Aerohive Networks Inc.

PPPoE TestCase

Revision History

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| --- | --- | --- | --- |
| **rsion** | **Date** | **Author** | **Description** |
| 0.1 | 03/20/2012 | Wei Cai | First version |
| 0.2 | 03/26/2012 | Wei Cai | Modify based on review suggestions |
| 0.3 | 11/02/2012 | Xufeng zhou | Add automation test log |
|  |  |  |  |

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Glossary and Abbreviations

# Introduction

Aerohive is adding BRxxx platforms as a branch router WiFi solution. In branch router or home-office deployment, WAN connection will be directly anchored on BRxxx platform, this is fundamental difference from APxxx platforms, which assumes direct layer-2(Ethernet) network of backhauling traffic to internet.

Because the deployment environment difference, new working flow is required to define the bootstrap procedure and the mechanism to maintain the WAN connection.

This functional specification covers the working follow of BRxxx platforms, as well as particular modules such as PPPoE support, CWP support and WAN connection monitoring etc.

# Test Objectives

This test case includes 3 test points:

1.PPPoE moudle

2.Wan-Faileover moudle

3.CWP-moulde

# Test Acceptance Criterion from Development

* Approved – Functional Specifications
* Approved – Unit Test Plans

# Product Pass Criterion

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

# Test Bed/Topo Design

## Topology1

Laptop1------BR------L2sw/Hub------ADSL Modem------PPPoE server

## Topology2

------PPPoE server1

Laptop1------BR------L2sw/Hub------ADSL Modem------L3sw------PPPoE server2

------PPPoE server3

## Topology3

Laptop1------BR------L2sw/Hub------ADSL Modem------SW------PPPoE server------SW------CVG------Laptop2

## Topology4

Laptop1------

Laptop2------BR------L2sw/Hub------ADSL Modem------PPPoE server

Laptop3------

# TestCase

## Key Scenarios

##### Case ID Key\_Scenarios\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Key\_Scenarios\_1 | | |
| **Priority** | Accept | **Automation Flag** | No |
| **Topology to use** | Topolopy3 | | |
| **Description** | PPPoE port VPN test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1. BR connect to PPPoE server   ***Config the following :***  ***Interface eth0 mode wan***  ***Interface eth0 pppoe username wcai password aerohive***  ***Interface eth0 pppoe enable***  2) Establish vpn tunnel between BR and CVG  3) Show ip router table  4) Laptop1 ping Laptop2  5) Laptop2 ping Laptop1  6) Laptop1 ping any web site (such as google) | | |
| **Expect result** | 1) Show log and show interface status to confirm the pppoe status  3) Route table is correct  4) Laptop1 ping Laptop2 successfully (through tunnel)  5) Laptop2 ping Laptop1 successfully (through tunnel)  6) Laptop1 ping google successfully (through ppp1) | | |
| **Comments** | **Log for step 1:**  2012-11-02 03:21:50 debug ah\_brd: [brd\_pppoe]: pppoe request: type: 0, interface\_idx: 0  2012-11-02 03:21:56 debug ah\_brd: WFOSM: Added event MAIN\_WAN\_IF\_CHANGE  2012-11-02 03:21:56 debug ah\_brd: [brd\_pppoe]: File [/var/run/ppp-pppoe0.pid] doesn't exist.  2012-11-02 03:21:56 debug ah\_brd: WFOSM: state IDLE -> IDLE @ MAIN\_WAN\_IF\_CHANGE  2012-11-02 03:21:56 debug [brd\_pppoe]: PPPoE request to start: cmd=[/sbin/pppd noipdefault noauth defaultroute replacedefaultroute usepeerdns persist maxfail 0 ah-pppoe unit 1 linkname pppoe0 plugin /lib/pppd/2.4.3/rp-pppoe.so eth0 refuse-mschap refuse-mschap-v2 refuse-eap user wcai password aerohive]word ae  2012-11-02 03:21:56 debug ah\_brd: WFOSM: Recv'd event default gateway route change  2012-11-02 03:21:56 debug ah\_brd: WFOSM: Update (wst=1): state=IDLE, WAN idx: prim=0 [down] bkup=1 [down]  AH-8c6f80#show interface eth0 pppoe  PPPoE status: enabled  Username: wcai  Password: \*\*\*  Authentication: ANY  Connection status: connected  Local IP: 10.5.16.8  Remote IP: 10.5.16.1  DNS server: 10.155.3.250  DNS server: 10.155.32.190  **Route table information for step 3:**  AH-8c6f80#show ip route  Ref=references; Iface=interface;  U=route is up;H=target is a host; G=use gateway;  Destination Gateway Netmask Flags Metric Ref Use Iface  --------------- --------------- --------------- ----- ------ ------ --- -----  10.138.2.1 0.0.0.0 255.255.255.255 UH 0 0 0 tunnel0  10.138.2.1 0.0.0.0 255.255.255.255 UH 32766 0 0 \*  10.5.16.1 0.0.0.0 255.255.255.255 UH 0 0 0 ppp1  192.168.85.0 0.0.0.0 255.255.255.0 U 0 0 0 mgt0  192.168.85.0 0.0.0.0 255.255.255.0 U 1 0 0 tunnel0  192.168.85.0 0.0.0.0 255.255.255.0 U 32766 0 0 \*  10.138.1.0 0.0.0.0 255.255.255.0 U 1 0 0 tunnel0  10.138.1.0 0.0.0.0 255.255.255.0 U 32766 0 0 \*  127.0.0.0 0.0.0.0 255.255.255.0 U 0 0 0 lo  0.0.0.0 10.5.16.1 0.0.0.0 UG 0 0 0 ppp1 | | |

