BR200 PSE Support Test Case

Revision History

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| --- | --- | --- | --- |
| Version | Date | Author | Description |
| 0.1 | 12/8/2011 | Tiezhu Zhu | Initial Version |
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Glossary and Abbreviations

# Introduction

Noise floor is a basic RF specification which related RSSI/RX performance/client connectivity .

# Test Objectives

To keep noise floor in a normal value, we should maintain a noise floor base line for each platform.

# Test Acceptance Criterion from Development

* Approved – MRD

The link to MRD

* Approved – Functional Specifications

The link to function spec：

* Approved – Unit Test Plans

The link to unit test report of dev

# Product Pass Criterion

Meet all objects in marketing requirement or function spec which may include key function objectives, capacity objectives, performance objectives and so on.

# Test Bed/Topo Design

<List topo and topo ID>

# Test Point

## Function Test

### Check all platform's noise floor in lab and compare with previous version.(Base on chipset platform)(wifi0/wifi1)

### By Hivemanager report, check 24 hours noise floor change for each platform

### Enable cca/disable cca/Change cca value to check if noise floor vary

### Under HT20/HT40 mode, check if noise floor change

### With different chain matrix, check if nnoise floor change

### Under screen room, check noise floor when neighbor AP do continuously transmit1

### Check noise floor in DFS channel

### Check SNR value in acsp neighbor

### Check SNR value in station state

### Check SNR value in rogue ap report

## Stress Test

## Performance test

# Test Case

## Noise Floor Function check

### Check all platform's noise floor in lab and compare with previous version.(Base on chipset platform)(wifi0/wifi1)

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_01 | | |
| Priority | Accept | Automation Flag | N/A |
| Topology to use | AP------SW | | |
| Description | Check all platform's noise floor in lab and compare with previous version.(Base on chipset platform)(wifi0/wifi1) | | |
| Pre-condition | All current platform: AP110/120/170/320/340/330/350/BR100/BR200 | | |
| Test procedure | 1. In screen room, set each AP to wifi0 2.4G band with channel 1-6-11 2. “show in wifi0” to check its noise floor and record it 3. Set each AP to wifi1 5g band with channel 36-48-149-165 4. “show in wifi1” to check its noise floor 5. In noisy lab room, set each AP to wifi0 2.4G band with channel 1-6-11 6. “show in wifi0” to check its noise floor and record it 7. Set each AP to wifi1 5g band with channel 36-48-149-165 8. “show in wifi1” to check its noise floor | | |
| Expect result | Same platform should have similar noise floor  Same band noise floor should be similar | | |
| Test Result |  | | |

### By Hivemanager report, check 24 hours noise floor change for each platform

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_02 | | |
| Priority | High | Automation Flag | N/A |
| Topology to use | AP------SW | | |
| Description | By Hivemanager report, check 24 hours noise floor change for each platform | | |
| Pre-condition | All current platform: AP110/120/170/320/340/330/350/BR100/BR200 | | |
| Test procedure | 1. In noisy lab room, set each AP to wifi0 2.4G band with channel 6 2. Set each AP to wifi1 5g band with channel 36 3. Check if noise floor vary fast | | |
| Expect result | Expect noise floor value swing in a low scope | | |
| Test Result |  | | |

### Enable cca/disable cca/Change cca value to check if noise floor vary

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_03 | | |
| Priority | High | Automation Flag | N/A |
| Topology to use | AP------SW | | |
| Description | Enable cca/disable cca/Change cca value to check if noise floor vary | | |
| Pre-condition | AP330 | | |
| Test procedure | 1. Enable wifi0/wifi1 cca by “ in wifi0 radio adaptive-cca enable” 2. “show in wifi0” to check if noise floor value vary during cca enable 3. Disable wifi0/wifi1 cca by “ no in wifi0 radio adaptive-cca enable” 4. “show in wifi0” to check if noise floor value vary during cca disable 5. Change wifi0/wifi1 default cca by “ in wifi0 radio adaptive-cca default-cca XXX” 6. “show in wifi0” to check if noise floor value vary during default-cca changed | | |
| Expect result | Expect noise floor value will not be changed | | |
| Test Result |  | | |

