



Firmware Release Note

Prestige 650HW-33

Standard version

Release 3.40(IT.4)C0

Date:

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Author:

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ZyXEL Prestige 650HW-33 Standard Version release 3.40(IT.4)C0 Release Note

Date: Nov 20, 2003

Supported Platforms:

ZyXEL Prestige 650HW-33

Versions:

ZyNOS Version : V3.40 (IT.4) | 11/20/2003 15:25:55
Bootbase Version : V1.11 | 3/4/2003 10:26:13

Notes:

The P650HW-33 is a small-office and home device that will allow a small LAN to access the Internet. By integrating ADSL, WLAN, NAT, P650HW-33 provides the ease of installation and Internet access.

The P650HW-33 provides an PCMCIA wireless card slot for 802.11b Wireless LAN connectivity, four single auto-sensing, auto-detection 10/100BASE-T Ethernet ports for connection to the user's local network, and a single RJ-11 port for connection to ADSL line.

The version of Alcatel modem code is 4.9.10

Known Issues:

1. Bandwidth Management:
Not support on-line adding class operation.
2. Update firmware issue :
 - a. Update firmware by FTP and Web: Can't update firmware from 3.40(IT.0), 3.40(IT.1) and 3.40(IT.2) to 3.40(IT.3) by FTP and Web
 - b. Only update firmware by console
3. Help page In Web GUI :
 - a. Firewall :Support English and German version only.
 - b. Static DHCP : Support English only.
4. The VPN tunnel can't build when setting PFS and aggressive mode.
5. Bandwidth management sometime will have problem (exception or system hang on).

Features:

Modifications in V 3.40(IT.4)C0 | 11/20/2003

1. [BUG FIXED]
Symptom: SMT menu 1 display error
Condition: When we are back from submenu(ex.DDNS), it shows unnecessary line.
Because HALF_BRIDGE is un-defined, we don't skip the field from SMT menu.
2. [BUG FIXED]
Symptom: When buffer is full and setting ACL rule in LAN to WAN, the system will get exception.
Condition: When the buffer is full, it should display error message.
3. [BUG FIXED]
Symptom: In eWC Firewall Edit Rule page, we can not add Available Service "IPSEC_TRANSPORT/TUNNEL(AH:0)".
Condition: Select "IPSEC_TRANSPORT/TUNNEL(AH:0)" and click ">>" button, "IPSEC_TRANSPORT(AH:0)" is added in Selected Service. It should be "IPSEC_TRANSPORT/TUNNEL(AH:0)".

Modifications in V 3.40(IT.4)b2 | 11/17/2003

4. [BUG FIXED]
Symptom: The PC can't get the dynamic IP from wireless Lan.
Condition: When one PC get the dynamic IP, other PCs can't get the dynamic IP.
5. [BUG FIXED]
Symptom: In eWC, content filter display error.
Condition: In eWC, the log of content filter display null page.
6. [FEATURE ENHANCED]
Symptom: In the keyword-blocking feature, add the number limitation of keyword-blocking.
Condition: In the keyword-blocking feature, add the number limitation of keyword-blocking is 32.

Modifications in V 3.40(IT.4)b1 | 10/31/2003

7. [BUG FIXED]
Symptom: VPN Can't Pass Through Router with NAT Traversal Turns On.
Condition: Setup a VPN connection with NAT Traversal turns on and establish a connection. It will be failed.
8. [BUG FIXED]
Symptom: There are distortion issue when both TV program and ftp transfer are executed.
Condition: When play TV program from wan side to lan side, and doing ftp from one ethernet station to one wireless station. There are distortion issue on TV screen. This is for ZD platform.
9. [BUG FIXED]
Symptom: If a Ethernet encapsulation route RemoteNode A was deleted and setup a same configuration on RemoteNode B, then packets can't route to WAN through RemoteNode B until arp flush.
Condition: Setup a Ethernet encapsulation route RemoteNode A and ping a host

connected by WAN, then delete RemoteNode A and set a same configuration to RemoteNode B, then ping the host again. It will be failed.

10. [BUG FIXED]

Symptom: The Space of romfile is not enough.

Condition: Reduce the romfile usage zise.

11. [FEATURE ENHANCED] Support VC auto-hunt feature.

12. [FEATURE ENHANCED] Support static DHCP by MAC feature.

13. [FEATURE ENHANCED] Support auto-configure TCP MSS size according to MTU size

14. [FEATURE ENHANCED] Support German help page of Firewall in Web GUI.

15. [FEATURE ENHANCED] Support Romania (CF:207) for wireless channel 1 ~ 11

16. [FEATURE ENHANCED] Support CI command “wlan active 1” to enable wireless LAN

17. [FEATURE ENHANCED] Support WINS server

18. [FEATURE CHANGED] Change France and Singapore WLAN channel to 1 ~ 13.

19. [BUG FIXED]

Symptom: Web GUI modification

Condition: 1) The “HELP” and “SITE MAP” will not change properly when changing to different language.

2) Display of Channel usage is not correct when using ZyAir B-120 WLAN card.

3) Help page of content filter can't be linked.

20. [BUG FIXED]

Symptom: If Re-authentication time sets to 10 sec in 802.1x function, 802.1x function will be fail.

Condition: If Re-authentication time sets to 10 sec in 802.1x function, 802.1x function will be fail.

Modifications in V 3.40(IT.3)C0 | 08/15/2003

1. [FEATURE ENHANCED]

Symptom:Support Firewall

2. [FEATURE ENHANCED]

Symptom: Support Content filter

3. [FEATURE ENHANCED]

Symptom:Support IPSec with 10 VPN tunnels

4. [FEATURE ENHANCED]

Symptom: Support ZyAir B-120 driver

5. [FEATURE ENHANCED]

Symptom:Support the CI command “ip adjmss [<mss>]” to adjust mss value.

6. [BUG FIXED]SIP pass-through bug fixed

Symptom: The exception will be occurred if using the Telia puhekaista.msi sip userAgent software.

Condition: The callID had no ipAddress. This will cause the system get null point for cpOffset[CALLID]

Modifications in V 3.40(IT.2) | 06/16/2003

1. Change to FCS version.

Modifications in V 3.40(IT.2)b2 | 06/02/2003

1. [NEW FEATURE]
Support Bandwidth Management. See [Appendix 1](#)
2. [FEATURE ENHANCED]
Support SIP passthrough.
3. [FEATURE ENHANCED]
Add time server setup page at eWC.
4. [BUG FIXED]
Symptom: Can't play XBox Live via NAT router.
5. [BUG FIXED]
Symptom: If the traffic for Polycom camera pass our router, the router would be reboot.
6. [FEATURE ENHANCED]
Symptom: Enhance SPTGEN feature
Condition:
 - 1) Add RIP direction and version for SMT menu4.
 - 2) Add active and protocol option for SMT menu15 (NAT).
 - 3) Extend filter set from 1 to 2 set.
 - 4) Support ADSL opencmd function.