## Function Test Case

### PPPoE module test case

#### PPPoE Discover stage test case

##### Case ID Discover\_stage\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Discover\_stage\_1 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PADI packet analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR send PADI packet to PPPoE server | | |
| **Expect result** | 1) The packet format is correct | | |

##### Case ID Discover\_stage\_2

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Discover\_stage\_2 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PADO packet analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR get PADO packet from PPPoE server | | |
| **Expect result** | 1) The packet format is correct and can trigger PADR sending | | |

##### Case ID Discover\_stage\_3

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Discover\_stage\_3 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PADR packet analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR send PADR packet to PPPoE server | | |
| **Expect result** | 1) The packet format is correct | | |

##### Case ID Discover\_stage\_4

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Discover\_stage\_4 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PADS packet analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR get PADS packet from PPPoE server | | |
| **Expect result** | 1) The packet format is correct and can trigger PPP stage | | |

##### Case ID Discover\_stage\_5

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Discover\_stage\_5 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PADT packet analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to PPPoE server successfully  2) Disable PPPoE (send PADT packet) | | |
| **Expect result** | 2) BR can send out PADT and the packet format is correct | | |

##### Case ID Discover\_stage\_6

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Discover\_stage\_6 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy2 | | |
| **Description** | PADR stage choose primary PPPoE servers | | |
| **Pre-condition** | PPPoE server1&2&3 and the port linked to the Modem is in the same vlan | | |
| **Test procedure** | 1) Open debug switch  2) Enable PPPoE config on BR  3) Look up logs | | |
| **Expect result** | 2) BR can connect to PPPoE server successfully  3) BR can get 3 PADO packets (server1&2&3) and send PADR to the PPPoE server which PADO packet reach BR firstly | | |

##### Case ID Discover\_stage\_7

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Discover\_stage\_7 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy2 | | |
| **Description** | BR can only get the PADO packet in the same vlan | | |
| **Pre-condition** | PPPoE server1&2 and the port linked to the Modem is in the same vlan and PPPoE server3 is in different vlan | | |
| **Test procedure** | 1) Open debug switch  2) Enable PPPoE config on BR  3) Look up logs | | |
| **Expect result** | 2) BR can connect to PPPoE server successfully  3) BR can get 2 PADO packets (server1&2), but not server3 | | |

#### PPPoE PPP stage test case

##### Case ID PPP\_stage\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPP\_stage\_1 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | LCP stage analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Capture the LCP packets from BR to PPPoE server | | |
| **Expect result** | 1) The packet format is correct | | |