### Under HT20/HT40 mode, check if noise floor change

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_04 | | |
| Priority | High | Automation Flag | YES |
| Topology to use | AP------SW | | |
| Description | Under HT20/HT40 mode, check if noise floor change | | |
| Pre-condition |  | | |
| Test procedure | 1. Set radio profile ng with HT20 and bind to wifi0.   “radio profile ng phymode 11ng”  “radio profile ng channel-wifth 20”  “in wifi0 radio profie ng”  “in wifi0 radio channel 6”   1. Wait 1 minute.Show interface wifi0 to check HT20 mode noise floor A.   “show interface wifi0 | include noise”   1. Set radio profile ng to HT40 mode and bind to wifi0   “radio profile ng channel-width 40-a”  “in wifi0 radip channel 6”   1. Wait 1 minute,Show interface wifi0 to check HT40 mode nose floor B.   “show interface wifi0 | include noise”   1. Check A and B.result 1 2. Set radio profile na with HT20 and bind to wifi1.   “radio profile na phymode 11na”  “radio profile na channel-wifth 20”  “in wifi1 radio profie na”  “in wifi1 radio channel 36”   1. Wait 1 minute.Show interface wifi1 to check HT20 mode noise floor A.   “show interface wifi1 | include noise”   1. Set radio profile na to HT40 mode and bind to wifi1   “radio profile na channel-width 40-a”  “in wifi1 radip channel 36”   1. Wait 1 minute,Show interface wifi1 to check HT40 mode nose floor B.   “show interface wifi1 | include noise”   1. Check A and B.result 1 | | |
| Expect result | HT20/HT40 noise floor should be similar  Result 1:|A-B|<=3dbm | | |
| Test Result |  | | |

### With different chain matrix, check if noise floor change

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_05 | | |
| Priority | High | Automation Flag | YES |
| Topology to use | AP------SW | | |
| Description | With different chain matrix, check if noise floor change | | |
| Pre-condition | AP | | |
| Test procedure | 1. Set radio chain to 1\*1.   “radio profile ng phymode 11ng”  “radio profile ng transmit-chain 1”  “radio profile ng receive-chain 1”  “interface wifi0 radio profile ng”  “interface wifi0 radio channel 6”   1. Wait 1 minute,check wifi0 noise floor A.   “show in wifi0 | in noise”   1. Set radio chain to 1\*2.   “radio profile ng transmit-chain 1”  “radio profile ng receive-chain 2”   1. Wait 1 minute,check wifi0 noise floor B.   “show in wifi0 | in noise”   1. Set radio chain to 1\*3 .   “radio profile ng transmit-chain 1”  “radio profile ng receive-chain 3”   1. Wait 1 minute,check wifi0 noise floor C.   “show in wifi0 | in noise”   1. Set radio chain to 3\*3 .   “radio profile ng transmit-chain 3”  “radio profile ng receive-chain 3”   1. Wait 1 minute,check wifi0 noise floor D.   “show in wifi0 | in noise”   1. Check A,B,C,D.result 1. 2. Set wifi1 radio chain to 1\*1.   “radio profile na phymode 11na”  “radio profile na transmit-chain 1”  “radio profile na receive-chain 1”  “interface wifi1 radio profile na”  “interface wifi1 radio channel 36”   1. Wait 1 minute,check wifi1 noise floor E.   “show in wifi1 | in noise”   1. Set radio chain to 1\*2.   “radio profile na transmit-chain 1”  “radio profile na receive-chain 2”   1. Wait 1 minute,check wifi1 noise floor F.   “show in wifi1 | in noise”   1. Set radio chain to 1\*3 .   “radio profile na transmit-chain 1”  “radio profile na receive-chain 3”   1. Wait 1 minute,check wifi1 noise floor G.   “show in wifi1 | in noise”   1. Set radio chain to 3\*3 .   “radio profile na transmit-chain 3”  “radio profile na receive-chain 3”   1. Wait 1 minute,check wifi1 noise floor H.   “show in wifi1 | in noise”   1. Check E,F,G,H,result 2. | | |
| Expect result | Different chain noise floor should be similar  Result 1:|A-B|<=3 dbm. |A-C|<=3 dbm. |A-D|<=3 dbm.  Result 2:|E-F|<=3 dbm. |E-G|<=3 dbm. |E-H|<=3 dbm. | | |
| Test Result |  | | |

