



Firmware Release Note

ZyWALL 5

Release 3.64(XD.0)

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ZyXEL ZyWALL 5 Standard Version release 3.64(XD.0) Release Note

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Supported Platforms:

ZyXEL ZyWALL 5

Versions:

ZyNOS Version: V3.64(XD.0) | 03/04/2005
Bootbase Version: V1.08 | 01/28/2005 14:47:16
Vantage Agent Version: 1.0.0

Note:

1. Restore to Factory Defaults Setting Requirement: No.
2. The setting of ignore triangle route is on in default ROM FILE. Triangle route network topology has potential security crisis. If you are not clear about it, please refer to Appendix for the triangle route issue.
3. IKE process in phase 2 will check ID information between system and the peer. If you found that the IPSec connection is failed, please check your settings.
4. When firewall turns from "off" to "on", the firewall initialization procedure will disconnect all connections running through the ZyWALL.
5. SUA/NAT address loopback feature was enabled on ZyWALL by default, however, if users do not need it, a C/I command "ip nat loopback off" could turn it off.
6. In WLAN configuration, a switch for enable / disable WLAN is added. The default value is "**disable**" since WLAN without any security setting is vulnerable. Please configure MAC filter, WEP and 802.1X when you enable WLAN feature.
7. When UPnP is on, and then reboot the router, Windows XP will not detect UPnP and refresh "My Network Places→Local Network". Plug in network wire again can solve this problem.
8. The default port roles for LAN/DMZ setting is: port 1 to port 4 are all LAN ports.
9. In bridge mode, If LAN side DHCP clients want to get DHCP address from WAN side DHCP server, you may need to turn on the firewall rule for BOOT_CLIENT service type in WAN→LAN direction.
10. You must notice those metric values of WAN, Traffic-Redirect and Dial-backup. You

should better give those values, Dial-backup > Traffic-Redirect > WAN. For example, WAN (1), Traffic-Redirect(14), Dial-backup(15).

11. Under Bridge Mode, all LAN ports will behave as a hub, and all DMZ ports will also behave as another hub.
12. For users using the default ROMFILE in former release, please remove “ip nat session 1300” from autoexec.net by CI command “sys edit autoexec.net”.
13. The first entry for static route is reserved for creating WAN default routes and is READ-ONLY.
14. In previous 3.64 firmware, the VID value of DPD is not correct. VID change will cause current version doesn't work with the wrong value. Please be sure to connect with devices which has updated VID, or the DPD may not work correctly.

Known Issues:

1. Sometimes on screen the “Local Area Connection” icon for UPnP disappears. The icon shows again when restarting PC.
2. When you use MSN messenger, sometimes you fail to open special applications, such as whiteboard, file transfer and video etc. You have to wait more than 3 minutes and retry these applications.
3. On the SUA/ Address Mapping Edit page, the user can give the same local IP and global IP.
4. If the metric of dial-backup is smaller (has higher priority) than the metric of Traffic-Redirect, Traffic-Redirect can't be triggered any more.
5. Sometimes, modify an active IPsec rule (the VPN tunnel was created) will crash the system, if this tunnel is going the re-key process.
6. Bandwidth Management doesn't work on wireless LAN.
7. Symptom: LAN host can ping Internet while LAN host change cable from LAN port to DMZ port.
Condition:
 - (1) Host connect to LAN port and get DHCP address from router.
 - (2) Unplug LAN host cable and plug it into DMZ port.
 - (3) The host can still ping Internet using LAN DHCP address
 - (4) The scenario will continue about 30secs.
8. The DMZ TxPkts counter increment at about 1 pkt/min even without any Ethernet cables ever connected.
9. At SMT24.1, the collisions for WAN, LAN and DMZ port are not really counted.
10. When device boots in Bridge Mode, some CI command error messages will be displayed on console. This is because some predefined CI commands in autoexec.net is forbidden to execute in Bridge Mode.
11. Bandwidth Management works abnormally when using Fairness/Priority scheduler and “borrow” is enabled on all classes.
12. Under PPTP encapsulation mode, we can not access some website like <http://www.kimo.com.tw/>
13. In eWC->Statistics, Tx data for Dial Backup is not correct.
14. Some limitations on Firewall CLI configuration:

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- (1) User can not delete specific address or custom port entry from a rule.
- (2) CLI doesn't support Modify and Move for rules implemented in eWC.
- (3) eWC can not display firewall rule field correctly if rule is added by CI command and its type is port/address range.
- 15. Can't block ActiveX in some case. (Sometime the ActiveX block fail. This is because the ActiveX is cached in C:\WINNT\Downloaded Program Files\ If you want to test the ActiveX block functionality. Please clear the cache in windows.)
- 16. Don't use CI command "bridge rstp bridge enable" to enable RSTP, it will change the initial Path Cost value to an incorrect value.
- 17. G-100 WLAN card, does not support the fragment size below 800.
- 18. Bandwidth management H.323 service does not support Netmeeting H.323 application.
- 19. P2002 P-to-P cannot pass through router.
- 20. If you were using MSN Messenger Voice Communication through ZyWALL UPnP and found voice is blocked by firewall, we suggest you download MSN Messenger 7.0 and try again. This is because we found MSN Messenger 6.2 sometimes fails to detect UPnP status when it's starting voice invitation.
- 21. The domain name update timer for VPN sometimes can't work correctly. (GUI/VPN/Global Setting)
- 22. Using BWM in PPPoE/PPTP mode, there are two filters for FTP and H323 ALG
 - (1) If we execute FTP first then H323 cannot pass through ZyWALL.
 - (2) If we execute H323 before FTP, all functions work properly.
- 23. In BWM, subclass cannot borrow the remaining free bandwidth from parent class in Priority-Based mode.
- 24. In some cases, BWM (Fairness-Based mode) cannot manage bandwidth accurately. Ex. In WAN interface, there are two subclasses for FTP service, their speed are 100Kbps and 500Kbps, the traffic match the filter which speed is 500Kbps may only use half of it's bandwidth.

Features:

Modifications in V3.64(XD.0) | 03/04/2005

Modify for formal release.

Modifications in V3.64(XD.0)b4 | 02/23/2005

- 1. [BUG FIX]
Symptom: In PPPoE/PPTP mode, BWM can not classify the traffic of FTP, H323, SIP.
- 2. [BUG FIX]
Symptom: Bandwidth Management, Priority based, FTP transfer speed slow down until to disconnect .
Condition:
 - (1) Edit web eWC/BW MGMT , WAN/Active=enable, WAN1/Speed (kbps)=1000, Scheduler=Priority-Based

- (2) Edit web eWC/BW MGMT/Class Setup, Interface=WAN1, Add Sub-Class, Class Name=FTP, Bandwidth Budget=200, Priority=3, Borrow bandwidth from parent class=enable , Enable Bandwidth Filter=enable, Service=FTP, Destination IP Address =192.168.10.0, Destination Subnet Mask=255.255.255.0
 - (3) FTP upload file from LAN to WAN
3. [BUG FIX]
Symptom: Custom traffic will send over 100 kbps in bridge mode.
Condition:
 - (1) In bridge mode, set WAN as 1000 kbps with fairness mode.
 - (2) Create a custom class, budget=50, priority=2, no borrow.
 - (3) Create a ftp class, budget=200, priority=3, no borrow.
 - (4) Use tftgen to generate UDP traffic to match custom class.
 - (5) Use ftp to generate TCP traffic to match ftp class.
 - (6) In GUI statistics page, custom class will be over 100 kbps.
4. [BUG FIX]
Symptom: VPN XAuth rule swap fail
Condition:
DUT1:
 - (1) Edit web eWC/VPN, add gateway policy, Name=IKE1, Remote Gateway Address=192.168.11.101, Pre-Shared Key=12345678, Enable Extended Authentication=enable, Client Mode/User Name=dut1, Client Mode/Password=dut1
 - (2) Edit web eWC/VPN, add network policy for IKE1, Active=enable, Name=IPSec1, Local Network/Starting IP Address=192.168.1.33, Remote Network/Starting IP Address=192.168.2.33
DUT2:
 - (1) Edit web eWC/AUTH SERVER/Local User Database, index1/Active=enable
 - (2) Edit web eWC/VPN, add gateway policy, Name=IKE1, Remote Gateway Address=192.168.12.100, Pre-Shared Key=12345678
 - (3) Edit web eWC/VPN, add gateway policy, Name=IKE2, Remote Gateway Address=0.0.0.0, Pre-Shared Key=12345678, Enable Extended Authentication=enable, Client Mode/User Name=dut1, Client Mode/Password=dut1
 - (4) Edit web eWC/VPN , add gateway policy, Name=IKE3, Remote Gateway Address=0.0.0.0, Pre-Shared Key=12345678, Enable Extended Authentication=enable, Server Mode=enable
 - (5) Edit web eWC/VPN, add network policy for IKE1, Active=enable, Name=IPSec1, Local Network/Starting IP Address=192.168.2.43, Remote Network/Starting IP Address=192.168.1.33
 - (6) Edit web eWC/VPN , add network policy for IKE2, Active=enable, Name=IPSec2, Local Network/Starting IP Address=192.168.2.53
 - (7) Edit web eWC/VPN , add network policy for IKE3, Active=enable, Name=IPSec3, Local Network/Starting IP Address=192.168.2.33
5. [BUG FIX]
Symptom: In eWC->Wireless, When select WPA or WPA PSK, the Authentication

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Databases field always says: Local User first then RADIUS.

Condition: Go to eWC>WLAN>Wireless, when select WPA or WPA PSK, the Authentication Databases field always says: "Local User first then RADIUS".

But it shouldn't.

- (1) When selecting "WPA", we should show "Authentication Database = RADIUS" instead of "Authentication Databases Local User first then RADIUS"
- (2) When selecting "WPA+PSK", "Authentication Databases" should be hidden.

Modifications in V3.64(XD.0)b3 | 02/03/2005

1. [BUG FIX]

Symptom: OpenPhone H.323 traffic will be blocked by Firewall if connection is initiated from WAN side to LAN side.

Condition:

PC1(OpenPhone)------(LAN) ZyWALL (WAN) ----- PC2(OpenPhone)
192.168.1.33

- (1) Enable Firewall, setup a WAN2LAN firewall rule for H.323 service
- (2) Enable NAT port forwarding for port 1720(H.323) to PC 192.168.1.33
- (3) Enable H.323 ALG by "ip alg enable ALG_H323"
- (4) PC1 and PC2 use OpenPhone, PC2 call PC1.
- (5) OpenPhone application traffic will be blocked by Firewall, you will see a lot of Firewall blocked log in Centralized LOG.

2. [BUG FIX]

Symptom: DPD vendor ID is not correct.

Condition: VID value of DPD is not compatible with RFC3706.

3. [FEATURE CHANGE]

WAS: The second datagram will use the last 8 octets of the first datagram as IV. This may cause IV "predictable".

IS: All datagrams will use random IV to make IV unpredictable.

Modifications in V3.64(XD.0)b2 | 01/31/2005

1. [BUG FIX]

Symptom: The name of Domain name does not check properly in SMT 1.

Condition:

- (1) In SMT 1->Edit Dynamic DNS->Edit Host, fill the record 1's "domain name" with "xxx.dyndns.org". and record 2's "domain name" with "xxx.dyndns.org ". (the domain name of record 2 contains a space at the end)
- (2) The domain should not contain space, we should have a filter to check this.
- (3) Set record 1's "Update policy" with "Use WAN IP Addrsss" and record 2's "Update policy" with "Let DDNS Server Auto Detect".
- (4) After the DDNS process updating, the domain name "xxx.dyndns.org" will be resolved by the policy "Let DDNS Server Auto Detect" not "Use WAN IP Addrsss". (the first DDNS query result was overwritten by the second executed, "xxx.dyndns.org" is the first, "xxx.dyndns.org " is the second)

2. [ENHANCEMENT] On eWC>BW MGMT>Class Setup, add a popup warning message "Delete Class : class name ?" before user delete a Class.
3. [ENHANCEMENT] Add a active checkbox for ipsec rule on VPN wizard.
4. [BUG FIX]
Symptom: The wording of Dial Backup in SMT is not consistent with GUI.
Condition:
(1) In "eWC->WAN->Dial Backup", one of the wordings in "Budget" is "Always On".
(2) In SMT, the wording is "Nailed-Up Connection".
5. [BUG FIX]
Symptom: While performing "Chariot 128 application 48 hours stress testing", ZyWALL crashed several .
Condition: Chariot Server<-----DUT----->Chariot end point
(1) DUT reset default romfile, and only configured WAN and LAN IP address.
(2) Traffic direction: Server to end point.
(3) Execute Chariot (automation.exe) after load stress file (stress-all.txt)
(4) After a while, DUT crashed
6. [BUG FIX]
Symptom: The traffic redirect should have higher priority than dial backup.
Condition:
(1) In eWC>WAN>Route, set Traffic Redirect priority smaller than Dial Backup, then click Apply.
(2) It can be saved.
7. [BUG FIX]
Symptom: Enter special url will cause device crash.
Condition: Form LAN site, enter
`http://192.168.1.1/Forms/rpAuth_1?ZyXEL%20ZyWALL%20Series<script>top.location.pathname=%20""</script>` on browser, the device will crash.
8. [BUG FIX]
Symptom: The CI command "ip nat service irc" may display strange Enable state.
Condition:
(1) Execute "ip nat service irc he_is_good".
(2) Execute "ip nat service irc 0".
(3) Execute "ip nat service irc he_is_bad".
After Step 3, you will see that a strange Enable state, e.g., "IRC enable = 12".
9. [BUG FIX]
Symptom: The eWC>Firewall>Rule Summary>EDIT RULE page might be corrupted.
Condition:
(1) Go to eWC>Firewall>Rule Summary.
(2) Add or Edit a firewall rule.
(3) Try to delete a Source Address (or Destination Address) without first selecting an address.
(4) Or try to delete a Service without first selecting a service.
(5) With 3 or 4, you will see an error message on the status bar.