Modifications in V 3.40(IT.2)b1 | 04/21/2003

1. [FEATURE ENHANCED] Support Multi-Lingual Web (English, France, Germany)
2. [FEATURE ENHANCED] Support 802.1X
3. [FEATURE ENHANCED] Add Web pages to configure 802.1x: (1)Local user database and Radius (in Advance Panel) ; (2)Association list and Channel usage (in Maintenance Panel)
4. [FEATURE CHANGED] Turn off some wireless related web-pages and SMT menu item(menu3.5 Wireless LAN Setup) when wireless card isn't installed in the device.
5. [FEATURE ENHANCED] Enlarge the size of WLAN MAC filter number to be 32

Modifications in V 3.40(IT.1) | 03/17/2003

1. Change version to FCS version.

Modifications in V 3.40(IT.1)b3 | 03/07/2003

1. [BUG FIXED]
Symptom: 8 PVCs can't work fine.
Condition: Not plug wireless card, 8 PVCs test will fail.

Modifications in V 3.40(IT.1)b2 | 03/04/2003

1. [BUG FIXED]
Symptom: Telnet to device cause system reboot.
Condition: Close adsl line, when adsl up, then telnet to device will cause system reboot.
2. [BUG FIXED]

- Symptom: Can't change UBR to CBR in eWC.
3. [FEATURE ENHANCED]
Symptom: Add web help for WAN setup page.
 4. [BUG FIXED]
Symptom: In wizard setup, OAM test will fail.
Condition: Configure device to PPPoA encap. and Nailed up is turn off

Modifications in V 3.40(IT.1)b1 | 02/25/2003

1. [FEATURE ENHANCED]
Symptom: Support SDRAM auto-detect for 8MB-32bit x1 & 8MB-16bit x2
Condition: Need to update bootbase version to 1.10
2. [FEATURE ENHANCED]
Symptom: Support generic filter for wireless channel.
Usage: wlan filter <incoming|outgoing> <generic> [set#1] [set#2] [set#3] [set#4]
3. [FEATURE ENHANCED]
Symptom: Update wireless available channels for certain countries.
4. [FEATURE ENHANCED]
Symptom: Support wireless basicrate and txrate.
Condition: Can't adjust basicrate and txrate for Intersil Card.
5. [FEATURE ENHANCED]
Symptom: Add WAN setup page in eWC.
6. [BUG FIXED]
Symptom: Video pixel issue
Condition: While downstream have multicast traffic(Video stream) and upstream have data traffic(FTP upload). There is pixel occurred every 2~3 mins.

Modifications in V 3.40(IT.0)C0 | 02/13/2003

1. Change FCS version.

Modifications in V 3.40(IT.0)b3 | 01/30/2003

1. [FEATURE ENHANCED]
Adopt new compress mechanism to reduce code size.
2. [BUG FIXED]
Symptom: In sub-menu, press return key continuously will re-enter to sub-menu.
Condition: In menu 3.2, press return key continuously will re-enter to sub-menu.
3. [BUG FIXED]
Symptom: Show wrong status in SMT menu 24.1
Condition: Set an remote node then non-active or delete it in menu 11.1. In menu 24.1 will show Idle not N/A.

Modifications in V 3.40(IT.0)b2 | 01/07/2003

1. [FEATURE CHANGED]
Create new model ID for standard version. Hence, must update bootbase to 1.06

Modifications in V 3.40(IT.0)b1 | 12/23/2002

1. Project created.

Appendix 1 Bandwidth Management

Introduction

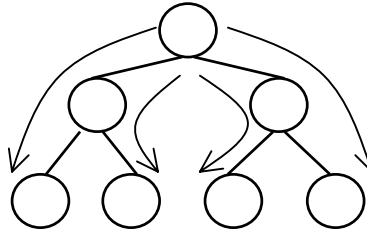


Figure 1.

The typical architecture of CBQ is drawn in figure 1. There are two major components in CBQ configuration. One is “class” and the other is “filter”. Each circle means a class and the hierarchy architecture shows the relation between ancestors and successors. The arrows mean the filters, which classify the incoming packets to the specific class. All of them, classes and filters, are constructed for a “physical” interface. To enable bandwidth management in more than two interfaces, users must configure the settings for each “physical” interface. The word “interface” we mentioned in the rest is meant “physical interface”.

The major mission of bandwidth management is to control the output rate of the flows. To archive this goal, the bandwidth management contains two modules, classifier and scheduler. If there is an outgoing packet, the classifier will classify the packet into a specific class and enqueue it in the queue belong to the class. The scheduler selects one class to dequeue one packet from its queue and makes sure that the output rate for each class is as expected.

There are two schedule mechanisms: Priority Round Robin (PRR) and Weighted Round Robin (WRR). The unused bandwidth will be offered to the class with higher priority under PRR mechanism; the unused bandwidth will be allotted in proportion. PRR is priority-based and WRR is fairness-based. Among these, the action of WRR is confusing. So we use an example to describe the action of WRR mechanism.

| | Reserved BW | Actual BW (total bandwidth =100 Mbps) | Actual BW (total bandwidth =10 Mbps) | Actual BW (total bandwidth = 1 Mbps) |
|---------|-------------|---------------------------------------|--------------------------------------|--------------------------------------|
| Class 1 | 5 Mbps | 5 Mbps | 5 Mbps | 0.5 Mbps |
| Class 2 | 5 Mbps | 5 Mbps | 5 Mbps | 0.5 Mbps |

The actual bandwidth for each class should be 5 Mbps when the total bandwidth of the output interface is more than 10 Mbps. But it is impossible to reserve 5 Mbps when the total bandwidth of the output interface is just 1 Mbps. According to the characteristics of

WRR, the actual bandwidth for each class should be 0.5 Mbps. The conclusions are the actual bandwidth will be equal to the reserved bandwidth if the total bandwidth of the output interface is enough, and the actual bandwidth will be decreased in proportion to the total bandwidth of the output interface in the contrast condition. And the behavior is the same as PRR when the actual bandwidth is less than the required bandwidth.

Work-conserving means that the transmission is kept on going. When the work-serving is enabled, the unused bandwidth will be allotted to the classes, which have packets in queue, from the class with high priority to low priority. The work-conserving makes the bandwidth efficient.

CI commands

The basic syntax of command interface (CI) to configure bandwidth management is described below:

```
bm interface if_name enable/disable [wrr/prr] [efficient] [bandwidth bps]  
bm class if_name add/del/mod class [name class_name] [priority X] [borrow on/off]  
[bandwidth bps]  
bm filter if_name add/del class dst_addr [mask xx] dst_port src_addr [mask xx] src_port  
proto  
bm show interface/class/filter/statistics if_name  
bm config save/load/clear  
bm monitor if_name [class_name]
```

For example, the configuration to construct the architecture of figure 1 is as follow:

```
bm interface LAN/WLAN/MPOA enable bandwidth 100m  
  
bm class LAN/WLAN/MPOA add 1 name agencyA bandwidth 30m  
bm class LAN/WLAN/MPOA add 1.1 name TA1_class bandwidth 10m  
bm class LAN/WLAN/MPOA add 1.2 name TA2_class bandwidth 20m  
  
bm class LAN/WLAN/MPOA add 2 name agencyB bandwidth 70m  
bm class LAN/WLAN/MPOA add 2.1 name TB1_class bandwidth 30m  
bm class LAN/WLAN/MPOA add 2.2 name TB2_class bandwidth 40m  
  
bm filter LAN/WLAN/MPOA add 1.1 0 0 0 20 6  
bm filter LAN/WLAN/MPOA add 1.2 0 0 0 30 6  
bm filter LAN/WLAN/MPOA add 2.1 0 0 0 40 6  
bm filter LAN/WLAN/MPOA add 2.2 0 0 0 50 6
```

In the configuration, the output rate of interface LAN/WLAN/MPOA is set 100Mbps. The first level classes, 1 (named agencyA) and 2 (named agencyB), get 30Mbps and 70Mbps. The leaf classes, 1.1 (named TA1_class), 1.2 (named TA2_class), 2.1 (named TB1_class) and 2.2 (named TB2_class), get 10Mbps, 20Mbps 30Mbps and 40Mbps. The four filters

classify packets into different classes by protocol type and source port. For example, the filter of class 1.1 classifies a packet into class 1.1 if the packet's protocol type is TCP and source port is 20.