##### Case ID PPP\_stage\_2

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPP\_stage\_2 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Auth stage analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Capture the auth packets from BR to PPPoE server(PAP)  2) Capture the auth packets from BR to PPPoE server(CHAP)  3) Capture the auth packets from BR to PPPoE server(Any) | | |
| **Expect result** | 1) The packet format is correct  2) The packet format is correct  3) The packet format is correct | | |

##### Case ID PPP\_stage\_3

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPP\_stage\_3 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | NCP stage analysis | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Capture the NCP packets from BR to PPPoE server | | |
| **Expect result** | 1) The packet format is correct and the wan interface can get ipaddr from PPPoE server successfully | | |

##### Case ID PPP\_stage\_4

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPP\_stage\_4 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Invalid user name/password/auth type | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to NET/switch firstly without any PPPoE config  2) Laptop connect to any web site (such as google)  3) Type in incorrect username/password/auth type | | |
| **Expect result** | 2) MiniHiveUI can be triggered successfully  3) BR cannot connect to PPPoE server | | |

##### Case ID PPP\_stage\_5

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPP\_stage\_5 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Cut off the link and recover when PPPoE link had been established(PPPoE status) | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Laptop connects to any web site(such as google)  3) Cut off the link and recover  4) Laptop connects to any web site(such as google) | | |
| **Expect result** | 1) PPPoE logs  (No dhcp client---PPP links—Get IPaddr—Update DNS---Update default route)  2) Laptop can connect successfully  3) PPPoE logs  (PPP links—Get IPaddr—Update DNS---Update default route)  4) Laptop can connect successfully | | |

#### PPPoE Transmit stage test case

##### Case ID Transmit\_stage\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Transmit\_stage\_1 | | |
| **Priority** | High | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | MTU test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to PPPoE server  2) Laptop sends packet size 1 packets to PPPoE server  3) Laptop sends packet size 1492 packets to PPPoE server  4) Laptop sends packet size 1500 packets to PPPoE server (no fragment)  5) Laptop sends packet size 2000 packets to PPPoE server (fragment)  6) Enable TCP mss on BR  7) Laptop sends packet size 1500 packets to PPPoE server (no fragment)  8) Disable TCP mss on BR and enable PMTUD on sw  9) Laptop sends packet size 1500 packets to PPPoE server (no fragment) | | |
| **Expect result** | 2) Server can receive the packets successfully(?)  3) Server can receive the packets successfully  4) Server cannot receive the packets(df=1)  5) Server cannot receive the packets?(size 1500 cannot transmit)  7) Server can receive the packets successfully  9) Server can receive the packets successfully | | |

##### Case ID Transmit\_stage\_2

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Transmit\_stage\_2 | | |
| **Priority** | High | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Whether PPPoE config would be covered when BR link to HiveManager firstly and update config from VHM | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to net/switch firstly without any PPPoE config  2) Laptop connect to any web site (such as google)  3) Type in correct username/password/auth type  4) Update config automatic (Auto Provisioning)  5) Show PPPoE config  6) Laptop connect to any web site (such as google) | | |
| **Expect result** | 2) MiniHiveUI can be triggered successfully  3) BR can connect to PPPoE server  4) Original PPPoE config would not be covered by config update  5) PPPoE config cannot be covered  6) Laptop can connect to the web site successfully | | |

##### Case ID Transmit\_stage\_3

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Transmit\_stage\_3 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE retry interval test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Open debug switch  2) BR connect to net/switch when the PPPoE server is not enable(Discover stage)  3) Look up logs and check the retry interval  4) Enable PPPoE server but type in invalid username/password/auth type(PPP stage)  5) Look up logs and check the retry interval  6) Type in correct username/password/auth type and cut off the link between client and server  7) Look up logs and check the retry interval | | |
| **Expect result** | 3) Retry interval is 3s  5) Retry interval is 3s  7) Retry interval is 3s | | |

##### Case ID Transmit\_stage\_4

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Transmit\_stage\_4 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE parameters test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Configure normal PPPoE and band it to eth0  2) Log in shell and show PPPoE parameters  3) Ps process and look up PPPD’s parameters | | |
| **Expect result** | 2) PPPoE parameters are correct  3) PPPD’s parameters are correct | | |