- (6) Click on any button of this page, and then you will see that the values of some fields on this page are lost. Also you won't be able to escape this page by clicking on the Cancel button.
10. [ENHANCEMENT] Add SIP protocol in service list in firewall rule edit page.
11. [BUG FIX]
Symptom: In SMT 15.1 address mapping rule error message not correct.
Condition:
(1) In SMT 15.1, configure NAT address mapping many to many overloads(or many one to one).
(2) Configure local address from 0.0.0.0 to 255.255.255.255.
(3) Configure global address from 0.0.0.0 to 255.255.255.255.
(4) Save the configuration =>error message show "The end IP address must be great than the start IP address " not correct.
- 12 [BUG FIX]
Symptom: Configure WAN page, and WAN priority will become 1.
Condition:
(1) In "eWC->WAN->General", set WAN1 priority to 5.
(2) In "eWC->WAN->WAN", set encapsulation type to PPTP or PPPoE.
(3) Go to "eWC->WAN->General", WAN's priority will become 1.
- 13 [ENHANCEMENT] Give a warning message when user configure FTP/SIP/H.323 filter on BWM but FTP/SIP/H.323 alg is not enabled.
GUI : Save the filter and show the warning message. Warning: This is a SIP(FTP, H.323) filter, you have to enable SIP(FTP, H.323) ALG by CI command "ip alg enable".
CI command : After running "bm config save", the router will save the configuration and check all filters in all interface. Then show a list of filters which are conflicted.
- 14 [ENHANCEMENT] NAT address mapping need prevent user configure local IP range and global IP range overlap.
- 15 [BUG FIX]
Symptom: SIP WiFi-Phone's voice communication failed.
Condition:
(1) Use following topology to test.
WiFi A--(L)ZW35(W)---Internet(SIP server)---(W)ZW5(L)---WiFi B
(2) Both zywall reset to default romfile.
(3) In SMT 24.8 CI command, both type "ip alg enable ALG_SIP" to enable SIP ALG.
(4) WiFi A make a phone call to WiFi B, voice communication works fine.
(5) Terminate the phone call,then WiFi B make a phone call to WiFi A, voice communication fail.
(6) Fail status: WiFi A can hear voice, but WiFi B can't.
- 16 [BUG FIX]
Symptom: The device crashes while the user is changing the SNMP access right configuration.
Condition:
(1) Restore default romfile.
(2) Set the SNMP Access = Disable.

- (3) Use MS-SOFT to query the device.
- (4) Before the query timeout, change Access = ALL, the device will crash.
- 17 [BUG FIX]
Symptom: In authentication server, the local user database should check if the input user name is duplicate.
Condition:
 - (1) Restore to default romfile.
 - (2) In record 1, active = yes, name = test, password = 1234 In record 2, active = yes, name = test, password = 5678
 - (3) Press Save and this configuration will be accept by router.
- 18 [BUG FIX]
Symptom: BWM linear search can not find first match filter.
Condition:
PC1 ----- (LAN) Router (WAN) ----- PC2
 - (1) In router, enable BWM on WAN, setup two classes for WAN Root class:
 - 1000kbps
 - |-----Class 1: 200kbps
 - |-----Class 2: 200kbps
 - Filters table:
 - Class 1: FTP SrcIP = 192.168.1.0/24
 - Class 2: FTP DstIP = 192.168.70.0/24
 - (2) FTP upload file from PC1 to PC2.
 - (3) In this case, BWM will match Class 2's filter. But it's wrong, in linear search algorithm, we should return the first match filter for traffic.
- 19. [BUG FIX]
Symptom: When manual mode encapsulation is Tunnel, responder can't build up tunnel.
Condition:
 - (1) PC A – ZW70 ---- ZW5 – PC B
 - (2) On eWC/VPN/Manual add two manual rules in ZW70 and ZW5. Rule 1 is inactive. Rule 2 is active and encapsulation is Tunnel.
 - (3) PC A ping PC B, check SA Monitor, ZW70 tunnel had been built up but no tunnel is up in ZW5, vice versa.
 - (4) If PC B ping PC A this time, tunnel can be built up in both sides and traffic can be transferred.
- 20. [BUG FIX]
Symptom: LAN static DHCP can save the same data.
Condition:
 - (1) Restore default rom file.
 - (2) In GUI>LAN>Static DHCP, add two record as MAC: 01:01:01:01:01:01, IP: 192.168.1.33 MAC: 02:02:02:02:02:02, IP: 192.168.1.66 and apply it.
 - (3) Change these two record as MAC: 03:03:03:03:03:03, IP: 192.168.1.99 and apply it.
 - (4) It can be saved and it is wrong.
- 21. [BUG FIX]
Symptom: Nail up warning message does not show correctly in eWC->WAN->WAN.

Condition:

- (1) Edit a VPN rule and enable nail up
- (2) In eWC->WAN->WAN, set encapsulation with PPPoE and no nailed-up enabled, click "apply" to save, the status will show "Warning: VPN Nailed-Up may trigger dial WAN links."
- (3) Click "apply" again, the status will show "Nothing changed; no need to perform save"

22. [BUG FIX]

Symptom: VPN tunnel cannot be disconnected.

Condition:

- (1) PC1—ZW5-----HUB-----ZW10W(V362WH7)--PC2
- (2) ZW5 has one IKE and two IPSec rules
- (3) ZW10W has two VPN rules
- (4) ZW10W initiates these two VPN rules
- (5) ZW10W delete these two VPN tunnels but one of ZW5 VPN tunnels can not be disconnected

23. [BUG FIX]

Symptom: When out of call schedule, the device still cannot send traffic out.

Condition:

- (1) Set WAN 1 encapsulation is Ethernet.
- (2) Edit SMT menu 24.10, Time Protocol = Manual, New Time (hh:mm:ss) = 10:00:00, New Date (yyyy-mm-dd) = 2004-06-01.
- (3) Edit SMT menu 26, enter Schedule Set Number to Configure = 1, Edit Name = FD-Once.
 - How often = Once
 - Once Date = 2004-06-01
 - Start Time = 10:05
 - Duration = 00:02
 - Action = Force Down
- (4) Edit SMT menu 11.1, schedule = 1.
- (5) However, when out of schedule about 5 minutes, device still cannot send traffic out.

24. [ENHANCEMENT] Add "Session Table is Full!" log message, when tos session is full.

25. [BUG FIX]

Symptom: Wireless CI command "wlan active 100" can be save.(The value should be 1 or 0)

Condition:

- (1) Plug in B120 and reboot router.
- (2) Use "wlan active 100" and it can be save.
- (3) Go to smt3-5, router will crash.

26. [BUG FIX]

Symptom: The centralized log shows the strange DHCP entry with hex IP address.

Condition:

- (1) The device enables LAN DHCP server.
- (2) A PC is set on device LAN site with dynamic IP and no system hostname.

- (3) The PC sends DHCP request to device.
- (4) The device will show the strange log message have the hex IP address. (ex: 101 01/15/ 2005 10:15:50 DHCP server assigns 0xa0a01e6 to 00:0E:08:AA:B6:B3)
- 27. [ENHANCEMENT] When router reset, console will display the reset date and time. For example, \sys_cmd.c:869 sysreset() ZyWALL 5 system reset at 01/18/2005 15:07:48
- 28. [BUG FIX]
Symptom: VPN page cannot be configured.
Condition:
 - (1) Go to eWC>VPN>GATEWAY POLICY>EDIT to add a GATEWAY POLICY rule.
 - (2) Go to eWC>VPN>NETWORK POLICY>EDIT to add 10 NETWORK POLICY rules and bind them with the GATEWAY POLICY rule which was added in Step1.
 - (3) Delete the GATEWAY POLICY rule which was added in Step1 and 10 NETWORK POLICY rules will be put into the Recycle Bin
 - (4) VPN page can't be configured anymore.
- 29. [BUG FIX]
Symptom: Enhance the VPN error description
Condition:
 - (1) On eWC VPN, add a IKE rule Dynamic rule (Remote Gateway Address is 0.0.0.0)
 - (2) Add an Ipsec rule, and fill some value instead of 0.0.0.0 in "Remote Network" fields.
 - (3) Status will show "This policy cannot bound to the dynamic rule"
 - (4) User may not know where is wrong.
- 30. [FEATURE CHANGE] Enhance Gateway Domain Name Update Timer. If Gateway Domain Name Update Timer is enabled. The ZyWALL will resolve the IP from a VPN gateway policy whose IKE remote gateway is domain name type in every cycle. If the ZyWALL finds that the new remote gateway IP is different from the old one(which is used by tunnel now), the ZyWALL will delete this tunnel.
- 31. [BUG FIX]
Symptom: Save a legal VPN gateway policy but the ZyWALL shows an error message.
Condition:
 - (1) GO to eWC>VPN>GATEWAY POLICY – EDIT
 - (2) Save a GATEWAY POLICY whose name = GW, My Address = www.abc.com.tw, Remote Gateway Address = www.cde.com.tw and Pre-Shared Key = 12345678
 - (3) GO to eWC>VPN>NETWORK POLICY - EDIT
 - (4) Save a NETWORK POLICY whose name = NW, Active = Yes, Starting IP Address = 192.168.1.33, Starting IP Address = 192.168.2.33 and Pre-Shared Key = 12345678
 - (5) Go back to eWC>VPN>Rules and edit rule "GW" and set its My Address as 0.0.0.0, then save
 - (6) The ZyWALL shows an error message "This IKE rule has static policy rules.", but it should not.

32. [BUG FIX]
Symptom: There are no logs in eWC>Logs>Log Settings when SMTP authentication fail .
Condition:
(1) Go to eWC>Logs>Log Settings. Configure a wrong Mail Server/Send Log to/Send Alerts to/ User Name of SMTP Authentication/Password of SMTP Authentication and save.
(2) Go to eWC>Logs>View Log. There are no logs about SMTP Auth failures/SMTP failures.
(3) If the configuration is correct. There is also no log to tell users that the result is successful.
33. [ENHANCEMENT] Add port information in centralized log message when a netbios packet was blocked.
34. [ENHANCEMENT] After the device rebooting, the system will synchronize Time server until any WAN is up or all WAN links are failed exceed 5 minutes. If NTP server is on LAN/DMZ subnet, DUT still won't sync when WAN interface is down.
35. [BUG FIX]
Symptom: VPN tunnel can be established but traffic cannot go through tunnel.
Condition: PC1 -- ZyWALL -- Any Router/Internet -- ZyWALL -- PC2
(1) Configure corresponding VPN setting in both ZyWALLs.
(2) Dial VPN tunnel
(3) After tunnel established, PC1 cannot ping PC2 vice versa.
36. [BUG FIX]
Symptom: The router cannot flush correctly in eWC->LOGS->Reports.
Condition:
(1) In Bridge Mode.
(2) In eWC->LOGS->Reports, enable "Collect Statistics", interface = LAN, Report type= "Host IP Address".
(3) When pressing "Flush" button, there is still one record existing "192.168.70.123 Outgoing 3913 bytes". "192.168.70.123" is router's IP address.
(4) It has the same problem when changing interface from "LAN" to "DMZ" if we do the same action.
37. [BUG FIX]
Symptom: In bridge mode, SIP traffic cannot be managed by BWM.
Condition: SIP Phone1 ----- (LAN)ZyWALL(WAN) ----- SIP Phone2
(1) Change router to Bridge Mode.
(2) Enable BWM, and add a SIP filter at WAN interface.
(3) SIP Phone1 call SIP Phone2.
(4) After connection is established, go to eWC->BW MGMT->Monitor, you will see SIP traffic falls into Default class, it's wrong.
38. [BUG FIX]
Symptom: Packet still can send out through NAT router when there is no unused port for it.
Condition:
(1) Configure an active port forwarding rule with incoming port range 10000 to 29999.

- (2) Send a packet out of NAT router.
(3) The packet can still send out.
39. [BUG FIX]
Symptom: BWM highest priority class cannot borrow residual bandwidth from parent class (using tfgen tool)
Condition:
(1) In WAN interface. Enable Priority-based Scheduler.
(2) Class Setup on WAN.
 Root 100000 Kbps
 |----WAN 2000 Kbps (No Borrow, No Filter, Priority = 3)
 |----WAN1-1 500 Kbps (Borrow; Filter: SrcIP:0, DestIP:0, SrcPort:0, DestPort:90; Protocol: 17; Priority = 3)
 |----WAN1-2 300 Kbps (Borrow, Filter: SrcIP:0, DestIP: 192.168.70.0/24, SrcPort:0, DestPort:0, Protocol: 17; Priority= 6)
(3) From LAN host, use tfgen (UDP packet generator) to generate two session to match class WAN1-1 and WAN1-2.
 session 1: Utilization = 2000Kbps, Destination = WAN host (192.168.70.57), port=90. This will match WAN1-1 class.
 session 2: Utilization = 2000Kbps, Destination = WAN host(192.168.70.57), port = default. This will match WAN1-2 class
(4) From Monitor, WAN1-1 should be protected at 500Kbps, and WAN1-2 should borrow remaining bandwidth from parent class.
But you will see WAN1-1 still borrow remaining bandwidth and WAN1-2 almost borrows nothing from parent class.
40. [BUG FIX]
Symptom: There is no response from DMZ after set system name by SNMP.
Condition:
(1) Reset to factory default setting.
(2) Disable firewall.
(3) Ping router's DMZ IP address continuity.
(4) Set DUT's system name by SNMP tool "MG-SOFT MIB browser".
(5) There is no response from DMZ anymore.
41. [BUG FIX]
Symptom: BM filter cannot be deleted via CI command.
Condition:
(1) On eWC->BW MGMT->Class Setup, create 3 classes on LAN interface. all classes have filter enabled.
(2) Go to SMT 24.8, delete the third filter by "bm filter lan del 3" and then save data by "bm config save"
(3) By typing, "bm show filter", you will see the third filter still exists.
42. [BUG FIX]
Symptom: Device will crash.
Condition: Use IXIA to simulate 1012 ip address to access web site (every ip has 10 sessions), device will crash.
43. [BUG FIX]
Symptom: Memory leak in DNS query.

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Condition:

- (1) Set the device as the network gateway.
- (2) Some PCs assign the DNS server to the device.
- (3) After some days, the DNS query will cause memory leak.

44. [BUG FIX]

Symptom: Executing CI command "ip nat service irc" will make the router crash.

Condition:

- (1) In SMT 24.8, type "ip nat service irc" then press enter.
- (2) The router crash.

45. [BUG FIX]

Symptom: NAT address mapping functionality fail.

Condition:

- (1) Restore to factory default.
- (2) In SMT4, set "Network Address Translation" as "Full Feature".
- (3) In SMT 15.1.1, insert a rule in rule 1. Take an example with my setting: Type: One to One. Local IP: 192.168.1.33 Global IP: 192.168.70.111 (FTP server in 192.168.70.8)
- (4) In PC/192.168.1.33, ftp to server/192.168.70.8.
In FTP server, you can find the incoming IP is 192.168.70.111. (This is right)
Then logout the ftp.
- (5) Repeat step 3 but change the Global IP: 192.168.70.123
- (6) Repeat step 4, you can find the incoming still 192.168.70.111. This is wrong, it should be 192.168.70.123.

46. [FEATURE CHANGE] Extend "devID" field to six hexadecimal numbers(12 characters) in syslog format.

47. [BUG FIX]

Symptom: Netmeeting H.323 traffic will be blocked by Firewall if connection is initiated from WAN side to LAN side.

Condition:

PC1(Netmeeting)------(LAN) ZyWALL (WAN) ----- PC2(Netmeeting)

- (1) Enable Firewall, setup a WAN2LAN firewall rule for H.323 service
- (2) Enable NAT port forwarding for port 1720(H.323) to PC 192.168.1.33
- (3) PC1 and PC2 use Netmeeting, PC2 call PC1.
- (4) Netmeeting application traffic will be blocked by Firewall, you will see a lot of Firewall blocked log in Centralized LOG.