Annex A CI Command List

| Command Class List Table | | |
|--|--|--|
| System Related Command | Exit Command | Ethernet Related Command |
| IP Related Command | Bridge Related Command | WAN Related Command |
| WLAN Related Command | Radius Related Command | 802.1x Related Command |
| Bandwidth Management | Firewall Related Command | IPSec Related Command |

| System Related Command | | | Home |
|------------------------|-------------|-------------------|---|
| | Command | | Description |
| sys | | | |
| | adjtime | | retrive date and time from Internet |
| | cbuf | | |
| | | display | display cbuf a: all f: free u: used |
| | | cnt | cbuf static |
| | | | display cbuf static |
| | | clear | clear cbuf static |
| | baud | <1..5> | change console speed |
| | callhist | | |
| | | add | <phone dir [rate] [uptime]> |
| | | display | display call history |
| | | remove | <index> |
| | | | remove entry from call history |
| | clear | | clear the counters in GUI status menu |
| | clock | | |
| | | display | display system clock |
| | countrycode | [countrycode] | set country code |
| | date | [year month date] | set/display date |
| | dir | | display file directory |
| | domainname | | display domain name |
| | edit | <filename> | edit a text file |
| | enhanced | | return OK if commands are supported for PWC purposes |
| | errctl | [level] | set the error control level 0:crash no save,not in debug mode (default) 1:crash no save,in debug mode 2:crash save,not in debug mode 3:crash save,in debug mode |
| | event | | |
| | | display | display tag flags information |
| | | trace | display system event information |
| | | | display trace event |
| | | display | display trace event |
| | | clear <num> | clear trace event |
| | extraphnum | | maintain extra phone numbers for outcalls |
| | | add | <set 1-3> <1st phone num> [2nd phone num] |
| | | | add extra phone numbers |
| | | display | display extra phone numbers |
| | | node | <num> |
| | | | set all extend phone number to remote node |
| | | | <num> |
| | | remove | <set 1-3> |
| | | | remove extra phone numbers |
| | | reset | reset flag and mask |
| | feature | | display feature bit |
| | fid | | |

| | | | | |
|--|-----------|----------|--|---|
| | | display | | display function id list |
| | firmware | | | display ISDN firmware type |
| | hostname | | [hostname] | display system hostname |
| | iface | | | |
| | | disp | [#] | display iface list |
| | isr | | [all used free] | display interrupt service routine |
| | interrupt | | | display interrupt status |
| | log | | | |
| | | category | | |
| | | | access [0:none/1:log] | record the access control logs |
| | | | attack [0:none/1:log/2:alert/3:both] | record and alert the firewall attack logs |
| | | | display | display the category setting |
| | | | error [0:none/1:log/2:alert/3:both] | record and alert the system error logs |
| | | | ipsec [0:none/1:log] | record the access control logs |
| | | | javablocked [0:none/1:log] | record the java etc. blocked logs |
| | | | mten [0:none/1:log] | record the system maintenance logs |
| | | | upnp [0:none/1:log] | record upnp logs |
| | | | urlblocked [0:none/1:log/2:alert/3:both] | record and alert the web blocked logs |
| | | | urlforward [0:none/1:log] | record web forward logs |
| | | clear | | clear log |
| | | display | | display all logs |
| | | errlog | | |
| | | | clear | display log error |
| | | | disp | clear log error |
| | | | online | turn on/off error log online display |
| | | load | | load the log setting buffer |
| | | mail | | |
| | | | alertaddr [mail address] | send alerts to this mail address |
| | | | display | display mail setting |
| | | | logaddr [mail address] | send logs to this mail address |
| | | | schedule display | display mail schedule |
| | | | schedule hour [0-23] | hour time to send the logs |
| | | | schedule minute [0-59] | minute time to send the logs |
| | | | schedule policy [0:full/1:hourly/2:daily/3:weekly/4:none] | mail schedule policy |
| | | | schedule week [0:sun/1:mon/2:tue/3:wed/4:thu/5:fri/6:sat] | weekly time to send the logs |
| | | | server [domainname/ip] | mail server to send the logs |
| | | | subject [mail subject] | mail subject |
| | | save | | save the log setting buffer |
| | | syslog | | |
| | | | active [0:no/1:yes] | active to enable unix syslog |
| | | | display | display syslog setting |
| | | | facility [local id(1-7)] | log the messages to different files |
| | | | server [domainname/ip] | syslog server to send the logs |
| | log | | | |
| | | clear | | clear log error |
| | | disp | | display log error |
| | | online | [on off] | turn on/off error log online display |
| | map | | | display whole memory map content |
| | mbuf | | | |

| | | | | |
|--|----------|---------|---------------------------------|---|
| | | link | link | list system mbuf link |
| | | pool | <id> [type] | list system mbuf pool |
| | | status | | display system mbuf status |
| | | disp | <address> | display mbuf status |
| | | cnt | | |
| | | | disp | display system mbuf count |
| | | | clear | clear system mbuf count |
| | | debug | [on off] | |
| | memory | | <address> <length> | display memory content |
| | memwrite | | <address> <len> [data list ...] | write some data to memory at <address> |
| | memwl | | <address> | write long word to memory at <address> |
| | memrl | | <address> | read long word at <address> |
| | memutil | | | |
| | | usage | | display memory allocate and heap status |
| | | mqueue | <address> <len> | display memory queues |
| | | mcell | mid [f u] | display memory cells by given ID |
| | | msecs | [a f u] | display memory sections |
| | | mtstart | <n-mcell> | start memory test |
| | | mtstop | | stop memory test |
| | | mtalloc | <size> [n-mcell] | allocate memory for testing |
| | | mtfree | <start-idx> [end-idx] | free the test memory |
| | model | | | display server model name |
| | proc | | | |
| | | display | | display all process information |
| | | stack | [tag] | display process's stack by a give TAG |
| | | pstatus | | display process's status by a give TAG |
| | pwc | | | sends information to PWC via telnet |
| | queue | | | |
| | | display | [a f u] [start#] [end#] | display queue by given status and range numbers |
| | | ndisp | [qid] | display a queue by a given number |
| | quit | | | quit CI command mode |
| | reboot | | [code] | reboot system code = 0 cold boot, = 1 immediately boot = 2 bootModule debug mode |
| | reslog | | | |
| | | disp | | display resources trace |
| | | clear | | clear resources trace |
| | stdio | | [second] | change terminal timeout value |
| | time | | [hour [min [sec]]] | display/set system time |
| | timer | | | |
| | | disp | | display timer cell |
| | | trace | [on off] | set/display timer information online |
| | | start | [tmvalue] | start a timer |
| | | stop | <id> | stop a timer |
| | trcdisp | | | monitor packets |
| | trclog | | | |
| | | switch | [on off] | set system trace log |
| | | online | [on off] | set on/off trace log online |
| | | level | [level] | set trace level of trace log #:1-10 |
| | | type | <bitmap> | set trace type of trace log |
| | | disp | | display trace log |
| | | clear | | clear trace |