### PPPoE Wan failover module test case

##### Case ID Wan\_failover\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | Wan\_failover\_1 | | |
| **Priority** | Accept | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE wan failover test | | |
| **Pre-condition** | Enable 3G modem | | |
| **Test procedure** | 1) BR connect to PPPoE server sucessfully  2) Enable 3G USB Modem  3) Laptop ping [www.google.com](http://www.google.com)  4) Cut off the link between BR and ADSL modem  5) Laptop ping [www.google.com](http://www.google.com)  6) Recover the link between BR and ADSL modem  7) Laptop ping [www.google.com](http://www.google.com) | | |
| **Expect result** | 3) Laptop ping [www.google.com](http://www.google.com) successfully and outgoing interface is eth0 (ppp1)  5) Laptop ping [www.google.com](http://www.google.com) successfully and outgoing interface is 3g-modem (ppp0)(Can trigger HiveMini UI?)  7) Laptop ping [www.google.com](http://www.google.com) successfully and outgoing interface is eth0 (ppp1) | | |

### PPPoE CWP module

##### Case ID CWP\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | CWP\_1 | | |
| **Priority** | Accept | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE CWP test(new) | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to net/switch firstly without any PPPoE config  2) Laptop connect to any web site (such as google)  3) Type in correct username/password/auth type  4) Pass OTP authentication | | |
| **Expect result** | 2) MiniHiveUI can be triggered successfully (PPPoE status is ?)  3) BR can connect to PPPoE server and get IP address successfully  4) BR can get default config from VHM successfully | | |

##### Case ID CWP\_2

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | CWP\_2 | | |
| **Priority** | Accept | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE CWP test(redirect) | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to PPPoE server  2) Laptop connect to any web site (such as google)  3) Cut off the link between BR and ADSL modem  4) Laptop connect to any web site (such as google)  5) Recover the link  6) Laptop connect to any web site (such as google)  7) Shutdown Eth0  8) Laptop connect to any web site (such as google)  9) Recover Eth0  10) Laptop connect to any web site (such as google)  11) Shutdown the port on PPPoE server  12) Laptop connect to any web site (such as google)  13) Recover the port on PPPoE server  14) Laptop connect to any web site (such as google) | | |
| **Expect result** | 2) Laptop can connect to web site successfully  4) MiniHiveUI can be triggered successfully (PPPoE status is ?)  6) Laptop can connect to web site successfully  7) MiniHiveUI can be triggered successfully (PPPoE status is ?)  10) Laptop can connect to web site successfully  12) MiniHiveUI can be triggered successfully (PPPoE status is ?)  14) Laptop can connect to web site successfully | | |

##### Case ID CWP\_3

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | CWP\_3 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | CWP triggered status when Track IP enable and disable | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to PPPoE server  2) Laptop connect to any web site (such as google)  3) Cut off the link between BR and ADSL modem  4) Laptop connect to any web site (such as google)  5) Recover the link  6) Laptop connect to any web site (such as google)  7) Disable Track IP  8) Repeat step 1-6 | | |
| **Expect result** | 2) Laptop can connect to web site successfully  4) MiniHiveUI can be triggered successfully (PPPoE status is ?)  6) Laptop can connect to web site successfully  8) MiniHiveUI cannot be triggered (need confirm?) | | |

##### Case ID CWP\_4

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | CWP\_4 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | CWP triggered status when 3G modem is enable | | |
| **Pre-condition** | Enable 3G modem | | |
| **Test procedure** | 1) BR connect to PPPoE server  2) Laptop connect to any web site (such as google)  3) Cut off the link between BR and ADSL modem  4) Laptop connect to any web site (such as google)  5) Recover the link  6) Laptop connect to any web site (such as google)  7) Disable 3G modem  8) Laptop connect to any web site (such as google)  9) Enable 3G modem  10) Laptop connect to any web site (such as google)  11) Cut off the link between BR and ADSL modem and disable 3G modem  12) Laptop connect to any web site (such as google) | | |
| **Expect result** | 2) Laptop can connect to web site successfully  4) Laptop can connect to web site successfully  6) Laptop can connect to web site successfully  8) Laptop can connect to web site successfully  10) Laptop can connect to web site successfully  12) MiniHiveUI can be triggered successfully | | |