48. [BUG FIX]

Symptom: After VPN tunnel is established, user will see DPD packet while traffic still can be transferred through tunnel.

Condition:

PC1----- ZyWALL-A ===== ZyWALL-B ----- PC2 IPSec tunnel

- (1) Configure VPN tunnel between ZyWALL-A and ZyWALL-B.
- (2) In ZyWALL-A eWC->VPN->Global Setting, set Output Idle Timer = 120.
- (3) Reboot ZyWALL-A.
- (4) PC1 ping PC2 to trigger tunnel.
- (5) after tunnel is established, users will see ZyWALL-A's LOG show DPD packets.

49. [ENHANCEMENT] BWM children's bandwidth's sum will not exceed parent's.

For example, the bandwidth of WAN interface is 50000 kbps. The sum of all children's bandwidth can not exceed 50000 kbps

Modifications in V3.64(XD.0)b1 | 12/17/2004

1. [ENHANCEMENT] Redesign IPSec mechanism to comply with ICSA Labs 1.1D IPSec Certification Testing.
New feature added :
 - (1) Multiple Proposal.
 - (2) Support Nail Up, Dead Peer Detection, Control Ping.
 - (3) Separate IPSec SA (Phase 2) from IKE SA (Phase 1), multiple IPSec SAs can bind to one the same IKE SA. (Multiple policy)
 - (4) Add a "Global Setting" tab in eWC->VPN which contains some timer settings.
 - (5) IKE and manual key rules have their setting pages respectively in eWC->VPN.
 - (6) Remove the VPN setup page (SMT 27)
 - (7) Redesign lots of IPSec CI command.
2. [ENHANCEMENT] Support Port Restricted Cone NAT.
3. [ENHANCEMENT] Redesign eWC->BW MGMT->Class Setup page.
4. [ENHANCEMENT] Enable "ip alg" command in bridge mode.
5. [ENHANCEMENT] Add the eWC>CONTENT FILTER>Cache and eWC>DNS>Cache GUI.
 - (1) Add total cache entry number info.
 - (2) Remove the "Port" info in URL Cache Entry table.
 - (3) The "Action" in URL Cache Entry table shows "Blocked" first by default.
 - (4) The URL entry in URL Cache Entry table aligns to the left.
 - (5) On the URL Cache Entry table, if the length of a URL entry is over 50, it will be truncated to 50 characters, with three trailing dots (...) appended.
 - (6) To adjust the note font size in eWC>DNS>Cache GUI.
6. [ENHANCEMENT] Popup message improvement: "Delete this rule?" => "Delete entry #[number] ?"
7. [ENHANCEMENT] DNS adds CI command "ip dns system cache flush".
8. [ENHANCEMENT] eWC>LOGS>Reports>Report Type>"LAN IP Address" renamed as "Host IP Address"
9. [ENHANCEMENT] In eWC>DNS>System>Address Record, add Wildcard.
10. [ENHANCEMENT] Add length checking of DNS(Peer ID Type) content in VPN.
11. [ENHANCEMENT] Integration of TOS & NAT information
 - (1) Current concurrent sessions = max(TOS current concurrent sessions, NAT current concurrent sessions)
 - (2) Historical high since last startup = max(TOS historical high since last startup, NAT historical high since last startup)
12. [ENHANCEMENT] Add FQDN support in my IP address in IKE.
13. [ENHANCEMENT] IPSec GUI enhancements
 - (1) On eWC>VPN>Global Settings, add IPSec timers configuration.
 - (2) On eWC>VPN>Network Policy Edit page, add Netbios passthrough field.
 - (3) On eWC>VPN>Gateway Policy Edit page, add FQDN field for My ZyWALL.

14. [ENHANCEMENT] Enhance ZyWALL GUI.
 - (1) To allow more than two child windows open from multiple ZyWALLs, the second parameter (windowName) of the JavaScript function Window.open() will be the MAC address of the ZyWALL that is currently being managed. The child windows include the following.
 - 1) Wizards
 - 2) Help
 - 3) Show Statistics
 - 4) Show DHCP Table
 - 5) VPN Status
 - 6) BWM statistics
 - (2) For identification purpose, the title of the eWC parent window, as well as its child windows, will contain the system FQDN of the ZyWALL that is currently being managed.
15. [ENHANCEMENT]
 - (1) In eWC>Home>System Time, add GMT timezone + DST offset.
 - (2) In eWC>Date&Time>Current Time, GMT add timezone + DST offset.
16. [ENHANCEMENT] Add GUI for LAN DHCP Relay feature.
17. [ENHANCEMENT] Auth Server/Local User Database needs long time to save all entries, enhance the saving policy to speed up this action.
18. [ENHANCEMENT] In SMT 24.6, the menu adds the reminding message "You can enter ctrl-x to terminate operation any time."
19. [ENHANCEMENT] Add a API function to move rules for NAT address mapping table. CI command: ip nat acl move <set#> <rule# from> <rule# to>
20. [ENHANCEMENT] For Manual IPsec rule, the "My ZyWALL" and "Remote Gateway Address" should not have FQDN fields. (Remove My Domain Name and change Secure Gateway Address into IP field)
21. [ENHANCEMENT]
 - (1) In eWC>MAINTENANCE>General, change the type of the "Administrator Inactivity Timer" field from ASCII to integer.
 - (2) Add a JavaScript Global function to avoid filling any character in the specific fields on both IE and Netscape. (allow number only)
22. [ENHANCEMENT] Add a "Log" check box for "VPN connectivity check". in eWC>VPN>NETWORK POLICY>EDIT.
23. [FEATURE CHANGE] Modify CI command "ip arp add" from hidden to visible.
24. [ENHANCEMENT] For single WAN, the WAN cannot receive an IP from DHCP server with the same subnet with other interfaces.
25. [ENHANCEMENT] The new DST feature allows user to know the start/end date. It will be nice if the ZyWALL shows what date '1st Sun in April' is ----. And there is some spare space on the screen on that line.
26. [ENHANCEMENT] User can use telnet/ping/ via VPN in SMT menu 24.8.
 - (1) If you telnet/ping/... from your ZyWALL to an IP on the VPN "remote network" and the ZyWALL's LAN IP (including alias IP) is on the VPN "local network", the ZyWALL uses LAN IP as source.
 - (2) If you telnet/ping/... from your ZyWALL to an IP on the VPN "remote network" and the ZyWALL's DMZ IP (including alias IP) is on the VPN "local network", the

ZyWALL uses DMZ IP as source.

(3) (For future wireless enhancement) If you telnet/ping/... from your ZyWALL to an IP on the VPN "remote network" and the ZyWALL's WLAN IP (including alias IP) is on the VPN "local network", the ZyWALL uses WLAN IP as source.

(4) Otherwise the ZyWALL uses any appropriate interface IP as source depending on the routing table.

Note: If there are more than one appropriate local interfaces, router will use the first matched local interface IP address as the source IP address.

27. [ENHANCEMENT] In GUI>NAT>Port Forwarding, router will now check if the translated end port is out of 65535.
28. [ENHANCEMENT] On eWC>HOME>VPN wizard, My ZyWALL address support Domain name.
29. [ENHANCEMENT]
 - (1) In eWC>MAINTENANCE>F/W Upload, the warning message title should be red in order to be consistent with the style of other warning message.
 - (2) In eWC>MAINTENANCE>Restore Configuration, the warning message title should be red in order to be consistent with the style of other warning message.
30. [ENHANCEMENT] On eWC>NAT>AddressMapping, add dynamic display for "Go To Page". If there are less than 10 address mapping rules, then hide "Go To Page", else display "Go To Page".
31. [ENHANCEMENT] When we receive a non-encrypt initial content payload in IKE, we will ignore it.
32. [ENHANCEMENT] Add payload information in IKE LOG. Besides reason, we also show which payload caused the IKE LOG.
33. [ENHANCEMENT] HOME>Internet Access, the "First DNS Server", "Second DNS Server" is inconsistent with DNS>Name Server Record.
The specified "First DNS Server", "Second DNS Server" will be updated in eWC>DNS>Name Server Record.
34. [ENHANCEMENT] In GUI>WAN, add "Authentication Type" field.
35. [ENHANCEMENT] For DHCP server, if the requested client does not have a host name, the log will show MAC address instead of nothing.
36. [ENHANCEMENT]
 - (1) In eWC>CONTENT FILTER>Cache, if users click Action/URL/Remaining Time to sort the cache entries, the page will not jump to the top of this page before it refreshes.
 - (2) By using Firefox/Netscape in eWC>CONTENT FILTER>Cache, if users click Action/URL/Remaining Time to sort the cache entries, the page will refresh immediately.
37. [ENHANCEMENT] In the past, we can delete a tunnel in SMT 27 and can only do this in eWC. Now, Add a CI command "ipsec drop <policy index>" to delete a tunnel and "ipsec show_runtime list" to list the active VPN tunnel.
38. [ENHANCEMENT] Consolidate "Receive IPSec packet, but no corresponding tunnel exists" logs.

Modifications in V3.62(XD.2) | 09/24/2004

Modify for formal release.

Modifications in V3.62(XD.2)b3 | 09/21/2004

1. [BUG FIX]
Symptom: LAN host will get wrong DNS server.
Condition:
 1. Set SMT 3.2 DNS first DNS server as user defined 1.1.1.1. Others are none.
 2. Unplug WAN port and reboot.
 3. LAN host get IP address and DNS server and the DNS server is LAN IP.

Modifications in V3.62(XD.2)b2 | 09/17/2004

1. [BUG FIX]
Symptom: LAN host ping device LAN IP a period time, then PPPoE/PPTP will be triggered dial.
Condition:
 1. Set WAN 1 are PPPoE.
 2. LAN host ping device LAN IP a period time, then WAN 1 will be triggered dial.
2. [BUG FIX]
Symptom: Firewall sends TCP RST after it blocks traffic period of time.
Condition:
 1. Configure Firewall LAN to WAN blocked and enable log
 2. Generate one TCP SYN packet from LAN to WAN
 3. Firewall will block this packet and generate block log
 4. After period of time (30 seconds), Firewall log shows it sent TCP RST to both client and server side
3. [BUG FIX]
Symptom: System has a lot of long timeout UDP sessions.
Condition:
 1. Enable firewall.
 2. Display TOS sessions.
 3. A lot of long timeout UDP sessions.
4. [BUG FIX]
Symptom: ZyWALL crashes very often in bridge mode.
Condition:
 1. Switch to bridge mode.
 2. Enable Firewall.
 3. ZyWALL crashes very often.
5. [ENHANCEMENT] Enhance "cnm keepalive" ci command. Add "cnm keepalive 0" command to stop sending of keepalive packet to Vantage.
6. [BUG FIX] Symptom: Symptom: FTP from WAN to LAN does not work.
Condition:
 1. Set a FTP server on a host in the LAN side and configure a default server to this host.

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2. Using FTP from WAN to the default server with port mode.
3. After typing username and password, "ls" command does not work.
7. [BUG FIX] Symptom: LAN host will get wrong DNS server.
Condition:
 1. Set SMT 3.2 DNS first DNS server as user defined 1.1.1.1. Others are none.
 2. Unplug WAN port and reboot.
 3. LAN host get IP address and DNS server and the DNS server is LAN IP.
8. [BUG FIX] Symptom: System Crash when change encryption key in Vantage.
Condition:
 1. Device register to Vantage in router mode under DES and PPPoE.
 2. configuration>>general>>system change the original encryption key and apply
 3. Device receives data but soon the system crash.
9. [BUG FIX] Symptom: WAN Gateway will be reset to 0.0.0.0.
Condition:
 1. In Vantage CNM add a device (the device have a static IP),when it register to Vantage. Vantage set default value to device.
 2. After the device reset, WAN Gateway will be reset to 0.0.0.0.
10. [BUG FIX] Symptom: CNM agent accepts wrong CI command "cnm keepalive -323123122222222222222222".
Condition:
 1. In SMT 24.8, type "cnm keep -323123122222222222222222".
 2. The system accepts it and saves with the value.
11. [BUG FIX] Symptom: CNM agent accepts wrong CI command "cnm encrymode 1231223".
Condition:
 1. In SMT 24.8, type "cnm encrymode 1231223".
 2. The system accepts it and read it as "65535".
12. [BUG FIX] Symptom: [Vantage] Configuration>>VPN: When delete a active VPN tunnel successfully. Device sends VPN tunnel status "Destroy" to vantage.
Condition:
 1. Create and dial up a VPN tunnel via Vantage.
 2. Delete this active rule in Vantage.
 3. Vantage server will have exception.
13. [BUG FIX]
Symptom: eWC will fill the "Connection ID/Name" field with "C:1" when the fetch data is empty.
Condition:
 1. In eWC, set "Connection ID/Name" as empty in PPTP mode and apply it.
 2. Go go another page and go back the WAN page, the "Connection ID/Name" field is filled with "C:1" even we set the field as empty.

Modifications in V3.62(XD.2)b1 | 08/16/2004

1. [ENHANCEMENT]
Add Unified ALG for SIP and H.323.
2. [ENHANCEMENT]

Each unified ALG can be enabled/disabled. The default ALG setting for SIP and H.323 is disabled.