| | | | | |
|--|-----------|-----------|--|--|
| | | call | | display call event |
| | | encapmask | [mask] | set/display tracelog encapsulation mask |
| | trcpacket | | | |
| | | create | <entry> <size> | create packet trace buffer |
| | | destroy | | packet trace related commands |
| | | channel | <name> [none incoming outgoing bothway] | <channel name>=enet0,sdsl00, fr0 set packet trace direction for a given channel |
| | | string | | enable smt trace log |
| | | switch | [on off] | turn on/off the packet trace |
| | | disp | | display packet trace |
| | | udp | | send packet trace to other system |
| | | | switch [on off] | set tracepacket upd switch |
| | | | addr <addr> | send trace packet to remote udp address |
| | | | port <port> | set tracepacket udp port |
| | | parse | [[start_idx], end_idx] | parse packet content |
| | | brief | | display packet content briefly |
| | syslog | | | |
| | | server | [destip] | set syslog server IP address |
| | | facility | <facilityno> | set syslog facility |
| | | type | [type] | set/display syslog type flag |
| | | mode | [on off] | set syslog mode |
| | version | | | display RAS code and driver version |
| | view | | <filename> | view a text file |
| | wdog | | | |
| | | switch | [on off] | set on/off wdog |
| | | cnt | [value] | display watchdog counts value: 0-34463 |
| | | dead | | let watch dog take place using while loop |
| | romreset | | | restore default romfile |
| | server | | | |
| | | access | <telnet ftp web icmp snmp dns> <value> | set server access type |
| | | load | | load server information |
| | | disp | | display server information |
| | | port | <telnet ftp web snmp> <port> | set server port |
| | | save | | save server information |
| | | secureip | <telnet ftp web icmp snmp dns> <ip> | set server secure ip addr |
| | spt | | | |
| | | dump | | dump spt raw data |
| | | | root | dump spt root data |
| | | | rn | dump spt remote node data |
| | | | user | dump spt user data |
| | | | slot | dump spt slot data |
| | | set | <offset> <len> <value...> | set spt value in memory address |
| | | save | | save spt data |
| | | size | | display spt record size |
| | | clear | | clear spt data |
| | cmgr | | | |
| | | trace | | |
| | | | disp <ch-name> | show the connection trace of this channel |
| | | | clear <ch-name> | clear the connection trace of this channel |
| | | data | <ch-name> | show channel connection related data |
| | | cnt | <ch-name> | show channel connection related counter |
| | socket | | | display system socket information |
| | filter | | | |

| | | | | |
|--|------|---------------|---|-----------------------------------|
| | | clear | | clear filter statistic counter |
| | | disp | | display filter statistic counters |
| | | sw | [on/off] | set filter status switch |
| | | rule | <iface> | display iface filter flag |
| | | set | <set> | display filter rule |
| | | addnetbios | | add netbios filter |
| | | removenetbios | | remove netbios filter |
| | | netbios | | |
| | | | disp | display netbios filter status |
| | | | config <0:lan to wan, 1:wan to lan, 2:lan to dmz, 3:ipsec passthrough, 4:trigger dial> <on/off> | config netbios filter |
| | | blockbc | [on/off] | set/display broadcast filter mode |
| | ddns | | | |
| | | debug | <level> | enable/disable ddns service |
| | | display | <iface name> | display ddns information |
| | | restart | <iface name> | restart ddns |
| | | logout | <iface name> | logout ddns |
| | cpu | | | |
| | | display | | display CPU utilization |

Exit Command

[Home](#)

| Command | | | | Description |
|---------|--|--|--|---------------|
| exit | | | | exit smt menu |

Ethernet Related Command

[Home](#)

| Command | | | | Description |
|---------|---------|--------|---------------------------------|--|
| ether | | | | |
| | config | | | display LAN configuration information |
| | driver | | | |
| | | cnt | | |
| | | | disp <name> | display ether driver counters |
| | | | clear <name> | clear ether driver counters |
| | | iface | <ch name> <num> | send driver iface |
| | | ioctl | <ch name> | Useless in this stage. |
| | | mac | <ch name> <mac addr> | Set LAN Mac address |
| | | reg | <ch name> | display LAN hardware related registers |
| | | rxmod | <ch_name> <mode> | set LAN receive mode. mode: 1: turn off receiving 2: receive only packets of this interface 3: mode 2+ broadcast 5: mode 2 + multicast 6: all packets |
| | | status | <ch name> | see LAN status |
| | | init | <ch name> | initialize LAN |
| | version | | | see ethernet device type |
| | pkttest | | | |
| | | disp | | |
| | | | packet <level> | set ether test packet display level |
| | | | event <ch> [on/off] | turn on/off ether test event display |
| | | sap | [ch_name] | send sap packet |
| | | arp | <ch name> <ip-addr> | send arp packet to ip-addr |
| | | mem | <addr> <data> [type] | write memory data in address |
| | test | | <ch_id> <test_id> [arg3] [arg4] | do LAN test |

| | | | | |
|--|-----------|--|-----------------------------|------------------|
| | pncconfig | | <ch_name> | do pnc config |
| | mac | | <src_ch> <dest_ch> <ipaddr> | fake mac address |

IP Related Command

[Home](#)