### check noise floor when neighbor AP do continuously transmit

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_06 | | |
| Priority | High | Automation Flag | YES |
| Topology to use | AP------SW | | |
| Description | check noise floor when neighbor AP do continuously transmit1 | | |
| Pre-condition | DUT AP interference AP | | |
| Test procedure | 1. put one AP near the DUT AP, and set same channel 1   on two Ap:  “interface wifi0 radio channel 1”   1. Check noise floor A on Dut AP.   “show interface wifi0 | include noise”   1. Run continuously transmit in neighbor AP   “\_test interface wifi0 con-tx”   1. Check if any noise floor B change in DUT AP   “show interface wifi0 | include noise”   1. Check A and B.result 1. | | |
| Expect result | Result 1:|A-B|<=3 dbm. | | |
| Test Result |  | | |

### Check noise floor in DFS channel

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_07 | | |
| Priority | High | Automation Flag | Yes |
| Topology to use | AP------SW | | |
| Description | Check noise floor in DFS channel | | |
| Pre-condition | AP----SW | | |
| Test procedure | 1. Set AP world country 826   “boot-param region World”  “boot-param country-code 826”   1. Set AP wifi1 dfs channel.   “radio profile na phymode 11na”  “radio profile na dfs”  “in wifi1 radio profile dfs”  “int wifi1 radio channel 100”   1. Wait 2 minute,check noise floor A.   “show int wifi1 | in noise”   1. Set wifi1 channel 36.   “int wifi1 radio channel 36”   1. Wait 1 minute,check noise floor B.   “show int wifi1 | in noise”   1. Check A and B.result 1. | | |
| Expect result | Result 1:|A-B|<=3 dbm | | |
| Test Result |  | | |

### Check SNR value in acsp neighbor

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_08 | | |
| Priority | High | Automation Flag | N/A |
| Topology to use | AP------SW | | |
| Description | Check SNR value in acsp neighbor | | |
| Pre-condition | AP----SW | | |
| Test procedure | 1. Put AP in lab with nosy environment 2. Enable wifi0/wifi1 with channel auto selection mode   “in wifi0 radio channel auto”  “in wifi1 radio channel auto”   1. After AP choose the channel, then set AP with wifi0/wifi1 static channel 1/36   “in wifi0 radio channel 1”  “in wifi1 radio channel 36”   1. Check wifi0/wifi1’s acsp neighbor SNR   “show acsp neighbor”  “show acsp \_nbr” | | |
| Expect result | The SNR and RSSI should be according with current environment | | |
| Test Result |  | | |

### Check SNR value in station state

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_09 | | |
| Priority | High | Automation Flag | N/A |
| Topology to use | AP------SW | | |
| Description | Check SNR value in station state | | |
| Pre-condition | AP----SW  |  Client | | |
| Test procedure | 1. Connect one client to AP wifi0 band 2. Check wifi0 band noise floor   “show in wifi0 | in noise”   1. Check if station’s SNR reasonable   “show station “   1. Connect one client to AP wifi1 band 2. Check wifi0 band noise floor   “show in wifi1 | in noise”   1. Check if station’s SNR reasonable   “show station “ | | |
| Expect result | The SNR and RSSI should be according with current environment | | |
| Test Result |  | | |