3. [ENHANCEMENT]
Firewall can bypass AX.25 (protocol #93) & IPv6 (protocol #41) protocols.
4. [BUG FIX]
Symptom: Bandwidth management with ALG_H.323 cause system crash.
Condition:
 1. Create a class with a Service-H.323 filter in WAN1 interface.
 2. Unplug all WAN's cable
 3. Launch the "Openphone" application that supports H.323 and make a call.
 4. Router crashes.
5. [BUG FIX]
Symptom: Router block trusted web content.
Condition:
 - 1). In "eWC->CONTENT FILTER->General", enable content filter.
 - 2). In "eWC->CONTENT FILTER->Customization", select check boxes of "Enable Web site customization" and "Disable all Web traffic except for trusted Web sites".
 - 3). In "eWC->CONTENT FILTER->Customization", set "www.hellowork.go.jp" as trusted web site.
 - 4). Open browser and access
<http://www.hellowork.go.jp/kensaku/servlet/kensaku?pageid=001>
 - 5). In the new page, select third and fourth radio button and click "search" button.
 - 6). In the new page, click "next page" button.
 - 7). The new page will be blocked.
6. [BUG FIX]
Symptom: External Content Filtering cannot block the URL belonging to restricted category.
Condition:
 - 1). In "eWC->CONTENT FILTER->Customization", unselect "Enable Web site customization".
 - 2). Add a URL to "trusted web sites".
 - 3). In "eWC->CONTENT FILTER->Customization", select "Block Web sites which contain these keywords".
 - 4). In "eWC->CONTENT FILTER->Categories", select the category which the URL belongs to.
 - 5). Access the trusted URL.
 - 6). The URL will not be blocked.
7. [BUG FIX]
Symptom: System crash by memory leak.
Condition:
 - 1). Enable bandwidth management.
 - 2). Into eWC->Bandwidth Management->Monitor and wait for a period time.
 - 3). System crash by memory leak.
8. [BUG FIX]
Symptom: Remote node CI command crashes.
Condition:

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- 1). Goto SMT 24.8
- 2). Load dial backup remote node to working buffer.
- 3). Type CI command "sys rn accessblock 0".
- 4). Save this remote.
- 5). System crashes.
9. [BUG FIX]
Symptom: System crash when someone want to configure NAT mapping rules.
Condition:
 1. Use the terminal program to login the console.
 2. Enter SMT 15, NAT Setup
 3. Select 1 to enter SMT 15.1, Address Mapping Sets.
 4. The system crash
10. [BUG FIX]
Symptom: eWC>NAT>ADDRESS MAPPING edit page leaks memory.
Condition:
 1. Log on to eWC.
 2. Go to eWC>NAT>ADDRESS MAPPING edit page, and then click Cancel.
 3. Repeat Step 2 for several times.
 4. Check system memory info by the CI command: system memu ms You will observe abnormal increases of memory sections, indicating memory leaks.
11. [BUG FIX]
Symptom: Trigger port will disappear after system reboot.
Condition:
 1. Configure Trigger port rule.
 2. System reboot.
 3. The configured Trigger port rule disappear.
12. [BUG FIX]
Symptom: The system might crash when enabling IPSec.
Condition: During IKE negotiation the system might crash.
13. [BUG FIX]
Symptom: MSN Messenger's "Ask for Remote Assistance" function causes system crash.
Condition:
 1. Enable UPnP.
 2. Set PC(A) and router(B) in intranet and PC(C) connects to LAN port of router(B).
 3. Test MSN Messenger's "Ask for Remote Assistance" function from PC(A) to PC(C).
 4. After PC(C) accepts the PC(A) request by "Ask for Remote Assistance" then the device will crash.
14. [BUG FIX]
Symptom: System out of memory.
Condition:
 1. Let the ZyWALL be a DNS proxy for LAN hosts.
 2. Do a lot of DNS inverse queries by running IPScan tool continuously from LAN host.
 3. After a long time, the ZyWALL will out of memory.
15. [FEATURE CHANGE]
Change UPnP device name for ZyWALL35 and ZyWALL5
WAS: "ZyXEL ZyWALL 35 Internet Security Gateway"
IS: "ZyXEL ZyWALL 35 Internet Security Appliance"
16. [BUG FIX]

- Symptom: Packets cannot pass through NAT router to LAN hosts.
Condition:
1. NAT default server is on
 2. Protocol of the packet is not TCP, UDP, ICMP, ESP, GRE.
 3. Packets from WAN to router.
 4. Packets cannot pass through NAT router to LAN hosts (NAT default server)
17. Symptom: External Content filtering cannot register.
Condition:
1. In "eWC->content filter->categories", click "register" to connect to ZSSW.
 2. Do the registration on ZSSW.
 3. The registration will fail in the final step.
18. [ENHANCEMENT]
External content filtering support full URL checking.
Was: External content filtering only take domain name or IP address of URL into category checking.
Is: External content filtering put entire URL into category checking.
19. [ENHANCEMENT]
CI command to turn off triangle route log, multicast log and broadcast log.
1. Add CI commands:
 - a. "sys logs switch".
 - b. "sys logs switch display".
 - c. Triangle route log switch: "sys logs switch bmlog <0:no|1:yes>"
 - d. Broadcast/Multicast log switch: "sys logs switch trilog <0:no|1:yes>"
20. [BUG FIX]
Symptom: System time problem.
Condition:
1. enter SMT24.10, configure time server.
 2. open daylight saving, configure the start time and end time so that current time is within the daylight saving time.
 3. after writing to rom file, router ask you to calibrate the system clock, answer yes.
 4. If system failed to connect time server, system time will add one hour, every time you enter smt 24.1, system time add 1 hour automatically.
21. [FEATURE CHANGE]
Change external content filtering message on centralized log and blocked page for some error events.
22. [BUG FIX]
Symptom: Router will crash.
Condition: When user continuously accesses eWC and press "Apply" button, sometimes router will crash.
23. [BUG FIX]
Symptom: The system crashes after it receives a url that contains more than three "/"s behind the ip address (or domain name).
24. [BUG FIX]
Symptom: Sometimes when connect to router by TCP, FTP or HTTP will fail.
Condition:
1. One user connects to router by FTP, TELNET or HTTP.
 2. In TCP handshake, client doesn't receive SYN ACK. i.e., router is in SYN RECEIVE state.
 3. Client timeout and send RESET to router.
 4. Related socket in router is still alive and other users can't login router until this

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- socket timeout.
25. [BUG FIX]
Symptom: eWC spelling error: eWC->Firewall→Default Rule: Allow Asymetrical should be "Asymmetric"
26. [BUG FIX]
Symptom: System out of memory and reboot when firewall enable.
Condition:
1. Enable firewall, then generate traffic.
2. The memory will slowly leak until it uses up all the memory, then reboot.
27. [BUG FIX]
Symptom: Generate a lot of TCP port 80 sessions to ZyWALL will cause device to hang and reboot by hardware watchdog.
Condition:
1. Use session.exe to generate a lot of TCP port 80 sessions to ZyWALL's LAN or WAN interface
2. After several hundreds of sessions are established, the ZyWALL will hang and finally reboot.
28. [ENHANCEMENT]
1. Support user config for SIP session timeout value.
2. Support SIP SDP multiple RTP port.
3. Delete unused ALG type.
4. Command for ALG enable/disable and sip timeout.
29. [BUG FIX]
Symptom: Sometimes the ZyWALL reboots by software watchdog.
Condition:
1. Put the ZyWALL on the network for a long time.
2. Sometimes the ZyWALL will reboot by software watchdog.
30. [BUG FIX]
Symptom: XAUTH with rule swap doesn't work.
Condition:
1. In initiator, set up a VPN rule with XAUTH in client mode.
2. In responder, there are three VPN rules:
a. Rule 1 is XAUTH off.
b. Rule 2 is XAUTH with client mode.
c. Rule 3 is XAUTH with server mode (this rule corresponds to client rule).
3. Dial from initiator, and the tunnel will never be up.
31. [BUG FIX]
Symptom: Content filter timeout problem.
Condition:
1. A router is register the content filter (CF) server.
2. Enable the CF feature.
3. Enable the external database content filtering.
4. The router log often record "Waiting content filter server (server name) timeout!".
5. A PC in lan fetch web from internet often hang for a while.

Modifications in V3.62(XD.1) | 06/25/2004

1. Formal release.

Modifications in V3.62(XD.1)b1 | 06/16/2004

1. [ENHANCEMENT] Support Vantage CNM 2.0 (Vantage Centralized Network Management).

Modifications in V3.62(XD.0) | 05/18/2004

1. Formal release.

Modifications in V3.62(XD.0)b5 | 05/14/2004

1. [BUG FIX] Symptom: The ZyWALL might crash or hang when users browse eWC→Firewall→Rule Summary.
Condition:
 - (1) Log on to eWC.
 - (2) Browse Ewc→Firewall→Rule Summary
 - (3) The ZyWALL might crash or hang.

Modifications in V3.62(XD.0)b4 | 04/27/2004

1. [FEATURE CHANGE]
Remove Policy Route feature from ZyWALL 5 because Policy Route is not defined in product specification.
2. [FEATURE CHANGE]
Maximum concurrent VPN tunnel number is changed from 5 to 10.
3. [FEATURE CHANGE]
The following default settings is changed:
 - (1) eWC→Firewall→Anti-Probing
WAS: Anti-Probing Respond Ping to LAN
IS: Anti-Probing Response Ping to LAN&WAN&DMZ
 - (2) eWC→Firewall→Threshold
WAS: TCP Maximum Incomplete Sessions = 10
IS: TCP Maximum Incomplete Sessions = 30
 - (3) eWC→WAN→Route
WAS: WAN Priority = 2
IS: WAN Priority = 1
4. [BUG FIX]
Symptom: External Content Filtering cannot be registered.
Condition:
 - (1) In eWC→CONTENT FILTER→Categories", click "register" to connect to ZSSW.
 - (2) Do the registration on ZSSW.
 - (3) Browser display "Please wait....." and the page of "Register successfully" does not

appear.

5. [BUG FIX]

Symptom: Traffic Redirect does not work.

Condition:

Internet ----- Router A ----- ZyWALL ----- gateway B ----- Internet
 WAN LAN

- (1) Let ZyWALL WAN port connect to another router A and A is connected to Internet.
- (2) Setup Traffic Redirect to backup gateway B located at LAN side.
- (3) Disconnect the connection between router A and Internet.
- (4) The ZyWALL can not do Traffic Redirect to gateway B located at LAN side.

6. [BUG FIX]

CI command “ip igmp” is lost.

7. [BUG FIX]

Symptom: The behavior in priority-based Bandwidth Management is not correct.

Condition:

- (1) In eWC→BW MGMT→Summary, activates WAN1 root class with Speed = 1500 kbps and Scheduler = Priority-Based
- (2) In eWC→BW MGMT→Class Setup, Adds two sub-classes under WAN1 root class. Where WAN1-1 : Bandwidth Budget = 200, Priority = 7(higher than WAN1-2), and “Borrow bandwidth from parent class” is selected; WAN1-2 : Bandwidth Budget = 500, Priority = 1, “Borrow bandwidth from parent class” is also selected.
- (3) First generates traffic that satisfies WAN1-2 class, users will find WAN1-2 borrow the whole available bandwidth from parent, and the traffic is bound at about 1500kbps.
- (4) Then generates traffic that satisfies WAN1-1 class. Users will find WAN1-1 can not borrow bandwidth from parent class and bandwidth is bound at about 200kbps even though WAN1-1 has higher priority than WAN1-2.

8. [BUG FIX]

Symptom: In eWC→MAINTENANCE→General, set a number which is bigger than 1000 for Administrator Inactivity Timer. The label string 'Administrator Inactivity Timer' will disappear.

Condition:

- (1) Go to eWC→MAINTENANCE→General, set a number which is bigger than 1000 for Administrator Inactivity Timer.
- (2) Click 'Apply'.
- (3) The label string 'Administrator Inactivity Timer' will disappear.

9. [BUG FIX]

Symptom: ZyWALL ping sometimes fails.

Condition:

- (1) Turn on Firewall.
- (2) Go to SMT 24.8
- (3) Ping to exist host, but it sometimes fails.

10. [BUG FIX]

Symptom: In SMT 3.2, the subnet of ZyWALL LAN IP can be different from the subnet of DHCP client ip and ZyWALL LAN IP can be set within DHCP Client IP pool range.

Condition:

First case:

- (1) Go to SMT 3.2
- (2) Set DHCP client IP Starting address to be 192.168.2.3
- (3) Set LAN IP Address to be 192.168.1.1, then confirm to save.
- (4) These setting can be saved and no error message.

Second case:

- (1) In SMT 3.2, set DHCP client ip Starting address to be 192.168.1.3
- (2) Set Size of Client IP Pool to be 10
- (3) Set LAN IP Address to be 192.168.1.3, then confirm to save.
- (4) These setting can be saved and no error message.

11. [BUG FIX]

Symptom: Remote access control cannot work properly.

Condition:

- (1) Turn on bridge mode
- (2) Configure telnet server access control from WAN only by SMT 24.11
- (3) Telnet to device via WAN side
- (4) The telnet connection fails.

12. [BUG FIX]

Symptom: System crashes.

Condition: Configure device by eWC sometimes cause crash.

13. [BUG FIX]

Symptom: In bridge mode ZyWALL at eWC→Bridge, Bridge IP address settings can not be saved successfully.

Condition:

- (1) Switch the ZyWALL to bridge mode.
- (2) Go to eWC→Bridge page.
- (3) Change "IP Address", "IP Subnet Mask", or "Gateway IP Address" then click "Apply"
- (4) Status shows "Configuration updated successfully" but the changes was not really saved.

14. [BUG FIX]

Symptom: In SMT 24.11, the setting of DNS Service is displayed under bridge mode

Condition:

- (1) Go to SMT 1, change Device Mode to bridge mode.
- (2) After reboot, go to SMT 24.11, DNS Service incorrectly appear.

Modifications in V3.62(XD.0)b3 | 04/04/2004

1. [BUG FIX]

Symptom: CI command error, ZyWALL will show some CI commands which don't belong to current command set.

Condition:

- (1) Go to SMT 24.8, CI command mode.
- (2) Type "ip dns system", ZyWALL will correctly print two available commands,

"edit" and "display".

(3) Type "ip dns sys", ZyWALL will unexpectedly print nine available commands instead of two. Those extra seven commands are not under "ip dns system".

2. [BUG FIX]

Symptom: DHCP client cannot get address from router.

Condition:

(1) In eWC→LAN→LAN, configure router as a DHCP server and set IP pool starting address as 192.168.1.33.

(2) In eWC→LAN→Static DHCP, configure all rules in static DHCP table and the IP addresses are 192.168.1.33~192.168.1.40.

(3) Use a PC which MAC address is not in the static DHCP table to get a IP address from router.

(4) The PC cannot get the IP address.

3. [BUG FIX]

Symptom: The ZyWALL will reset the current eWC HTTP session even when the LAN IP configuration is not successfully changed. Under this situation, users have to re-log in the ZyWALL.

Condition:

(1) Log in ZyWALL eWC, and go to eWC→LAN.

(2) Deliberately configure the LAN IP address as within the WAN subnet.

(3) Click Apply, then the status will show an error message indicating address conflict.

(4) The ZyWALL will then automatically break the current eWC HTTP session. To access the ZyWALL, users have to log in again.

4. [BUG FIX]

Symptom: Router will crash when entering SMT menu 3.5

Condition:

(1) Insert WLAN card.

(2) In CI command, enter "wlan active 11" instead of "wlan active 1" to activate WLAN on router.

(3) Enter SMT 3.5, router will crash.

5. [ENHANCEMENT]

Supports Vantage CNM 2.0(Vantage Centralized Network Management)

6. [BUG FIX]

Symptom: The Content Filtering blocks cookies even if it is not in the blocked schedule.

Condition:

(1) In eWC→CONTENT FILTER→General, select "Block Cookies".

(2) In eWC→CONTENT FILTER→General, set "Schedule to Block" with a time period NOT including the current time.

(3) Access a web site which contains cookies.

(4) The cookies will be blocked by the Content Filtering.

7. [BUG FIX]

Symptom: WAN status in SMT 24.1 shows wrong information in bridge mode.

Condition:

(1) Configure Internet access as PPTP or PPPoE encapsulation in router mode.

(2) Switch ZyWALL to bridge mode.