| Command | | | | Description |
|---------|----------|----------|----------------------------------|---|
| ip | | | | |
| | address | | [addr] | display host ip address |
| | alias | | <iface> | alias iface |
| | aliasdis | | <0 1> | disable alias |
| | arp | | | |
| | | status | <iface> | display ip arp status |
| | | add | <hostid> ether <ether addr> | add arp information |
| | | resolve | <hostid> | resolve ip-addr |
| | | replydif | [<0:no 1:yes>] | reply different interface ip-addr's arp request |
| | | drop | <hostid> [hardware] | drop arp |
| | | flush | | flush arp table |
| | | publish | | add proxy arp |
| | dhcp | | <iface> | |
| | | client | | |
| | | | release | release DHCP client IP |
| | | | renew | renew DHCP client IP |
| | | mode | <server relay none client> | set dhcp mode |
| | | relay | server <serverip> | set dhcp relay server ip-addr |
| | | reset | | reset dhcp table |
| | | server | | |
| | | | probecount <num> | set dhcp probe count |
| | | | dnsserver <ip1> [ip2] [ip3] | set dns server ip-addr |
| | | | winsserver <winsip1> [<winsip2>] | set wins server ip-addr |
| | | | gateway <gatewayip> | set gateway |
| | | | hostname <hostname> | set hostname |
| | | | initialize | fills in DHCP parameters and initializes (for PWC purposes) |
| | | | leasetime <period> | set dhcp leasetime |
| | | | netmask <netmask> | set dhcp netmask |
| | | | pool <startip> <numip> | set dhcp ip pool |
| | | | renewaltime <period> | set dhcp renew time |
| | | | rebindtime <period> | set dhcp rebind time |
| | | | reset | reset dhcp table |
| | | | server <serverip> | set dhcp server ip for relay |
| | | | dnsorder [router isp] | set dhcp dns order |
| | | status | [option] | show dhcp status |
| | | static | | |
| | | | delete <num> all | delete static dhcp mac table |
| | | | display | display static dhcp mac table |
| | | | update <num> <mac> <ip> | update static dhcp mac table |
| | dns | | | |
| | | query | | |
| | | | address <ipaddr> [timeout] | resolve ip-addr to name |
| | | | debug <num> | enable dns debug value |
| | | | name <hostname> [timeout] | resolve name to ip-addr |
| | | | status | display dns query status |
| | | | table | display dns query table |
| | | server | <primary> [secondary] [third] | set dns server |

| | | | | |
|--|----------|-------------|---|--|
| | | stats | | |
| | | | clear | clear dns statistics |
| | | | disp | display dns statistics |
| | | table | | display dns table |
| | httpd | | | |
| | | debug | [on off] | set http debug flag |
| | icmp | | | |
| | | echo | [on off] | set icmp echo response flag |
| | | data | <option> | select general data type |
| | | check | | |
| | | | cmd [on off] | check icmp echo reply command data |
| | | | rsp [on off] | check icmp response |
| | | | indication [i r l p] | set icmp indication |
| | | status | | display icmp statistic counter |
| | | trace | [on off] | turn on/off trace for debugging |
| | | discovery | <iface> [on off] | set icmp router discovery flag |
| | ifconfig | | [iface] [ipaddr] [broadcast <addr> mtu <value> dynamic] | configure network interface |
| | ifdrop | | <iface> | check if iface is available. |
| | ping | | <hostid> | ping remote host |
| | pong | | <hostid> [<size> <time-interval>] | pong remote host |
| | route | | | |
| | | status | [if] | display routing table |
| | | add | <dest_addr default>[/<bits>] <gateway> [<metric>] | add route |
| | | addiface | <dest_addr default>[/<bits>] <gateway> [<metric>] | add an entry to the routing table to iface |
| | | addprivate | <dest_addr default>[/<bits>] <gateway> [<metric>] | add private route |
| | | drop | <host addr> [/<bits>] | drop a route |
| | | flush | | flush route table |
| | | lookup | <addr> | find a route to the destination |
| | | errcnt | | |
| | | | disp | display routing statistic counters |
| | | | clear | clear routing statistic counters |
| | status | | | display ip statistic counters |
| | adjtcp | | <iface> [<mss>] | adjust the TCP mss of iface |
| | udp | | | |
| | | status | | display udp status |
| | rip | | | |
| | | accept | <gateway> | drop an entry from the RIP refuse list |
| | | activate | | enable rip |
| | | merge | [on off] | set RIP merge flag |
| | | refuse | <gateway> | add an entry to the rip refuse list |
| | | request | <addr> [port] | send rip request to some address and port |
| | | reverse | [on off] | RIP Poisoned Reverse |
| | | status | | display rip statistic counters |
| | | trace | | enable debug rip trace |
| | | mode | | |
| | | | <iface> in [mode] | set rip in mode |
| | | | <iface> out [mode] | set rip out mode |
| | | dialin_user | [show in out both none] | show dialin user rip direction |
| | tcp | | | |
| | | ceiling | [value] | TCP maximum round trip time |

| | | | | |
|--|-----------|----------------|-----------------------------|--|
| | | floor | [value] | TCP minimum rtt |
| | | irtt | [value] | TCP default init rtt |
| | | kick | <tc> | kick tcb |
| | | limit | [value] | set tcp output window limit |
| | | max-incomplete | [number] | Set the maximum number of TCP incomplete connection. |
| | | mss | [value] | TCP input MSS |
| | | reset | <tc> | reset tcb |
| | | rtt | <tc> <value> | set round trip time for tcb |
| | | status | [tc] [<interval>] | display TCP statistic counters |
| | | syndata | [on off] | TCP syndata piggyback |
| | | trace | [on off] | turn on/off trace for debugging |
| | | window | [tc] | TCP input window size |
| | samenet | | <iface1> [<iface2>] | display the ifaces that in the same net |
| | uninet | | <iface> | set the iface to uninnet |
| | tftp | | | |
| | | support | | prtn if tftp is support |
| | | stats | | display tftp status |
| | xparent | | | |
| | | join | <iface1> [<iface2>] | join iface2 to iface1 group |
| | | break | <iface> | break iface to leave ipxparent group |
| | anitprobe | | <0 1> 1:yes 0:no | set ip anti-probe flag |
| | igmp | | | |
| | | debug | [level] | set igmp debug level |
| | | forwardall | [on off] | turn on/off igmp forward to all interfaces flag |
| | | querier | [on off] | turn on/off igmp stop query flag |
| | | iface | | |
| | | | <iface> grouptm <timeout> | set igmp group timeout |
| | | | <iface> interval <interval> | set igmp query interval |
| | | | <iface> join <group> | join a group on iface |
| | | | <iface> leave <group> | leave a group on iface |
| | | | <iface> query | send query on iface |
| | | | <iface> rsptime [time] | set igmp response time |
| | | | <iface> start | turn on of igmp on iface |
| | | | <iface> stop | turn off of igmp on iface |
| | | | <iface> ttl <threshold> | set ttl threshold |
| | | | <iface> v1compat [on off] | turn on/off v1compat on iface |
| | | robustness | <num> | set igmp robustness variable |
| | | status | | dump igmp status |
| | pr | | | |
| | | clear | | clear ip pr table counter information |
| | | disp | | dump ip pr table counter information |
| | | switch | | turn on/off ip pr table counter flag |
| | nat | | | |
| | | debug | [on off] | turn on/off the nat debug flag |
| | | period | [period] | set nat timer period |
| | | port | [port] | set nat starting external port number |
| | | checkport | | verify all server tables are valid |
| | | timeout | | |
| | | | gre [timeout] | set nat gre timeout value |
| | | | iamt [timeout] | set nat iamt timeout value |
| | | | generic [timeout] | set nat generic timeout value |
| | | | reset [timeout] | set nat reset timeout value |
| | | | tcp [timeout] | set nat tcp timeout value |

| | | | |
|--|--|--------------------------------------|---|
| | | tcpoother [timeout] | set nat tcp other timeout value |
| | | update | create nat system information from spSysParam |
| | | iamt | display nat iamt information |
| | | iface | <iface> |
| | | lookup | <rule set> |
| | | new-lookup | <rule set> |
| | | loopback | [on off] |
| | | reset | <iface> |
| | | server | |
| | | disp | display nat server table |
| | | load <set id> | load nat server information from ROM |
| | | save | save nat server information to ROM |
| | | clear <set id> | clear nat server information |
| | | edit active <yes no> | set nat server edit active flag |
| | | edit svrport <start port> [end port] | set nat server server port |
| | | edit intport <start port> [end port] | set nat server forward port |
| | | edit remotehost <start ip> [end ip] | set nat server remote host ip |
| | | edit leasetime [time] | set nat server lease time |
| | | edit rulename [name] | set nat server rule name |
| | | edit forwardip [ip] | set nat server server ip |
| | | edit protocol [protocol id] | set nat server protocol |
| | | service | |
| | | irc [on off] | turn on/off irc flag |
| | | resetport | reset all nat server table entries |
| | | incikeport | [on off] |
| | | | turn on/off increase ike port flag |