### Check SNR value in rogue ap report

|  |  |  |  |
| --- | --- | --- | --- |
| Case ID | NoiseFloor\_Check\_10 | | |
| Priority | High | Automation Flag | N/A |
| Topology to use | AP------SW | | |
| Description | Check SNR value in rogue ap report | | |
| Pre-condition | AP----SW | | |
| Test procedure | 1. Put AP in lab noisy environment 2. Enable AP IDP function   security wlan-idp profile tz-idp  security wlan-idp profile tz-idp ap-policy  security wlan-idp profile tz-idp ap-policy ap-oui  security wlan-idp profile tz-idp ap-policy ap-oui entry 00:19:77  security wlan-idp profile tz-idp ap-detection connected  interface wifi0 wlan-idp profile tz-idp  interface wifi1 wlan-idp profile tz-idp   1. Check wifi0/wifi1 noise floor   “show in wifi0 | In noise”  “show in wifi1 | in noise”   1. Check if friendly AP or rogue AP RSSI reasonable   “sh in wifi1 wlan-idp ap-info type” | | |
| Expect result | Get reasonable RSSI value compare with acsp neighbor list | | |
| Test Result | AH-457f00#sh in wifi1 wlan-idp ap-info  MD=mode; TP=type; IN=in network; CHN=channel; PWR=power in dBm; DSCT=discover time; P=short preamble; B=short beacon interval; M=WMM; ENC=encryption; NCR=noncompliant reason  IN: I=in-net, N=not sure  MD: ap=AP; clt=client; adc=adhoc; brg=bridge; msh=mesh  TP: vld=valid; rog=rogue; ext=external  Bit in NCR: o=open; w=wep; a=wpa; m=wmm; u=bssid oui; s=ssid; p=short preamble; b=short beacon interval; h=adhoc; c=manual classify  MAC MD TP IN CHN PWR DSCT P B M ENC NCR SSID  -------------- --- --- -- --- ---- -------- - - - ---- --------- ---------------  0019:7745:da61 ap vld N 40 -75 39:43:08 N N Y wep ---------- Aerohive\_PPSK  0019:7745:c864 ap vld N 40 -58 39:43:08 N N Y wep ---------- Aerohive\_PPSK  0019:7745:c861 ap vld N 40 -58 39:43:08 N N Y open ---------- Register  0019:7745:da62 ap vld N 40 -73 39:43:08 N N Y open ---------- Register  0019:7745:c862 ap vld N 40 -62 39:43:08 N N Y wep ---------- Aerohive\_guest  0019:7745:c863 ap vld N 40 -59 39:43:08 N N Y wep ---------- Aerohive\_staff  0019:7745:da63 ap vld N 40 -73 39:43:07 N N Y wep ---------- Aerohive\_guest  0019:7745:da64 ap vld N 40 -73 39:43:07 N N Y wep ---------- Aerohive\_staff  0019:7745:9561 ap vld N 44 -41 02:22:42 N N Y open ---------- hangzhou  0019:7717:aaa2 ap vld N 36 -36 27:21:10 N N Y wpa ---------- bug16834-8021x  0019:7722:6321 ap vld N 36 -46 21:48:12 N N Y wpa ---------- bug16834  0019:773c:0041 ap vld N 36 -36 26:00:12 N N Y open ---------- opencwp  0019:778d:0fd4 ap vld N 36 -45 26:08:20 N N Y wpa ---------- sys-casablanca-wpa-auto | | |

## Capacity Test Case

## Compatibility Test Case

## CLI Management (Automation Status: Yes/No)

<firstly, list all cli that this feature has one by one>

<CLI test case>

## GUI Management-HiveManager

<List HM test case or test log>

## GUI Management-HiveUI

<List HiveUI test case or test log>