(3) WAN status in SMT 24.1 shows idle and IP address is "0.0.0.0".

8. [BUG FIX]
Symptom: Device cannot transfer Ethernet frame in bridge mode.
Condition:
 - (1) ZyWALL enables bridge mode.
 - (2) The Internet connection is under DMZ port.
 - (3) Plug Ethernet cable between one host and ZyWALL DMZ port.
 - (4) This host starts to transfer packets to Internet.
 - (5) Unplug the Ethernet cable from DMZ port and plug in LAN port.
 - (6) This host cannot transfer packets to Internet anymore.
9. [BUG FIX]
Symptom: PPPoE connection sometimes fails in France.
Condition: Since France Telecom changes their core network setup to BRAS, ZyWALL PPPoE connection on authentication phase most of the time fails.
10. [ENHANCEMENT]
Updates help pages for ZyWALL 5.
11. [BUG FIX]
Symptom: On the eWC→WIZARD→Internet Access page, the System DNS Servers configuration is not available when the ZyWALL is not a DHCP server for its LAN hosts.
Condition:
 - (1) Log onto eWC, and go to eWC→LAN. Uncheck the "DHCP Server" option to stop ZyWALL from being a DHCP server to its LAN hosts.
 - (2) Go to eWC→HOME→WIZARD→Internet Access. The System DNS Servers configuration is not available in the wizard.
12. [ENHANCEMENT]
The ZyWALL 5 Firewall GUI are enhanced as follows.
 - (1) On eWC→Firewall→Rule Summary→Edit Rule, a basic sanity check on the firewall rule is performed.
 - (2) On eWC→Firewall→Rule Summary→Edit Rule, the selected service for a new rule is empty by default.
 - (3) On eWC→Firewall→Rule Summary→Edit Rule, the useless headers "##### Source IP Address #####" and "##### Destination IP Address #####" are removed.
 - (4). On eWC→Firewall→Rule Summary→Edit Rule, when a specific address is added to the Source/Destination Address list, the "Any" address will automatically be deleted.
 - (5) On eWC→Firewall→Rule Summary→Edit Rule, the firewall action radio buttons are replaced by a dropdown list.
 - (6) On eWC→Firewall→Threshold, the "Cancel" button is replaced by "Reset" button.
 - (7) On eWC→Firewall→Default Rule, the wording "Default Rule Settings" is replaced by "Default Rule Setup".
 - (8) On eWC→Firewall→Anti-Probing, the wording "Anti-Probing Settings" is replaced by "Anti-Probing Setup".
 - (9) "ACCESS POLICY" is renamed as "FIREWALL".
 - (10) "CUSTOM PORT" is renamed as "CUSTOM SERVICE".
 - (11) Users can expand or collapse "Source Address", "Destination Address" and "Service Type" drop down lists by clicking the [+]/[-] icon at the beginning of each rule in Firewall Rule Summary Table.

Modifications in V3.62(XD.0)b2 | 03/26/2004

1. [BUG FIX]
Symptom: In eWC→FIREWALL→ACCESS POLICY→EDIT RULE, Action for Matched Packets can't be saved correctly.
Condition:
(1) Go to eWC→FIREWALL→ACCESS POLICY→EDIT RULE
(2) Choose the type of Action for Matched Packets as Block, and then click Apply.
(3) Leave this page and then re-enter this page again, Action for Matched Packets always shows Forward.
2. [ENHANCEMENT]
Supports Intel TE28F640 J3C120 Flash ROM.

Modifications in V3.62(XD.0)b1 | 03/11/2004

First Release.

Appendix 1 Remote Management Enhancement (Add SNMP & DNS Control)

New function

- (1) You can change the server port.
- (2) You can set the security IP address for each type of server.
- (3) You can define the rule for server access. (WAN only/LAN only, None, ALL).
- (4) The secure IP and port of the SNMP server is read only
- (5) The port of the SNMP and DNS server is read only.
- (6) The default server access of the SNMP and DNS is ALL.

Modification

- (1) The default value for Server access rule is **ALL**.
- (2) Under the default setting: You can setup the Menu 15 to forwarding the server to LAN IP address. Thus you can configure the router through the WAN and you don't need to modify the server management or filter.

Note

- (1) DNS Service is not available in Bridge Mode.

Menu 24.11 - Remote Management Control

```
TELNET Server:  Port = 23      Access = ALL
                  Secure Client IP = 0.0.0.0
FTP Server:     Port = 21      Access = ALL
                  Secure Client IP = 0.0.0.0
SSH Server:     Certificate = auto_generated_self_signed_cert
                  Port = 22     Access = ALL
                  Secure Client IP = 0.0.0.0
HTTPS Server:   Certificate = auto_generated_self_signed_cert
                  Authenticate Client Certificates = No
                  Port = 443    Access = ALL
                  Secure Client IP = 0.0.0.0
HTTP Server:    Port = 80      Access = ALL
                  Secure Client IP = 0.0.0.0
SNMP Service:   Port = 161     Access = ALL
                  Secure Client IP = 0.0.0.0
DNS Service:    Port = 53      Access = ALL
                  Secure Client IP = 0.0.0.0
Press ENTER to Confirm or ESC to Cancel:
```

Appendix 2 Trigger Port

Introduction

Some routers try to get around this "one port per customer" limitation by using "triggered" maps. Triggered maps work by having the router watch *outgoing* data for a specific port number and protocol. When the router finds a match, it remembers the IP address of the computer that sent the matching data. When the requested data wants to come back *in* through the firewall, the router uses the port mapping rules that are linked to the trigger, and the IP address of the computer that "pulled" the trigger, to get the data back to the proper computer.

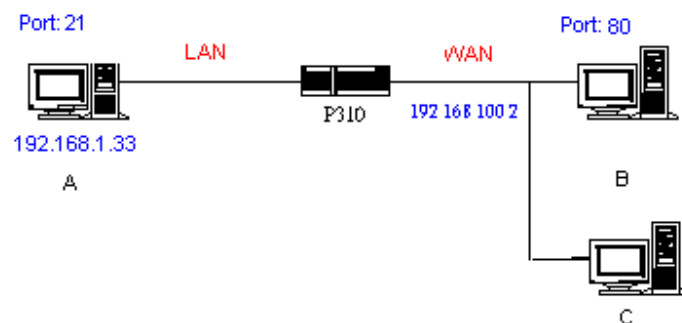
These triggered events can be timed so that they erase the port mapping as soon as they are done with the data transfer, so that the port mapping can be triggered by another Client computer. This gives the *illusion* that multiple computers can use the same port mapping at the same time, but the computers are really just taking turns using the mapping.

How to use it

Following table is a configuration table.

Name	Incoming	Trigger
Napster	6699	6699
Quicktime 4 Client	6970-32000	554
Real Audio	6970-7170	7070
User	1001-1100	1-100

How it works



For example, you are running a FTP Server on port 21 of machine A. And you may want this server accessible from the Internet without enabling NAT-based firewall. There are one Web Server on port 80 of machine B and another client C on the Internet.

- (1) As Prestige receives a packet from a local client A destined for the outside Internet machine B, it will check the destination port in the TCP/UDP header to see if it matches the setting in "Trigger Port" (80). If it matches, Prestige records the source IP of A (192.168.1.33) in its internal table.
- (2) Now client C (or client B) tries to access the FTP server in machine A. When Prestige to forward any un-requested traffic generated from Internet, it will first check the rules in port forwarding set. When no matches are found, it will then check the "Incoming Port". If it matches, Prestige will forward the packet to the recorded IP address in the

internal table for this port. (This behavior is the same as we did for port forwarding.)

- (3) The recorded IP in the internal table will be cleared if machine A disconnect from the sessions that matches the "Trigger Port".

Notes

- (1) Trigger events can't happen on data coming from ***outside*** the firewall because the NAT router's sharing function doesn't work in that direction.
- (2) Only one computer can use a port or port range at a time on a given real (ISP assigned) IP address.

Appendix 3 Hard-coded packet filter for "NetBIOS over TCP/IP" (NBT)

The new set C/I commands is under "sys filter netbios" sub-command. Default values of any direction are "Forward", and trigger dial is "Disabled".

There are two CI commands:

- (1) "sys filter netbios disp": It will display the current filter mode.

Example output:

```
===== NetBIOS Filter Status =====  
LAN to WAN:          Block  
WAN to LAN:          Forward  
IPSec Packets:       Forward  
Trigger Dial:        Disabled
```

- (2) "sys filter netbios config <type> {on|off}": To configure the filter mode for each type. Current filter types and their description are:

Type	Description	Default mode
0	LAN to WAN	Forward
1	WAN to LAN	Forward
6	IPSec pass through	Forward
7	Trigger dial	Disabled

Example commands:

```
sys filter netbios config 0 on  => block LAN to WAN NBT packets  
sys filter netbios config 1 on  => block WAN to LAN NBT packets  
sys filter netbios config 6 on  => block IPSec NBT packets  
sys filter netbios config 7 off => disable trigger dial
```

Appendix 4 Traffic Redirect/Static Route Application Note

Why traffic redirect/static route be blocked by ZyWALL

ZyWALL is the ideal secure gateway for all data passing between the Internet and the LAN. For some reasons (load balance or backup line), users want traffics be re-routed to another Internet access devices while still be protected by ZyWALL. The network topology is the most important issue. Here is the common example that people misemploy the LAN traffic redirect and static route.

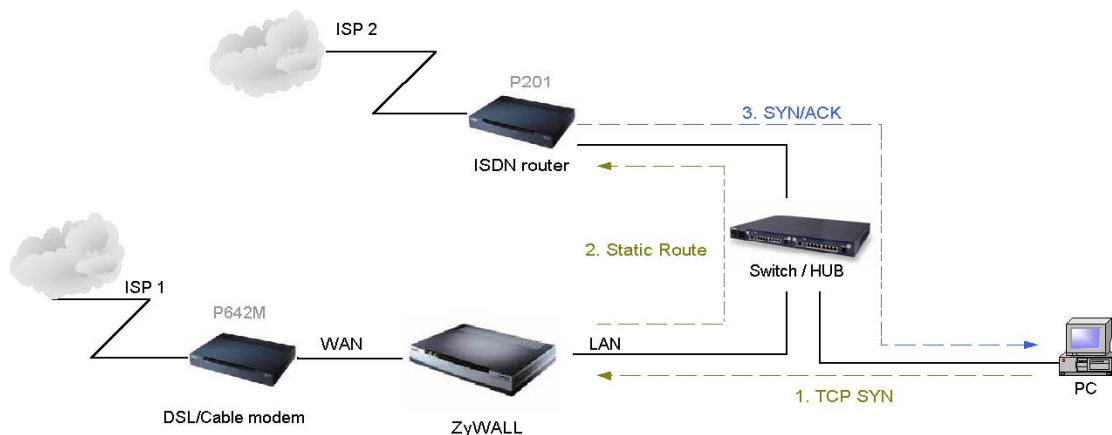


Figure 4-1 Triangle Route

Figure 4-1 indicates the triangle route topology. It works fine with turn off firewall. Let's take a look into the perspective toward this situation.

- Step 1. PC sends outgoing traffics through ZyWALL because default gateway assigned to it.
- Step 2. Then, ZyWALL will redirect the traffics to another gateway (ISDN/Router) as we expect.
- Step 3. But the return traffics do not go through ZyWALL because the gateway (say, P201) and the PC are on the same IP network. **Any traffic will easily inject into the protected network area through the unprotected gateway.**
- Step 4. When firewall turns on, it could be worse. ZyWALL will check the outgoing traffics by ACL and create dynamic sessions to allow legal return traffics. For Anti-DoS reason, ZyWALL will send RST packets to the PC and the peer because it never received TCP SYN/ACK packet.

That causes all of outgoing TCP traffics being reset!

How traffic redirect/static route works under protection - Solutions

(1) Gateway on alias IP network

IP alias allows you to partition a physical network into different logical IP networks over the same Ethernet interface. The ZyWALL supports three logical LAN interfaces via its single physical Ethernet interface with the ZyWALL itself as the gateway for each LAN network. Division of protected LAN and the other gateway into different subnets will trigger the incoming traffic back to ZyWALL and it can work as normal function.

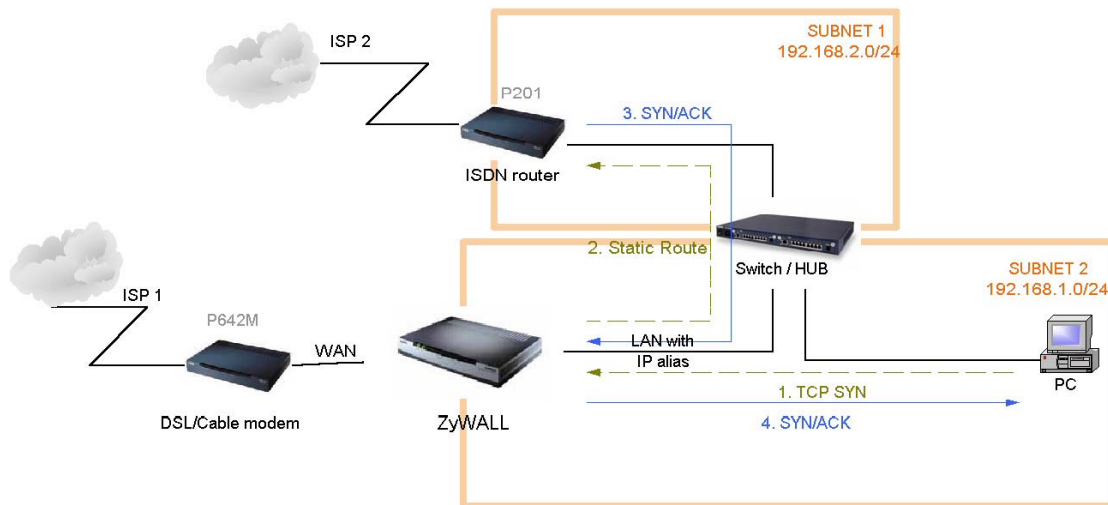


Figure 4-2 Gateway on alias IP network

(2) Gateway on WAN side

A working topology is suggested as below.