Bridge Related Command[Home](#)

| Command | | | | Description |
|---------|------|---------|------------------------|--|
| bridge | | | | |
| | mode | | <1/0> (enable/disable) | turn on/off (1/0) LAN promiscuous mode |
| | blt | | | related to bridge local table |
| | | disp | <channel> | display blt data |
| | | reset | <channel> | reset blt data |
| | | traffic | | display local LAN traffic table |
| | | monitor | [on off] | turn on/off traffic monitor. Default is off. |
| | | time | <sec> | set blt re-init interval |
| | brt | | | related to bridge route table |
| | | disp | [id] | display brt data |
| | | reset | [id] | reset brt data |
| | cnt | | | related to bridge routing statistic table |
| | | disp | | display bridge route counter |
| | | clear | | clear bridge route counter |
| | stat | | | related to bridge packet statistic table |
| | | disp | | display bridge route packet counter |
| | | clear | | clear bridge route packet counter |
| | disp | | | display bridge source table |

WAN Related Command[Home](#)

| Command | | | | Description |
|---------|------|----------|--|------------------------------|
| wan | adsl | bert | | ADSL ber |
| | | chandata | | ADSL channel data, line rate |
| | | close | | Close ADSL line |
| | | coding | | ADSL standard current |
| | | ctrlint | | ADSL CTRL response command |

| | | | | |
|--|--|---------------|------------------|--|
| | | defbitmap | | ADSL defect bitmap status |
| | | dyinggasp | | Send ADSL dyinggasp |
| | | fwav | | Test the ADSL F/W available ping |
| | | fwdl | | Download modem code, but must reset first |
| | | linedata | | |
| | | linedata | near | Show ADSL near end noise margin |
| | | linedata | far | Show ADSL far end noise margin |
| | | open | | Open ADSL line |
| | | opencmd | | Open ADSL line with specific standard |
| | | opmode | | Show the operational mode |
| | | perfdata | | Show performance information,CRC,FEC, error seconds.. |
| | | rdata | [start] [length] | Read DSP CTRL registers 512 bytes |
| | | reset | | Reset ADSL modem, and must reload the modem code again |
| | | selftest | | |
| | | selftest | long | ADSL long loop test |
| | | selftest | short | ADSL short loop test |
| | | status | | ADSL status (ex: up, down or wait for init) |
| | | version | | ADSL version information |
| | | vendorid | | ADSL vendor information |
| | | utopia | | Show ADSL utopia information |
| | | cellcnt | | Show ADSL cell counter |
| | | display | | |
| | | display | shutdown | Show the counter of rate adaptive mechanism happening |
| | | display | rateup | Show real status that rate adaptive mechanism happened |
| | | rateadap | [on/off] | Turn on/off rate adaptive mechanism |
| | | dumpcondition | [on/off] | Turn on/off online debug information of rate adaptive mechanism |
| | | sampletime | [mins] | Tune the sample time of rate adaptive mechanism |
| | | noisegt | [db] | if noise margin is 3db greater than before, and rate is worse than before, then system will do “L1 shutdown RA3”, default is 3db |
| | | noisemargin | [db] | if noise margin is greater than this value, and rate is worse than before, then system will do “L1 shutdown RA3”, default is 8db |
| | | persisttime | [time] | when the adaptive condition is matched system will continue to monitor the time period “persisttime” before doing “L1 shutdown RA3”, default is 30 seconds |
| | | timeinterval | [mins] | when “L1 shutdown RA3” is done twice, and still can’t reach the max rate which system recorded, it will delay a time period that the period base time is “timeinterval” before starting again. The time-based default is 2 hrs |
| | | defectcheck | [on/off] | Turn on/off detect table checking, default is on |
| | | txgain | [value] | Set the CTRL register (0xc3), the value is from 0xfa to 0x06 |
| | | targetnoise | [value] | Set the CTRL register (0xc4), the value is from 0xfa to 0x06 |
| | | maxtonelimit | [value] | Set the CTRL register (0xc5), the value is from 0xfa to 0x06 |

| | | | | |
|-----|-------|---------------|--------------------------------|--|
| | | rxgain | [value] | Set the CTRL register (0xc6), the value is from 0xfa to 0x06 |
| | | txoutputpwr | [value] | Set the CTRL register (0xc7), the value is from 0xfa to 0x06 |
| | | rxoutputpwr | [value] | Set the CTRL register (0xc8), the value is from 0xfa to 0x06 |
| | | maxoutputpwr | [value] | Set the CTRL register (0xc9), the value is from 0xfa to 0x06 |
| | | errorsecond | | |
| | | errorsecond | switch [1 0] | Turn on/off error sending to DSLAM side |
| | | errorsecond | sendes | Send current error second information immediately |
| | | dygasprecover | | |
| | | dygasprecover | level [value] | By default is 100, after receiving 100 dying gasp system will reboot |
| | | dygasprecover | active [on off] | Turn on/off this mechanism |
| | | rsploss | [1 0] | Turn on means to response signal loss of CTRL immediately, default is off |
| | | watchdog | [1 0] | Watchdog for DSP |
| | atm | test | [fix rand period oam loopback] | Generate ATM traffic |
| wan | hwsar | disp | | Display hwsar packets incoming/outgoing information |
| | | clear | | Clear hwsar packets information |
| | | sendoam | | Send OAM packets: <vpi> <vci> <f5> <end-to-end> <type:0(AIS) 1(RDI) 2(LoopBack)> |

WLAN Related Command

[Home](#)

| Command | | | | Description |
|---------|---------|-------------------------|--|--|
| wlan | | | | |
| | ssid | | | Configure ESSID |
| | chid | | | Configure channel ID |
| | debug | | | Turn on /off debug information |
| | version | | | Show WLAN AP F/W version |
| | filter | < incoming outgoing > | < generic > [set#1][set#2][set#3][set#4] | To set generic filter for wireless channel |

Radius Related Command

[Home](#)

| Command | | | | Description |
|---------|------|--|--|---|
| radius | | | | |
| | auth | | | show current radius authentication server configuration |
| | acct | | | show current radius accounting server configuration |