##### Case ID CWP\_5

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | CWP\_5 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | CWP page different browsers test | | |
| **Pre-condition** | Enable 3G modem | | |
| **Test procedure** | 1) BR connect to PPPoE server  2) Laptop connect to any web site (such as google)  3) Cut off the link between BR and ADSL modem  4) Laptop connect to any web site (such as google) via IE  5) Laptop connect to any web site (such as google) via Firefox  6) Laptop connect to any web site (such as google) via Safari  7) Laptop connect to any web site (such as google) via Chrome | | |
| **Expect result** | 2) Laptop can connect to web site successfully  4) MiniHiveUI can be triggered successfully and the format is correct  5) MiniHiveUI can be triggered successfully and the format is correct  6) MiniHiveUI can be triggered successfully and the format is correct  7) MiniHiveUI can be triggered successfully and the format is correct | | |

##### Case ID CWP\_6

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | CWP\_6 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy4 | | |
| **Description** | Multi-users configure PPPoE via CWP | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to PPPoE server  2) Laptop connect to any web site (such as google)  3) Cut off the link between BR and ADSL modem  4) Laptop1 configure PPPoE config1 and update  5) Laptop2 configure PPPoE config2 and update  6) Laptop3 configure PPPoE config3 and update | | |
| **Expect result** | 2) Laptop can connect to web site successfully  4) BR’s PPPoE configure is PPPoE1  5) BR’s PPPoE configure is PPPoE2  6) BR’s PPPoE configure is PPPoE3 | | |

##### Case ID CWP\_7

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | CWP\_7 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy4 | | |
| **Description** | Only 3G-USB modem enable and reboot AP, CWP status test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Only 3G-Modem enable  2) Reboot AP  3) Laptop connect to AP and type in any web site | | |
| **Expect result** | 3) Laptop can connect to web site successfully | | |
| **Comment** | Bug 18300 | | |

## Negative test case

##### Case ID PPPoE\_Negative\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Negative\_1 | | |
| **Priority** | High | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Modify username/password when PPPoE link had been established | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Laptop connects to any web site(such as google)  3) Modify PPPoE username/password(Type in mgt0 IPaddr to log in MiniUI via browser)  4) Laptop connects to any web site(such as google) | | |
| **Expect result** | 2) Laptop can connect successfully  4) Laptop cannot connect successfully?(need confirm) | | |

##### Case ID PPPoE\_Negative\_2

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Negative\_2 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Enable dhcp client when PPPoE link had been established | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Laptop connects to any web site(such as google)  3) Enable eth0 dhcp client  4) Laptop connects to any web site(such as google) | | |
| **Expect result** | 2) Laptop can connect successfully  4) Laptop can connect successfully?(need confirm, DNS confuse?) | | |

##### Case ID PPPoE\_Negative\_3

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Negative\_3 | | |
| **Priority** | High | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Kill the PPPoE process when PPPoE link had been established | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Laptop connects to any web site(such as google)  3) Kill the process of the PPPoE “Pppd”  4) Laptop connects to any web site(such as google) | | |
| **Expect result** | 2) Laptop can connect successfully  4) Laptop can connect successfully | | |

##### Case ID PPPoE\_Negative\_4

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Negative\_4 | | |
| **Priority** | High | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Special character username and password test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Type in special character (username or password)  3) Laptop connects to any web site(such as google) | | |
| **Expect result** | 3) Laptop can connect successfully | | |

##### Case ID PPPoE\_Negative\_5

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Negative\_5 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Eth mode change test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Modify eth0 mode to wan (dhcp client)  3) Recover(PPPoE client)  4) Laptop connects to any web site(such as google)  5) Modify eth0 mode to backhaul  6) Recover(PPPoE client)  7) Laptop connects to any web site(such as google)  8) Modify eth0 mode to backhaul  9) Recover(PPPoE client)  10) Laptop connects to any web site(such as google)  11) Repeat step 2-10 5 times | | |
| **Expect result** | 4) Laptop can connect successfully  7) Laptop can connect successfully  10) Laptop can connect successfully  11) Laptop can connect successfully when the eth0 mode is wan(PPPoE client) | | |