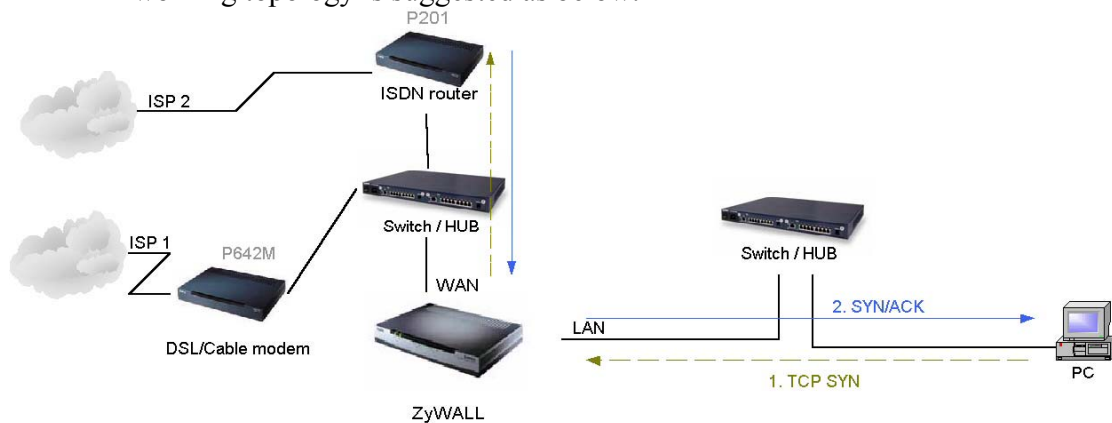


Figure 5-3 Gateway on WAN side

Appendix 5 IPSec FQDN support

ZyWALL A-----Router C (with NAT) -----ZyWALL B
(WAN) (WAN) (LAN) (WAN)

If ZyWALL A wants to build a VPN tunnel with ZyWALL B by passing through Router C with NAT, A can not see B. It has to secure gateway as C. However, ZyWALL B will send it packet with its own IP and its ID to ZyWALL A. The IP will be NATed by Router C, but the ID will remain as ZyWALL B sent.

In FQDN design, all three types, IP, DNS, E-Mail, can set ID content. For ID type is DNS or E-mail, the behavior is simple. ZyWALL A and ZyWALL B only checks the ID contents are consistent and they can connect.

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Basically the story is the same when ID type is IP. If user configures ID content, then ZyWALL will use it as a check. So the ID content also has to match each other. For example, ID type and ID content of incoming packets must match “Peer ID Type” and “Peer ID content”. Or ZyWALL will reject the connection.

However, user can leave “ID content” blank if the ID type is IP. ZyWALL will put proper value in it during IKE negotiation. This appendix describes all combinations and behaviors of ZyWALL.

We can put all combinations in to these two tables:

(Local ID Type is IP):

Configuration		**Run-time status	
My IP Addr	Local ID Content	My IP Addr	Local ID Content
0.0.0.0	*blank	My WAN IP	My WAN IP
0.0.0.0	a.b.c.d (it can be 0.0.0.0)	My WAN IP	a.b.c.d (0.0.0.0, if user specified it)
a.b.c.d (not 0.0.0.0)	*blank	a.b.c.d	a.b.c.d
a.b.c.d (not 0.0.0.0)	e.f.g.h (or 0.0.0.0)	a.b.c.d	e.f.g.h (or 0.0.0.0)

*Blank: User can leave this field as empty, doesn't put anything here.

**Runtime status: During IKE negotiation, ZyWALL will use “My IP Addr” field as source IP of IKE packets, and put “Local ID Content” in the ID payload.

(Peer ID Type is IP):

Configuration		*Run-time check
Secure Gateway Addr	Peer ID Content	
0.0.0.0	blank	Just check ID types of incoming packet and machine's peer ID type. If the peer's ID is IP, then we accept it.
0.0.0.0	a.b.c.d	System checks both type and content
a.b.c.d	blank	1. System will check the ID type and the content. 2. The contents will match only if the ID content of coming packet is a.b.c.d because system will put Secure Gateway Address as Peer ID content.
a.b.c.d	e.f.g.h	1. System will check the ID type and the content. 2. The contents will match only if the ID content of coming packet is e.f.g.h.

*Runtime Check: During IKE negotiation, we will check ID of incoming packet and see if it matches our setting of “Peer ID Type” and “Peer ID Content”.

Summary:

1. When Local ID Content is blank which means user doesn't type anything here, during IKE negotiation, my ID content will be "My IP Addr" (if it's not 0.0.0.0) or local's WAN IP.
2. When "Peer ID Content" is not blank, ID of incoming packet has to match our setting. Or the connection request will be rejected.
3. When "Secure Gateway IP Addr" is 0.0.0.0 and "Peer ID Content" is blank, system can only check ID type. This is a kind of "dynamic rule" which means it accepts incoming request from any IP, and these requests' ID type is IP. So if user put a such kind of rule in top of rule list, it may be matched first. To avoid this problem, we will enhance it in the future.

Appendix 6 Embedded HTTPS proxy server

HTTPS (Hypertext Transfer Protocol over Secure Socket Layer, or HTTP over SSL) is a Web protocol developed by Netscape and built into its browser that encrypts and decrypts user page requests as well as the pages that are returned by the Web server. HTTPS is really just the use of Netscape's Secure Socket Layer (SSL) as a sublayer under its regular HTTP application layering.

The ZyWALL's embedded HTTPS proxy server is basically an SSL server which performs SSL transactions, on behalf of the embedded HTTP server, with an SSL client such as MSIE or Netscape. As depicted by the figure below, when receiving a secure HTTPS request from an SSL-aware Web browser, the HTTPS proxy server converts it into a non-secure HTTP request and sends it to the HTTP server. On the other hand, when receiving a non-secure HTTP response from the HTTP server, the HTTPS proxy server converts it into a secure HTTPS response and sends it to the SSL-aware Web browser.

By default, the HTTPS proxy server listens on port 443 instead of the HTTP default port 80. If the ZyWALL's HTTPS proxy server port is changed to a different number, say 8443, then the URL for accessing the ZyWALL's Web user interface should be changed to <https://hostname:8443/> accordingly.

Annex A CI Command List

Last Updated: 2004/04/27

Command Class List Table		
System Related Command	Exit Command	Device Related Command
Ethernet Related Command	POE Related Command	PPTP Related Command
AUX Related Command	Configuration Related Command	IP Related Command
IPSec Related Command	Bridge Related Command	Bandwidth Management
Firewall Related Command	Certificate Management (PKI) Command	

Flag :

R: This command can be used in Router Mode

B: This command can be used in Bridge Mode

System Related Command

[Home](#)

Command				Flag	Description
sys					
	adjtime			R + B	retrieve date and time from Internet
	cbuf				
		cnt			cbuf static
		display		R + B	display cbuf static
	callhist				
		display		R	display call history
		remove	<index>	R	remove entry from call history
	countrycode		[countrycode]	R + B	set country code
	date		[year month date]	R + B	set/display date
	debug			R + B	
		romfile		R + B	
			cert [0:reserve/1:erase]	R + B	erase all the certificates
			display	R + B	display romfile debug settings
			isp [0:reserve/1:erase]	R	erase the account and password of ISP
			prekey [0:reserve/1:reset]	R	reset the system IPSec pre-shared key
			profile [0:reserve/1:erase]	R + B	erase the accounts and passwords of 802.1X and XAUTH
			pwd [0:reserve/1:reset]	R + B	reset system password
			radius	R + B	erase Authentication and Accounting keys
			update [0:reserve/1:erase]	R + B	update romfile depend on current configuration
			wep [0:reserve/1:erase]	R + B	erase all WEP encryption keys
	domainname			R + B	display domain name
	edit		<filename>	R + B	edit a text file
	extraphnum			R	maintain extra phone numbers for outcalls
		add	<set 1-3> <1st phone num> [2nd phone num]	R	add extra phone numbers
		display		R	display extra phone numbers
		node	<num>	R	set all extend phone number to remote node <num>
		remove	<set 1-3>	R	remove extra phone numbers
		reset		R	reset flag and mask
	feature			R + B	display feature bit
	hostname		[hostname]	R + B	display system hostname
	logs			R + B	
		category		R + B	

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			access [0:none/1:log/2:alert/3:both]	R + B	record the access control logs
			attack [0:none/1:log/2:alert/3:both]	R + B	record and alert the firewall attack logs
			display	R + B	display the category setting
			error [0:none/1:log/2:alert/3:both]	R + B	record and alert the system error logs
			ipsec [0:none/1:log/2:alert/3:both]	R	record the access control logs
			ike [0:none/1:log/2:alert/3:both]	R	record the access control logs
			javablocked [0:none/1:log]	R + B	record the java etc. blocked logs
			mten [0:none/1:log]	R + B	record the system maintenance logs
			packetfilter [0:none/1:log]	R + B	record the packet filter logs
			pki [0:none/1:log/2:alert/3:both]	R	record the pki logs
			tcpreset [0:none/1:log]	R + B	record the tcp reset logs
			upnp [0:none/1:log]	R	record upnp logs
			urlblocked [0:none/1:log/2:alert/3:both]	R + B	record and alert the web blocked logs
			urlforward [0:none/1:log]	R + B	record web forward logs
		clear		R + B	clear log
		display	[access attack error ipsec ike java blocked mten packetfilter pki tcp reset urlblocked urlforward]	R + B	display all logs or specify category logs
		errlog		R + B	
			clear	R + B	display log error
			disp	R + B	clear log error
			online	R + B	turn on/off error log online display
		load		R + B	load the log setting buffer
		mail		R + B	
			alertAddr [mail address]	R + B	send alerts to this mail address
			display	R + B	display mail setting
			logAddr [mail address]	R + B	send logs to this mail address
			schedule display	R + B	display mail schedule
			schedule hour [0-23]	R + B	hour time to send the logs
			schedule minute [0-59]	R + B	minute time to send the logs
			schedule policy [0:full/1:hourly/2:daily/3:weekly/ 4:none]	R + B	mail schedule policy
			schedule week [0:sun/1:mon/2:tue/3:wed/4:thu/5 :fri/6:sat]	R + B	weekly time to send the logs
			server [domainName/IP]	R + B	mail server to send the logs
			subject [mail subject]	R + B	mail subject
		save		R + B	save the log setting buffer
		syslog		R + B	
			active [0:no/1:yes]	R + B	active to enable unix syslog
			display	R + B	display syslog setting
			facility [Local ID(1-7)]	R + B	log the messages to different files
			server [domainName/IP]	R + B	syslog server to send the logs
		updateSvrIP	<minute>	R + B	If there is one parameter <minute>, it will change the dns timer task timeout value. Otherwise, do dns resolve to find email log server and syslog server IP.
		consolidate		R + B	
			switch <0:on 1:off>	R + B	active to enable log consolidation

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		period	R + B	consolidation period (seconds)
		msglist	R + B	display the consolidated messages
	switch			
		bmlog <0:no 1:yes>	R + B	active to enable broadcast/multicast log
		display	R + B	display switch setting
		trilog <0:no 1:yes>	R + B	active to enable triangle route log
	mbuf		R + B	
	link	link	R + B	list system mbuf link
	pool	<id> [type][num]	R + B	list system mbuf pool
	status		R + B	display system mbuf status
	disp	<address>[1 0]	R + B	display mbuf status
	cnt		R + B	
		disp	R + B	display system mbuf count
		clear	R + B	clear system mbuf count
	debug	[on off]	R + B	
	mode	<router/bridge>	R + B	switch router and bridge mode
	pwderrtm	[minute]	R + B	Set or display the password error blocking timeout value.
	rn		R	
	load	<entry no.>	R	load remote node information
	disp	<entry no.>(0:working buffer)	R	display remote node information
	nat	<none sua full feature>	R	config remote node nat
	nailup	<no yes>	R	config remote node nailup
	mtu	<value>	R	set remote node mtu
	save	[entry no.]	R	save remote node information
	smt		R + B	not support in this product
	stdio	[second]	R + B	change terminal timeout value
	time	[hour [min [sec]]]	R + B	display/set system time
	tos		R + B	
	display		R + B	display all runtime TOS
	listPerHost		R + B	display all host session count
	debug	[on off]	R + B	turn on or off TOS debug message
	sessPerHost	<number>	R + B	configure session per host value
	timeout		R + B	
		display	R + B	display all TOS timeout information
		icmp <idle timeout>	R + B	set idle timeout value
		igmp <idle timeout>	R + B	set idle timeout value
		tcpsyn <idle timeout>	R + B	set idle timeout value
		tcp <idle timeout>	R + B	set idle timeout value
		tcpfin <idle timeout>	R + B	set idle timeout value
		udp <idle timeout>	R + B	set idle timeout value
		gre <idle timeout>	R + B	set idle timeout value
		esp <idle timeout>	R + B	set idle timeout value
		ah <idle timeout>	R + B	set idle timeout value
		other <idle timeout>	R + B	set idle timeout value
	tempTOSDisplay		R + B	display temporal TOS records.
	tempTOSTimeout	[timeout value]	R + B	set/display temporal timeout value
	trcdisp	parse, brief, disp	R + B	monitor packets
	trclog		R + B	
	trcpacket		R + B	

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	syslog			R + B	
		server	[destIP]	R + B	set syslog server IP address
		facility	<FacilityNo>	R + B	set syslog facility
		type	[type]	R + B	set/display syslog type flag
		mode	[on/off]	R + B	set syslog mode
	version			R + B	display RAS code and driver version
	view		<filename>	R + B	view a text file
	wdog			R + B	
		switch	[on/off]	R + B	set on/off wdog
		cnt	[value]	R + B	display watchdog counts value: 0-34463
	romreset			R + B	restore default romfile
	server				
		access	<telnet ftp web icmp snmp dns> <value>	R + B	set server access type
		load		R + B	load server information
		disp		R + B	display server information
		port	<telnet ftp web snmp> <port>	R + B	set server port
		save		R + B	save server information
		secureip	<telnet ftp web icmp snmp dns> <ip>	R + B	set server secure ip addr
		certificate	<https ssh> [certificate name]	R + B	set server certificate
		auth_client	<https> [on/off]	R + B	specifies whether the server authenticates the client
	fwnotify			R + B	
		load		R + B	load fwnotify entry from spt
		save		R + B	save fwnotify entry to spt
		url	<url>	R + B	set fwnotify url
		days	<days>	R + B	set fwnotify days
		active	<flag>	R + B	turn on/off fwnotify flag
		disp		R + B	display firmware notify information
		check		R + B	check firmware notify event
		debug	<flag>	R + B	turn on/off firmware notify debug flag
	cmgr			R + B	
		trace		R + B	
			disp <ch-name>	R + B	show the connection trace of this channel
			clear <ch-name>	R + B	clear the connection trace of this channel
		cnt	<ch-name>	R + B	show channel connection related counter
	socket			R + B	display system socket information
	filter			R + B	
		netbios		R + B	
			disp	R + B	display netbios filter status
			config <0:Between LAN and WAN, 1: Between LAN and DMZ, 2: Between WAN and DMZ, 3:IPSec passthrough, 4:Trigger Dial> <on/off>	R + B	config netbios filter
	roadrunner			R	
		debug	<level>	R	enable/disable roadrunner service 0: disable <default> 1: enable
		display	<iface name>	R	display roadrunner information iface-name: enif0, wanif0
		restart	<iface name>	R	restart roadrunner
	ddns			R + B	

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		debug	<level>	R + B	enable/disable ddns service
		display	<iface name>	R + B	display ddns information
		restart	<iface name>	R + B	restart ddns
		logout	<iface name>	R + B	logout ddns
	cpu			R + B	
		display		R + B	display CPU utilization
	upnp			R	
		active	[0:no/1:yes]	R	Activate or deactivate the saved upnp settings
		config	[0:deny/1:permit]	R	Allow users to make configuration changes. through UPnP
		display		R	display upnp information
		firewall	[0:deny/1:pass]	R	Allow UPnP to pass through Firewall.
		load		R	save upnp information
		reserve	[0:no/1:yes]	R	Reserve UPnP NAT rules in flash after system bootup.
		save		R	save upnp information

Exit Command

[Home](#)

Command				Flag	Description
exit				R + B	exit smt menu

Device Related Command

[Home](#)

Command				Flag	Description
dev					
	channel				
		drop	<channel_name>	R + B	drop channel
	dial		<node#>	R + B	dial to remote node

Ethernet Related Command

[Home](#)

Command				Flag	Description
ether				R + B	
	config			R + B	display LAN configuration information
	driver			R + B	
		cnt		R + B	
			disp <name>	R + B	display ether driver counters
		ioctl	<ch_name>	R + B	Useless in this stage.
		status	<ch_name>	R + B	see LAN status
	version			R + B	see ethernet device type
	pkttest				
		disp			
			packet <level>	R + B	set ether test packet display level
			event <ch> [on off]	R + B	turn on/off ether test event display
		sap	[ch_name]	R + B	send sap packet
		arp	<ch_name> <ip-addr>	R + B	send arp packet to ip-addr
	debug				
		disp	<ch_name>	R + B	display ethernet debug infomation
		level	<ch_name> <level>	R + B	set the ethernet debug level level 0: disable debug log level 1:enable debug log (default)
	edit			R + B	
		load	<ether no.>	R + B	load ether data from spt
		mtu	<value>	R + B	set ether data mtu

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		speed	<speed>	R + B	set ether data speed
		save		R + B	save ether data to spt
	dynamicPort				
		dump		U+R+B	display the relation between physical port and channel.
		set	<port> <type>	U+R+B	set physical port belongs to which channel.
		spt		U+R+B	display channel setting stored in SPT.