802.1x Related Command

[Home](#)

| Command | | | | Description |
|---------|-------|-------|---------------|--|
| 8021x | | | | |
| | debug | level | [debug level] | set ieee802.1x debug message level |
| | | trace | | show all supplications in the supplication table |
| | | user | [username] | show the specified user status in the supplicant table |

| Command | | | | | | Description |
|---------|-----------|-------------|---------|-----------------|-----------------|--|
| bm | | | | | | |
| | interface | lan | enable | <bandwidth xxx> | | Enable bandwidth management in LAN with bandwidth xxx bps. If the user doesn't set the bandwidth, the default value is 100Mbps. |
| | | | | <wrr pr> | | Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based. |
| | | | | <efficient> | | Enable work-conserving feature. |
| | | | disable | | | Disable bandwidth management in LAN |
| | | wlan | enable | <bandwidth xxx> | | Enable bandwidth management in WLAN with bandwidth xxx bps. If the user doesn't set the bandwidth, the default value is 100Mbps. |
| | | | | <wrr pr> | | Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based. |
| | | | | <efficient> | | Enable work-conserving feature. |
| | | | disable | | | Disable bandwidth management in WLAN |
| | | mpoa[00~07] | enable | <bandwidth xxx> | | Enable bandwidth management in WAN with bandwidth xxx bps. If the user doesn't set the bandwidth, the default value is 100Mbps. |
| | | | | <wrr pr> | | Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based. |
| | | | | <efficient> | | Enable work-conserving feature. |
| | | | disable | | | Disable bandwidth management in WAN |
| | class | lan | add # | bandwidth xxx | <name xxx> | Add a class with bandwidth xxx bps in LAN. The name is for users' information. |
| | | | | | <priority x> | Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The default value is 3. |
| | | | | | <borrow on off> | The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The default value is off. |
| | | | mod # | <bandwidth xxx> | | Modify the parameters of the class in LAN. The bandwidth is unchanged if the user doesn't set a new value. |
| | | | | <name xxx> | | Set the class' name. |
| | | | | <priority x> | | Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The priority is unchanged if the user doesn't set a new value. |
| | | | | <borrow on off> | | The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The borrow is unchanged if the user doesn't set a new value. |
| | | | del # | | | Delete the class # and its filter and all its children class and their filters in LAN. |
| | | wlan | add # | bandwidth xxx | <name xxx> | Add a class with bandwidth xxx bps in WLAN. The name is for users' information. |
| | | | | | <priority x> | Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The default value is 3. |
| | | | | | <borrow | The class can borrow bandwidth from its parent |

| | | | | | | |
|--|--------|-------------|-------|--|-----------------|--|
| | | | | | on off> | class when the borrow is set on, and vice versa. The default value is off. |
| | | | mod # | <bandwidth xxx> | | Modify the parameters of the class in WLAN. The bandwidth is unchanged if the user doesn't set a new value. |
| | | | | <name xxx> | | Set the class' name. |
| | | | | <priority x> | | Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The priority is unchanged if the user doesn't set a new value. |
| | | | | <borrow on off> | | The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The borrow is unchanged if the user doesn't set a new value. |
| | | | del # | | | Delete the class # and its filter and all its children class and their filters in WLAN. |
| | | mpoa[00~07] | add # | bandwidth xxx | <name xxx> | Add a class with bandwidth xxx bps in WAN. The name is for users' information. |
| | | | | | <priority x> | Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The default value is 3. |
| | | | | | <borrow on off> | The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The default value is off. |
| | | | mod # | <bandwidth xxx> | | Modify the parameters of the class in WAN. The bandwidth is unchanged if the user doesn't set a new value. |
| | | | | <name xxx> | | Set the class' name. |
| | | | | <priority x> | | Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The priority is unchanged if the user doesn't set a new value. |
| | | | | <borrow on off> | | The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The borrow is unchanged if the user doesn't set a new value. |
| | | | del # | | | Delete the class # and its filter and all its children class and their filters in WAN. |
| | filter | lan | add # | Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol | | Add a filter for class # in LAN. The filter contains destination address (netmask), destination port, source address (netmask), source port and protocol. You may set the value as 0 if you do not care the item. |
| | | | del # | | | Delete a filter which belongs to class # in LAN. |
| | | wlan | add # | Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol | | Add a filter for class # in WLAN. The filter contains destination address (netmask), destination port, source address (netmask), source port and protocol. You may set the value as 0 if you do not care the item. |
| | | | del # | | | Delete a filter which belongs to class # in WLAN. |
| | | mpoa[00~07] | add # | Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol | | Add a filter for class # in WAN. The filter contains destination address (netmask), destination port, source address (netmask), source port and protocol. You may set the value as 0 if you do not care the item. |
| | | | del # | | | Delete a filter which belongs to class # in WAN. |
| | show | interface | lan | | | Show the interface settings of LAN |

| | | | | | |
|--|---------|-----------------|-----------------|--|--|
| | | | wlan | | Show the interface settings of WLAN |
| | | | mpoa[0 0~07] | | Show the interface settings of WAN |
| | | class | lan | | Show the classes settings of LAN |
| | | | wlan | | Show the classes settings of WLAN |
| | | | mpoa[0 0~07] | | Show the classes settings of WAN |
| | | filter | lan | | Show the filters settings of LAN |
| | | | wlan | | Show the filters settings of WLAN |
| | | | mpoa[0 0~07] | | Show the filters settings of WAN |
| | | statistics | lan | | Show the statistics of the classes in LAN |
| | | | wlan | | Show the statistics of the classes in WLAN |
| | | | mpoa[0 0~07] | | Show the statistics of the classes in WAN |
| | monitor | lan | <#> | | Monitor the bandwidth of class # in LAN. If the class is not specific, all the classes in LAN will be monitored. The first time you key the command will set it on; the second time you will set it off, and so on. |
| | | wlan | <#> | | Monitor the bandwidth of class # in WLAN. If the class is not specific, all the classes in WLAN will be monitored. The first time you key the command will set it on; the second time you will set it off, and so on. |
| | | mpoa[00~ 07] | <#> | | Monitor the bandwidth of class # in WAN. If the class is not specific, all the classes in WAN will be monitored. The first time you key the command will set it on; the second time you will set it off, and so on. |
| | config | save | | | Save the configuration. |
| | | load | | | Load the configuration. |
| | | clear | | | Clear the configuration. |

Firewall Related Command

[Home](#)

| Command | | | | Description |
|---------|----------|---------|----------|---|
| sys | Firewall | | | |
| | | acl | | |
| | | | disp | Display specific ACL set # rule #, or all ACLs. |
| | | active | <yes no> | Active firewall or deactivate firewall |
| | | clear | | Clear firewall log |
| | | cnt | | |
| | | | disp | Display firewall log type and count. |
| | | | clear | Clear firewall log count. |
| | | disp | | Display firewall log |
| | | online | | Set firewall log online. |
| | | pktdump | | Dump the 64 bytes of dropped packet by firewall |
| | | update | | Update firewall |
| | | tcprst | | |
| | | | rst | Set TCP reset sending on/off. |
| | | | rst113 | Set TCP reset sending for port 113 on/off. |
| | | | display | Display TCP reset sending setting. |

| | | | | |
|--|--|--------|----------|---|
| | | dos | | |
| | | | smtp | Set SMTP DoS defender on/off |
| | | | display | Display SMTP DoS defender setting. |
| | | | ignore | Set if firewall ignore DoS in lan/wan/dmz/wlan |
| | | ignore | | |
| | | | dos | Set if firewall ignore DoS in lan/wan/dmz/wlan |
| | | | triangle | Set if firewall ignore triangle route in lan/wan/dmz/wlan |