##### Case ID PPPoE\_Negative\_6

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Negative\_6 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Eth status change test(up/down) | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connect to PPPoE server  2) Laptop connect to any web site (such as google)  3) Cut off the link between BR and ADSL modem  4) Laptop connect to any web site (such as google)  5) Recover the link  6) Laptop connect to any web site (such as google)  7) Shutdown Eth0  8) Laptop connect to any web site (such as google)  9) Recover Eth0  10) Laptop connect to any web site (such as google)  11) Repeat step3-10 5 times | | |
| **Expect result** | 4) Laptop can connect successfully  7) Laptop can connect successfully  10) Laptop can connect successfully  11) Laptop can connect successfully when the eth0 status is up | | |

##### Case ID PPPoE\_Negative\_7

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Negative\_7 | | |
| **Priority** | Middle | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Save pppoe config when no any pppoe config | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Reset BR  2) Save config pppoe  3) Reboot BR  4) show logging buffered level error | | |
| **Expect result** | 4) no error log  ah\_cli: load config failed!: Inappropriate ioctl for device  1970-01-01 00:00:34 err ah\_cli: failed to append configuration to  file(/tmp/ui\_conf\_tmp.32): Inappropriate ioctl for de  vice  1970-01-01 00:00:34 err ah\_cli: failed to parse config-file(pppoe\_cfg) in  current directory | | |

## Stress Test Case

## Duration Test Case

##### Case ID PPPoE\_Duration\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Durration\_1 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE duration test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Laptop download/upload files via wifi0 (>5 hours)  3) Laptop download/upload files via wifi1 (>5 hours)  4) Laptop download/upload files via lan (>5 hours) | | |
| **Expect result** | 2) Download/Upload successfully and PPPoE status is keep alive(no disconnect)  3) Download/Upload successfully and PPPoE status is keep alive(no disconnect)  4) Download/Upload successfully and PPPoE status is keep alive(no disconnect) | | |

## Performance Test Case

##### Case ID PPPoE\_Performance\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Performance\_1 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE performance test (maximum transmit rate) | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to PPPoE server successfully  2) Laptop download/upload files via wifi0  3) Laptop download/upload files via wifi1  4) Laptop download/upload files via lan | | |
| **Expect result** | 2) Max rate is …  3) Max rate is …  4) Max rate is … | | |

## Scalability Test Case

## Compatibility Test Case

##### Case ID PPPoE\_Compatibility\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_Compatibility\_1 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE Compatibility test (different Telecoms Operators) | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) BR connects to China Telecom  2) Laptop connect to any web site (such as google)  3) BR connects to China Unicom  4) Laptop connect to any web site (such as google)  5) BR connects to China Mobile  6) Laptop connect to any web site (such as google) | | |
| **Expect result** | 1) BR can connect to the PPPoE server and get IPaddr successfully  2) Laptop can connect to web site successfully  3) BR can connect to the PPPoE server and get IPaddr successfully  4) Laptop can connect to web site successfully  5) BR can connect to the PPPoE server and get IPaddr successfully  6) Laptop can connect to web site successfully | | |

## CLI Management (Automation Status: No)

CLI commands

1. [no] interface <ethx> pppoe enable
2. [no] interface <ethx> pppoe username <string> password <string>
3. [no] interface <ethx> pppoe auth-method {pap|chap|any}
4. show interface <ethx> pppoe
5. show running-config pppoe [password]
6. save config pppoe [bootstrap]

##### Case ID PPPoE\_CLI\_1

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_CLI\_1 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | By default, there is no PPPoE config | | |
| **Pre-condition** | None | | |
| **Test procedure** | 1) show default PPPoE  ***“show interface eth0 pppoe”***  2) show default PPPoE configure  ***“show running-config”*** | | |
| **Expect result** | 1) No information is displayed  2) No PPPoE config is displayed | | |