POE Related Command(All commands can only be used in Router Mode)[Home](#)

Command				Description
poe				
	status		[ch_name]	see poe status
	dial		<node>	dial a remote node
	drop		<node>	drop a pppoe call
	ether		[rfc3com]	set /display pppoe ether type
	proxy	disp		Display PPPoE proxy client session table
		active	[on off]	Turn on / off PPPoE proxy function
		debug	[on off]	Turn on / off PPPoE proxy debug function
		time	<interval>	Set the time out interval, it's a count. Actual time is count * 5 seconds.
		init		Initialize PPPoE proxy client session table
		flush		Clear PPPoE proxy client session table

PPTP Related Command (All commands can only be used in Router Mode)[Home](#)

Command				Description
pptp				
	dial		<rn-name>	dial a remote node
	drop		<rn-name>	drop a remote node call
	tunnel		<tunnel id>	display pptp tunnel information

AUX Related Command (All commands can only be used in Router Mode)[Home](#)

Command				Description
aux				
	atring		<device name>	Command the AT command to the device.
	cnt			
		disp	<device name>	display aux counter information
		clear	<device name>	clear aux counter information
	drop		<device name>	disconnect
	init		<device name>	initialize aux channel
	mstatus		<device name>	display modem last call status
	mtype		<device name>	display modem type
	netstat		<device name>	prints upper layer packet information
	rate		<device name>	show tx rx rate
	redirect		<device name>	invalid
	signal		<device name>	show aux signal

Configuration Related Command

(All commands can be used in both Router Mode and Bridge Mode)

[Home](#)

Command					Description
config					The parameters of config are listed below.
edit	firewall	active <yes/no>			Activate or deactivate the saved firewall settings

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	custom-service <entry#>	name <string>			Configure selected custom-service with name = <string>
		ip-protocol < icmp tcp udp tcp/udp user-defined>			Configure IP Protocol Type for selected custom-service
		port-range <start port> <end port>			When ip-protocol = “tcp udp tcp/udp “. configure port range for custom-service entry #. For single port configuration, start port equals to end port.
		user-defined-ip <1~65535>			When ip-protocol = “user-defined”. Configure user defined IP protocol.
		icmp-type <0~255>			When ip-protocol = “icmp”, configure ICMP type.
		icmp-code <0~255>			When ip-protocol = “icmp”, configure ICMP code. This field is optional for ICMP.
retrieve	firewall				Retrieve current saved firewall settings
save	firewall				Save the current firewall settings
	custom-service <entry#>				Save the custom service entry specified by <entry#>
	all				Save all working SPT buffer into flash.
display	firewall				Displays all the firewall settings
		set <set#>			Display current entries of a set configuration; including timeout values, name, default-permit, and number of rules in the set.
		set <set#>	rule <rule#>		Display current entries of a rule in a set.
		attack			Display all the attack alert settings in PNC
		e-mail			Display all the e-mail settings in PNC
		?			Display all the available sub commands
	custom-service				Display all configured custom services.
	custom-service <entry #>				Display custom service <entry #>
edit	firewall	e-mail	mail-server <mail server IP>		Edit the mail server IP to send the alert
			return-addr <e-mail address>		Edit the mail address for returning an email alert
			e-mail-to		Edit the mail address to send the alert

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			<e-mail address>		
			policy <full hourly daily weekly>		Edit email schedule when log is full or per hour, day, week.
			day <sunday monday tuesday wednesday thursday friday saturday>		Edit the day to send the log when the email policy is set to Weekly
			hour <0~23>		Edit the hour to send the log when the email policy is set to daily or weekly
			minute <0~59>		Edit the minute to send to log when the email policy is set to daily or weekly
			Subject <mail subject>		Edit the email subject
		attack	send-alert <yes no>		Activate or deactivate the firewall DoS attacks notification emails
			block <yes no>		Yes: Block the traffic when exceeds the tcp-max-incomplete threshold
					No: Delete the oldest half-open session when exceeds the tcp-max-incomplete threshold
			block-minute <0~255>		Only valid when sets 'Block' to yes. The unit is minute
			minute-high <0~255>		The threshold to start to delete the old half-opened sessions to minute-low
			minute-low <0~255>		The threshold to stop deleting the old half-opened session
			max-incomplete-high <0~255>		The threshold to start to delete the old half-opened sessions to max-incomplete-low
			max-incomplete-low <0~255>		The threshold to stop deleting the half-opened session
			tcp-max-incomplete <0~255>		The threshold to start executing the block field
		set <set#>	name <desired name>		Edit the name for a set
			default-permit <forward block>		Edit whether a packet is dropped or allowed when it does not match the default set
			icmp-timeout <seconds>		Edit the timeout for an idle ICMP session before it is terminated
			udp-idle-timeout <seconds>		Edit the timeout for an idle UDP session before it is terminated
			connection-timeout <seconds>		Edit the wait time for the SYN TCP sessions before it is terminated
			fin-wait-timeout <seconds>		Edit the wait time for FIN in concluding a TCP session before it is terminated
			tcp-idle-timeout <seconds>		Edit the timeout for an idle TCP session before it is terminated
			pnc <yes no>		PNC is allowed when 'yes' is set even there is a

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					rule to block PNC
			log <yes no>		Switch on/off sending the log for matching the default permit
			logone <yes no>		Switch on/off for one packet that create just one log message.
			rule <rule#>	action <permit drop reject>	Edit whether a packet is permitted, dropped or rejected when it matches this rule
				name <string>	Edit/Update rule name with <string>
				active <yes no>	Edit whether a rule is enabled or not
				protocol <0~255>	Edit the protocol number for a rule. 1=ICMP, 6=TCP, 17=UDP...
				log <none match not-match both>	Sending a log for a rule when the packet none matches not match both the rule
				alert <yes no>	Activate or deactivate the notification when a DoS attack occurs or there is a violation of any alert settings. In case of such instances, the function will send an email to the SMTP destination address and log an alert.
				srcaddr-single <ip address>	Select and edit a source address of a packet which complies to this rule
				srcaddr-subnet <ip address> <subnet mask>	Select and edit a source address and subnet mask if a packet which complies to this rule.
				srcaddr-range <start ip address> <end ip address>	Select and edit a source address range of a packet which complies to this rule.
				destaddr-single <ip address>	Select and edit a destination address of a packet which complies to this rule
				destaddr-subnet <ip address> <subnet mask>	Select and edit a destination address and subnet mask if a packet which complies to this rule.
				destaddr-range <start ip address> <end ip address>	Select and edit a destination address range of a packet which complies to this rule.
				tcp destport-single <port#>	Select and edit the destination port of a packet which comply to this rule. For non-consecutive port numbers, the user may repeat this command line to enter the multiple port numbers.
				tcp destport-range <start port#> <end port#>	Select and edit a destination port range of a packet which comply to this rule.
				udp destport-single <port#>	Select and edit the destination port of a packet which comply to this rule. For non-consecutive port numbers, users may repeat this command line to enter the multiple port numbers.
				udp destport-range <start port#> <end port#>	Select and edit a destination port range of a packet which comply to this rule.
				desport-custom <desired custom port name>	Type in the desired custom port name
				custom-ip <desired custom service name>	Type in the desired User Defined IP Protocol custom service.
				custom-icmp <desired custom service name>	Type in the desired ICMP custom service
delete	firewall	e-mail			Remove all email alert settings
		attack			Reset all alert settings to defaults
		set <set#>			Remove a specified set from the firewall

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					configuration
		set <set#>	rule <rule#>		Remove a specified rule in a set from the firewall configuration
insert	firewall	e-mail			Insert email alert settings
		attack			Insert attack alert settings
		set <set#>			Insert a specified rule set to the firewall configuration
		set <set#>	rule <rule#>		Insert a specified rule in a set to the firewall configuration
cli					Display the choices of command list.

IP Related Command

[Home](#)

Command				Flag	Description
ip					
	address		[addr]		display host ip address
	alias		<iface>	R	alias iface
	aliasdis		<0 1>	R	disable alias
	alg				
		disp			Show ALG enable disable status
		enable	<ALG FTP ALG H323 ALG SIP>		Enable ALG command
		disable	<ALG FTP ALG H323 ALG SIP>		Disable ALG command
		siptimeout	<timeout in second> or 0 for no timeout		Configure SIP timeout command
	arp				
		status	<iface>		display ip arp status
	dhcp		<iface>	R	
		client		R	
			release	R	release DHCP client IP
			renew	R	renew DHCP client IP
			release <entry num>	R	release specific entry of the dhcp server pool
		status	[option]	R	show dhcp status
	dns			R	
		query		R	
			address <ipaddr> [timeout]	R	resolve ip-addr to name
			Debug <num>	R	enable dns debug value
			Name <hostname> [timeout]	R	resolve name to multiple IP addresses
			Status	R	display dns query status
			Table	R	display dns query table
		server	<primary> [secondary] [third]	R	set dns server
		stats		R	
			Clear	R	clear dns statistics
			Disp	R	display dns statistics
		table		R	display dns table
		default	<ip>	R	Set default DNS server
		system			
			display		display dns system information
			edita <record idx> <name> <0:FQDN 1:wildcard> <0:from ISP group 1:user defined> <isp group idx ip address>		edit dns A record
			editns <record idx> <*> domain name> <0:from ISP 1:user defined(public) 2: user defined(private)> <isp group idx dns server ip>		edit dns NS record

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			inserta <before record idx -1:new> <name> <0:FQDN 1:wildcard> <0:from ISP group 1:user defined> <isp group idx ip address>		insert dns A record
			insertns <before record idx -1:new> <*<domain name> <0:from ISP 1:user defined(public) 2: user defined(private)> <isp group idx dns server ip>		insert dns NS record
			movea <record idx> <record idx>		move dns A record
			movens <record idx> <record idx>		move dns NS record
			dela <record idx>		delete DNS A record
			delns <record idx>		delete DNS NS record
		system cache			
			disp <0:none 1:name 2:type 3:IP 4:refCnt 5:ttl> [0:increase 1:decrease]		display DNS cache table
			flush		flush DNS cache
			negaperiod <second(60 ~ 3600)>		set negative cache period
			negative <0: disable 1: enable>		enable/disable dns negative cache
			positive <0: disable 1: enable>		enable/disable dns positive cache
			ttl <second(60 ~ 3600)>		set positive cache maximum ttl
	Httpd			R + B	
		debug	[on/off]	R + B	set http debug flag
	icmp				
		status		R + B	display icmp statistic counter
		discovery	<iface> [on/off]	R + B	set icmp router discovery flag
	ifconfig		[iface] [ipaddr] [broadcast <addr> mtu <value> dynamic]	R + B	configure network interface
	ping		<hostid>	R + B	ping remote host
	route			R	
		status	[if]	R	display routing table
		add	<dest_addr default>[/<bits>] <gateway> [<metric>]	R	add route
		addiface	<dest_addr default>[/<bits>] <gateway> [<metric>]	R	add an entry to the routing table to iface
		drop	<host addr> [/<bits>]	R	drop a route
	status			R + B	display ip statistic counters
	stroute			R	
		display	[rule # buf]	R	display rule index or detail message in rule.
		load	<rule #>	R	load static route rule in buffer
		save		R	save rule from buffer to spt.
		config		R	
			name <site name>	R	set name for static route.
			destination <dest addr>[/<bits>] <gateway> [<metric>]	R	set static route destination address and gateway.
			mask <IP subnet mask>	R	set static route subnet mask.
			gateway <IP address>	R	set static route gateway address.
			metric <metric #>	R	set static route metric number.
			private <yes/no>	R	set private mode.
			active <yes/no>	R	set static route rule enable or disable.
	udp			R + B	
		status		R + B	display udp status
	tcp			R + B	
		status	[tcb] [<interval>]	R + B	display TCP statistic counters