IPSec Related Command

[Home](#)

| Command | | | | Description |
|---------|-------------------|-------------|----------|--|
| ipsec | | | | |
| | debug | <1 0> | | turn on/off trace for IPSec debug information |
| | ipsec_log_display | | | show IPSec log, same as menu 27.3 |
| | route | lan | <on/off> | After a packet is IPSec processed and will be sent to LAN side, this switch is to control if this packet can be applied IPSec again. |
| | | wan | <on/off> | After a packet is IPSec processed and will be sent to WAN side, this switch is to control if this packet can be applied IPSec again. |
| | show_runtime | sa | | display runtime phase 1 and phase 2 SA information |
| | | spd | | When a dynamic rule accepts a request and a tunnel is established, a runtime SPD is created according to peer local IP address. This command is to show these runtime SPD. |
| | switch | <on/off> | | As long as there exists one active IPSec rule, all packets will run into IPSec process to check SPD. This switch is to control if a packet should do this. If it is turned on, even there exists active IPSec rules, packets will not run IPSec process. |
| | timer | chk_my_ip | <1~3600> | - Adjust timer to check if WAN IP in menu is changed |
| | | | | - Interval is in seconds |
| | | | | - Default is 10 seconds |
| | | | | - 0 is not a valid value |
| | | chk_conn. | <0~255> | - Adjust auto-timer to check if any IPSec connection has no traffic for certain period. If yes, system will disconnect it. |
| | | | | - Interval is in minutes |
| | | | | - Default is 2 minutes |
| | | | | - 0 means never timeout |
| | | update_peer | <0~255> | - Adjust auto-timer to update IPSec rules which use domain name as the secure gateway IP. |
| | | | | - Interval is in minutes |
| | | | | - Default is 15 minutes |
| | | | | - 0 means never update |
| | updatePeerIp | | | Force system to update IPSec rules which use domain name as the secure gateway IP right away. |
| | dial | <rule #> | | Initiate IPSec rule <#> |
| | display | <rule #> | | Display IPSec rule # |
| | keep_alive | <rule #> | <on/off> | Set ipsec keep_alive flag |

| | | | | |
|--|--------|---------------|--|---|
| | load | <rule #> | | Load ipsec rule |
| | save | | | Save ipsec rules |
| | config | netbios | active <on off> | Set netbios active flag |
| | | | group <group index1, group index2...> | Set netbios group |
| | | name | <string> | Set rule name |
| | | active | <Yes No> | Set active or not |
| | | keyAlive | <Yes No> | Set keep alive or not |
| | | lcIdType | <0:IP 1:DNS 2:Email> | Set local ID type |
| | | lcIdContent | <string> | Set local ID content |
| | | myIpAddr | <IP address> | Set my IP address |
| | | peerIdType | <0:IP 1:DNS 2:Email> | Set peer ID type |
| | | peerIdContent | <string> | Set peer ID content |
| | | secureGwAddr | <IP address Domain name> | Set secure gateway address or domain name |
| | | protocol | <1:ICMP 6:TCP 17:UDP> | Set protocol |
| | | lcAddrType | <0:single 1:range 2:subnet> | Set local address type |
| | | lcAddrStart | <IP> | Set local start address |
| | | lcAddrEndMask | <IP> | Set local end address or mask |
| | | lcPortStart | <port> | Set local start port |
| | | lcPortEnd | <port> | Set local end port |
| | | rmAddrType | <0:single 1:range 2:subnet> | Set remote address type |
| | | rmAddrStart | <IP> | Set remote start address |
| | | rmAddrEndMask | <IP> | Set remote end address or mask |
| | | rmPortStart | <port> | Set remote start port |
| | | rmPortEnd | <port> | Set remote end port |
| | | antiReplay | <Yes No> | Set antireplay or not |
| | | keyManage | <0:IKE 1:Manual> | Set key manage |
| | | ike | negotiationMode <0:Main 1:Aggressive> | Set negotiation mode in phase 1 in IKE |
| | | | authMethod <0:PreSharedKey 1:RSASignature> | Set authentication method in phase 1 in IKE |
| | | | preShareKey <string> | Set pre shared key in phase 1 in IKE |
| | | | certFile <FILE> | Set certificate file if using RSA signature as authentication method. |
| | | | p1EncryAlgo <0:DES 1:3DES> | Set encryption algorithm in phase 1 in IKE |
| | | | p1AuthAlgo <0:MD5 1:SHA1> | Set authentication algorithm in phase 1 in IKE |
| | | | p1SaLifeTime <seconds> | Set sa life time in phase 1 in IKE |
| | | | p1KeyGroup <0:DH1 1:DH2> | Set key group in phase 1 in IKE |
| | | | activeProtocol <0:AH 1:ESP> | Set active protocol in phase 2 in IKE |
| | | | p2EncryAlgo <0:Null 1:DES 2:3DES> | Set encryption algorithm in phase 2 in IKE |
| | | | p2AuthAlgo <0:MD5 1:SHA1> | Set authentication algorithm in phase 2 in IKE |
| | | | p2SaLifeTime <seconds> | Set sa life time in phase 2 in IKE |
| | | | encap <0:Tunnel 1:Transport> | set encapsulation in phase 2 in IKE |
| | | | pfs <0:None 1:DH1 2:DH2> | set pfs in phase 2 in IKE |
| | | manual | activeProtocol <0:AH 1:ESP> | Set active protocol in manual |
| | | manual ah | encap <0:Tunnel 1:Transport> | Set encapsulation in ah in manual |

| | | | | |
|--|---------------------|------------|-------------------------------------|---|
| | | | spi <decimal> | Set spi in ah in manual |
| | | | authAlgo <0:MD5 1:SHA1> | Set authentication algorithm in ah in manual |
| | | | authKey <string> | Set authentication key in ah in manual |
| | | manual esp | encap <0:Tunnel 1:Transport> | Set encapsulation in esp in manual |
| | | | spi <decimal> | Set spi in esp in manual |
| | | | encryAlgo <0:Null 1:DES 2:3DES> | Set encryption algorithm in esp in manual |
| | | | encryKey <string> | Set encryption key in esp in manual |
| | | | authAlgo <0:MD5 1:SHA1> | Set authentication algorithm in esp in manual |
| | | | authKey < string> | Set authentication key in esp in manual |
| | swSkipOver lapIp | | <on off> | <ul style="list-style-type: none">- When a VPN rule with remote range overlaps with local range, the switch decides if a local to local packet should apply this rule.- Default value is “off” which means “no skip”. |
| | adjTcpMss | | <off auto user defined value> | <ul style="list-style-type: none">- After a tunnel is established, system will automatically adjust TCP MSS.- After all tunnels are drops, the MSS will adjust to the original value.- The default value is auto. |