##### Case ID PPPoE\_CLI\_2

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_CLI\_2 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Normal PPPoE config | | |
| **Pre-condition** | ***“interface eth0 pppoe username admin password aerohive”***  ***“interface eth0 pppoe auth-method any”***  ***“interface eth0 enable”*** | | |
| **Test procedure** | 1) show PPPoE status  ***“show interface eth0 pppoe”***  2) show PPPoE configure  ***“show running-config”*** | | |
| **Expect result** | 1) PPPoE status can be displayed correct  2) PPPoE config can be displayed correct | | |

##### Case ID PPPoE\_CLI\_3

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_CLI\_3 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Delete PPPoE config | | |
| **Pre-condition** | ***“interface eth0 pppoe username admin password aerohive”***  ***“interface eth0 pppoe auth-method any”***  ***“interface eth0 enable”*** | | |
| **Test procedure** | 1) show PPPoE status  ***“show interface eth0 pppoe”***  2) show PPPoE configure  ***“show running-config”***  3) Delete PPPoE config  ***“no interface eth0 enable”***  ***“no interface eth0 pppoe username”***  ***“no interface eth0 pppoe auth-method”***  4) Repeat 1-2 | | |
| **Expect result** | 1) PPPoE status can be displayed correct  2) PPPoE config can be displayed correctly  4) No PPPoE status neither config can be displayed | | |

##### Case ID PPPoE\_CLI\_4

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_CLI\_4 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | Overwrite PPPoE config | | |
| **Pre-condition** | ***“interface eth0 pppoe username admin password aerohive”***  ***“interface eth0 pppoe auth-method any”***  ***“interface eth0 enable”*** | | |
| **Test procedure** | 1) show PPPoE status  ***“show interface eth0 pppoe”***  2) show PPPoE configure  ***“show running-config”***  3) Modify PPPoE config  ***“interface eth0 pppoe username root password aerohive”***  ***“interface eth0 pppoe auth-method pap”***  4) Repeat 1-2 | | |
| **Expect result** | 1) PPPoE status can be displayed correctly  2) PPPoE config can be displayed correctly  4) PPPoE status and config can be displayed correctly | | |

##### Case ID PPPoE\_CLI\_5

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_CLI\_5 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE password status | | |
| **Pre-condition** | ***“interface eth0 pppoe username admin password aerohive”***  ***“interface eth0 pppoe auth-method any”***  ***“interface eth0 enable”*** | | |
| **Test procedure** | 1) show running-config  ***“show running-config”***  ***“show interface eth0 pppoe”***  2) show PPPoE password configure  ***“show running-config pppoe password”*** | | |
| **Expect result** | 1) PPPoE password is “\*\*\*\*\*”  2) PPPoE password is “aerohive” | | |

##### Case ID PPPoE\_CLI\_6

|  |  |  |  |
| --- | --- | --- | --- |
| **Case ID** | PPPoE\_CLI\_6 | | |
| **Priority** | Low | **Automation Flag** | No |
| **Topology to use** | Topolopy1 | | |
| **Description** | PPPoE save commands test | | |
| **Pre-condition** |  | | |
| **Test procedure** | 1) Config PPPoE  ***“interface eth0 pppoe username admin password aerohive”***  ***“interface eth0 pppoe auth-method any”***  ***“interface eth0 enable”***  2) Save config  ***“save config”***  3) Reboot ap and show PPPoE status/config  ***“show running-config”***  ***“show interface eth0 pppoe”***  4) Config PPPoE  ***“interface eth0 pppoe username admin password aerohive”***  ***“interface eth0 pppoe auth-method any”***  ***“interface eth0 enable”***  5) Save PPPoE config  ***“save config pppoe”***  6) Reboot ap and show PPPoE status/config  ***“show running-config”***  ***“show interface eth0 pppoe”*** | | |
| **Expect result** | 3) No PPPoE status/config can be displayed  6) PPPoE status/config can be displayed correctly | | |

## GUI Management-HiveManager

**<List HM test case or test log>**

## GUI Management-HiveUI

**<List HiveUI test case or test log>**