_105 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client assoc accept/reject event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_106 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client WPA/WPA2 key exchange completion condition

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_107 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client deauth event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_108 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check AP deauth event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_109 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client disassoc event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_110 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check AP disassoc event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_111 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Check client roaming event

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_112 | | |
| Priority | High | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Client gone will triggered stop record

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_113 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

## Important system and client state transition need to be logged in reatime

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | RadioDebug\_Test\_114 | | |
| Priority | Middle | Automation Flag | No |
| Topology to use | Topology-2 | | |
| Description |  | | |
| Pre-condition |  | | |
| Test procedure |  | | |
| Expect result |  | | |

# CLI (Automation Status: Yes/No)

<Just list all cli that this feature has one by one>

# Customer Issue or Typical Bug