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	telnet		<host> [port]	R + B	execute telnet client command
	tracroute		<host> [ttl] [wait] [queries]	R + B	send probes to trace route of a remote host
	xparent			R	
		join	<iface1> [<iface2>]	R	join iface2 to iface1 group
		break	<iface>	R	break iface to leave ipxparent group
	urlfilter			R + B	
		customize		R + B	
			display	R + B	display customize action flags
			actionFlags [filterList/disableAllExceptTrusted/unblock RWFTToTrusted/keywordBlock/fullPath/cas eInsensitive/fileName][enable/disable]	R + B	set action flags
			logFlags [type(1-3)][enable/disable]	R + B	set log flags
			add [string] [trust/untrust/keyword]	R + B	add url string
			delete [string] [trust/untrust/keyword]	R + B	delete url string
			reset	R + B	clear all information
		general		R + B	
			enable	R + B	enable/disable url filter function
			display	R + B	display content filter's general setting
			webFeature	R + B	[block/nonblock] [activex/java/cookei/webproxy]
			timeOfDay[always/hh:mm] [hh:mm]	R + B	set block time
			exemptZone display	R + B	display exemptzone information
			exemptZone actionFlags [type(1-3)][enable/disable]	R + B	set action flags
			exemptZone add [ip1] [ip2]	R + B	add exempt range
			exemptZone delete [ip1] [ip2]	R + B	delete exempt range
			exemptZone reset	R + B	clear exemptzone information
			reset	R + B	reset content filter's general setting
		webControl		R + B	
			enable	R + B	enable cbr filter
			display	R + B	display cbr filter's setting
			logAndBlock [log/block/both]	R + B	set log or block on matched web site
			category	R + B	set blocked categories
			serverList display	R + B	display current cbr filter servers
			serverList refresh	R + B	refresh cbr filter servers
			queryURL [url][Server/localCache]	R + B	query url need to block or forward according the database on server or local cache
			cache display	R + B	display the local cache entries
			cache delete [entrynum/All]	R + B	delete the local cache entries
			cache timeout [hour]	R + B	Set timeout value of cache entries
			blockonerror [log/block][on/off]	R + B	choose log or block when server is unavailable
			unratedwebsite[block log][on/off]		choose log or block for unrated web site
			waitingTime [sec]	R + B	set waiting time for server
			reginfo display	R + B	display the license key with cerberian
			reginfo refresh	R + B	Check whether device had been registered and write the original license key to flash
			zssw	R + B	change the zssw's URL
	tredir			R	
		failcount	<count>	R	set tredir failcount

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		partner	<ipaddr>	R	set tredir partner
		target	<ipaddr>	R	set tredir target
		timeout	<timeout>	R	set tredir timeout
		checktime	<period>	R	set tredir checktime
		active	<on/off>	R	set tredir active
		save		R	save tredir information
		disp		R	display tredir information
		debug	<value>	R	set tredir debug value
	rpt			R + B	
		active	[0:lan 1:dmz][1:yes 0:no]	R + B	active report
		start		R + B	start report
		stop		R + B	stop report
		url	[num]	R + B	top url hit list
		ip	[num]	R + B	top ip addr list
		srv	[num]	R + B	top service port list
	dropIcmp		[0 1]	R + B	to drop ICMP fragment packets
	nat			R	
		period	[period]	R	set nat timer period
		port	[port]	R	set nat starting external port number
		checkport		R	verify all server tables are valid
		timeout		R	
			gre [timeout]	R	set nat gre timeout value
			iamt [timeout]	R	set nat iamt timeout value
			generic [timeout]	R	set nat generic timeout value
			reset [timeout]	R	set nat reset timeout value
			tcp [timeout]	R	set nat tcp timeout value
			tcpother [timeout]	R	set nat tcp other timeout value
			udp [port] <value>	R	set nat udp timeout value of specific port
		update		R	create nat system information from spSysParam
		iamt	<iface>	R	display nat iamt information
		iface	<iface>	R	show nat status of an interface
		lookup	<rule set>	R	display nat lookup rule
		new-lookup	<rule set>	R	display new nat lookup rule
		loopback	[on/off]	R	turn on/off nat loopback flag
		reset	<iface>	R	reset nat table of an iface
		server		R	
			disp	R	display nat server table
			load <set id>	R	load nat server information from ROM
			save	R	save nat server information to ROM
			clear <set id>	R	clear nat server information
			edit active <yes/no>	R	set nat server edit active flag
			edit svrport <start port> [end port]	R	set nat server server port
			edit intport <start port> [end port]	R	set nat server forward port
			edit remotehost <start ip> [end ip]	R	set nat server remote host ip
			edit leasetime [time]	R	set nat server lease time
			edit rulename [name]	R	set nat server rule name
			edit forwardip [ip]	R	set nat server server ip
			edit protocol [protocol id]	R	set nat server protocol
			edit clear	R	clear one rule in the set
		service		R	
			irc [on/off]	R	turn on/off irc flag
			xboxlive [on/off]	R	turn on/off xboxlive flag

		resetport	aol [on/off]	R	Turn on/off aol flag
		incikeport	<iface>[on/off]	R	reset all nat server table entries
		session	[session per host]	R	turn on/off increase ike port flag
		deleteslot	<iface> <slot>	R	set nat session per host value
		routing	[0:LAN 1:DMZ] [0:no 1:yes]	R	delete specific slot of iface
	igmp			R	set NAT routing attributes
		debug	[level]	R	
		forwardall	[on/off]	R	set igmp debug level
		querier	[on/off]	R	turn on/off igmp forward to all interfaces flag
		iface		R	turn on/off igmp stop query flag
			<iface> grouptm <timeout>	R	
			<iface> interval <interval>	R	set igmp group timeout
			<iface> join <group>	R	set igmp query interval
			<iface> leave <group>	R	join a group on iface
			<iface> query	R	leave a group on iface
			<iface> rsptime [time]	R	send query on iface
			<iface> start	R	set igmp response time
			<iface> stop	R	turn on of igmp on iface
			<iface> ttl <threshold>	R	turn off of igmp on iface
			<iface> v1compat [on/off]	R	set ttl threshold
		robustness	<num>	R	turn on/off v1compat on iface
		status		R	set igmp robustness variable
				R	dump igmp status

IPSec Related Command (All commands can only be used in Router Mode)

[Home](#)

Command				Description
ipsec	debug	type	<0:Disable 1:Original on/off 2:IKE on/off 3: IPSec [SPI]on/off 4:XAUTH on/off 5:CERT on/off 6: All>	Turn on/off trace for IPsec debug information
		level	<0:None 1:User 2:Low 3:High>	Set the debug level. Higher number means more detailed.
		display		Show debugging information, include type and level.
	route	dmz	<on/off>	After a packet is IPsec processed and will be sent to DMZ side, this switch is to control if this packet can be applied IPsec again.
				Remark: Only supported in ZyWALL100
		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.
				Remark: Command available since 3.50(WA.3)
		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_run time	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.
		List		Display brief runtime phase 1 and phase 2 SA

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				information
	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_conn.	<0~255>	- Adjust auto-timer to check if any IPSec connection has “only outbound traffic but no inbound 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 30 minutes
				- 0 means never update
		chk_input	<0~255>	- Adjust input timer to check if any IPSec connection has no inbound traffic for a certain period. If yes, system will disconnect it.
				- Interval is in minutes
				- Default is 2 minutes
				- 0 means never timeout
	updatePeerIp			Force system to update IPSec rules which use domain name as the secure gateway IP right away.
	dial	<rule index> <policy index>		Initiate IPSec rule <#> policy <#> from ZyWALL box
	ikeDisplay	<rule #>		Display IKE rule #, if no rule number assigned, this command will show current working buffer. NOTE: If working buffer is null, it will show error messages. Please ADD or EDIT an IKE rule before display.
	ikeAdd			Create a working buffer for IKE rule.
	ikeEdit	<rule #>		Edit an existing IKE rule #
	ikeSave			Save working buffer of IKE rule to romfile.
	ikeList			List all IKE rules
	ikeDelete	<rule #>		Delete IKE rule #
	ikeConfig	name	<string>	Set rule name (max length is 31)
		negotiationMode	<0:Main 1:Aggressive>	Set negotiation mode
		natTraversal	<Yes No>	Enable NAT traversal or not.
		multiPro	<Yes No>	Enable multiple proposals in IKE or not
		lclIdType	<0:IP 1:DNS 2:Email>	Set local ID type
		lclIdContent	<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
		authMethod	<0:PreSharedKey 1:RSASignature 2:preShare Key+XAUTH 3:RSASignature+XAUTH>	Set authentication method in phase 1 in IKE
		preShareKey	<ASCII 0xHEX>	Set pre shared key in phase 1 in IKE
		certificate	<certificate name>	Set certificate file if using RSA signature as authentication method.

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		encryAlgo	<0:DES 1:3DES 2:AES>	Set encryption algorithm in phase 1 in IKE
		authAlgo	<0:MD5 1:SHA1>	Set authentication algorithm in phase 1 in IKE
		saLifeTime	<seconds>	Set sa life time in phase 1 in IKE
		keyGroup	<0:DH1 1:DH2>	Set key group in phase 1 in IKE
		xauth	type <0:Client Mode 1:Server Mode>	Set client or server mode.
			username <name>	Set xauth user name
			password <password>	Set xauth password
			radius <username> <password>	Set radius username and password
	ipsecDisplay	<rule #>		Display IPSec rule #, if no rule number assigned, this command will show current working buffer. NOTE: If working buffer is null, it will show error messages. Please ADD or EDIT an IPSec rule before display.
	ipsecAdd			Create a working buffer for IPSec rule.
	ipsecEdit	<rule #>		Edit IPSec rule #
	ipsecSave			Save working buffer of IPSec rule to romfile.
	ipsecList			List all IPSec rules
	ipsecDelete	<rule #>		Delete IPSec rule #
	ipsecConfig	name	<string>	Set rule name. (max length is 31)
		active	<Yes No>	Set active or not
		saIndex	<index>	Bind to which IKE rule.
		multiPro	<Yes No>	Enable multiple proposals in IPSec or not
		nailUp	<Yes No>	Enable nailed-up or not
		activeProtocol	<0:AH 1:ESP>	Set active protocol in IPSec
		encryAlgo	<0:Null 1:DES 2:3DES 3:AES>	Set encryption algorithm in IPSec
		encryKeyLen	<0:128 1:192 2:256>	Set encryption key length in IPSec
		authAlgo	<0:MD5 1:SHA1>	Set authentication algorithm in IPSec
		saLifeTime	<seconds>	Set sa life time in IPSec
		encap	<0:Tunnel 1:Transport>	set encapsulation in IPSec
		pfs	<0:None 1:DH1 2:DH2>	set pfs in phase 2 in IPSec
		antiReplay	<Yes No>	Set antireplay or not
		controlPing	<Yes No>	Enable control ping or not
		logControlPing	<Yes No>	Enable logging control ping events or not
		controlPingAddr	<IP>	Set control ping address
		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
	policyList			List all IPSec policies
	manualDisplay	<rule #>		Display manual rule #

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	manualAdd			Add manual rule
	manualEdit	<rule #>		Edit manual rule #
	manualSave			Save IPSec rules
	manualList			List all IPSec rule
	manualDelete	<rule #>		Delete IPSec rule #
	manualConfig	name	<string>	Set rule name
		active	<Yes No>	Set active or not
		myIpAddress	<IP address>	Set my IP address
		secureGwAddr	<IP address>	Set secure gateway
		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
		activeProtocol	<0:AH 1:ESP>	Set active protocol in 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
		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
	manualPolicyList			List all manual policy
	swSkipOverlapIp		<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.
	Drop		<policy index>	Drop a active tunnel.

Firewall Related Command (All command can be used in both Router Mode and Bridge Mode) [Home](#)

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Command					Description
sys	Firewa ll				
		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.
		dynamice rule			
			display		Display firewall dynamic rules
		tcpreset			
			reset		Set TCP reset sending on/off.
			reset 113		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			
			triangle		Set if firewall ignore triangle route in lan/wan/dmz/wlan
		schedule			
			load [set # rule #]		Load firewall ACL schedule by rule.
			display		Display ACL schedule in buffer.
			save		Save buffer data and update runtime firewall ACL rule.
			week		
				monday [on/off]	Set schedule on or off by day – Monday.
				tuesday [on/off]	Set schedule on or off by day – Tuesday.
				wednesday [on/off]	Set schedule on or off by day – Wednesday.
				thursday [on/off]	Set schedule on or off by day – Thursday.
				friday [on/off]	Set schedule on or off by day – Friday.
				saturday [on/off]	Set schedule on or off by day – Saturday.
				sunday [on/off]	Set schedule on or off by day – Sunday.
				allweek [on/off]	Quick set schedule on or off by week.
			timeOfDay [always/hh:mm]		Set firewall ACL schedule block time of day.

Certificate Management (PKI) Command

(All commands can be used in both Router Mode and Bridge Mode)

[Home](#)

Command				Description
certificates				
	my_ce			

	rt			
		create		
			selfsigned <name> <subject> [key size]	Create a self-signed local host certificate. <name> specifies a descriptive name for the generated certificate. <subject> specifies a subject name (required) and alternative name (required). The format is "subject-name-dn; {ip,dns,email}=value". If the name contains spaces, please put it in quotes. [key size] specifies the key size. It has to be an integer from 512 to 2048. The default is 1024 bits.
			request <name> <subject> [key size]	Create a certificate request and save it to the router for later manual enrollment. <name> specifies a descriptive name for the generated certification request. <subject> specifies a subject name (required) and alternative name (required). The format is "subject-name-dn; {ip,dns,email}=value". If the name contains spaces, please put it in quotes. [key size] specifies the key size. It has to be an integer from 512 to 2048. The default is 1024 bits.
			scep_enroll <name> <CA addr> <CA cert> <auth key> <subject> [key size]	Create a certificate request and enroll for a certificate immediately online using SCEP protocol. <name> specifies a descriptive name for the enrolled certificate. <CA addr> specifies the CA server address. <CA cert> specifies the name of the CA certificate. <auth key> specifies the key used for user authentication. If the key contains spaces, please put it in quotes. To leave it blank, type "". <subject> specifies a subject name (required) and alternative name (required). The format is "subject-name-dn; {ip,dns,email}=value". If the name contains spaces, please put it in quotes. [key size] specifies the key size. It has to be an integer from 512 to 2048. The default is 1024 bits.
			cmp_enroll <name> <CA addr> <CA cert> <auth key> <subject> [key size]	Create a certificate request and enroll for a certificate immediately online using CMP protocol. <name> specifies a descriptive name for the enrolled certificate. <CA addr> specifies the CA server address. <CA cert> specifies the name of the CA certificate. <auth key> specifies the id and key used for user authentication. The format is "id:key". To leave the id and key blank, type ":". <subject> specifies a subject name (required) and alternative name (required). The format is "subject-name-dn; {ip,dns,email}=value". If the name contains spaces, please put it in quotes. [key size] specifies the key size. It has to be an integer from 512 to 2048. The default is 1024 bits.
		import [name]		Import the PEM-encoded certificate from stdin. [name] specifies the descriptive name (optional) as which the imported certificate is to be saved. For my certificate importation to be successful, a certification request corresponding to the imported certificate must already exist on ZyWALL. After the importation, the certification request will automatically be deleted. If a descriptive name is not specified for the imported certificate, the certificate will adopt the descriptive name of the certification request.
		export <name>		Export the PEM-encoded certificate to stdout for user to copy and paste. <name> specifies the name of the certificate to be exported.
		view <name>		View the information of the specified local host certificate. <name> specifies the name of the certificate to be viewed.
		verify <name> [timeout]		Verify the certification path of the specified local host certificate. <name> specifies the name of the certificate to be verified. [timeout] specifies the timeout value in seconds (optional). The default timeout value is 20 seconds.
		delete <name>		Delete the specified local host certificate. <name> specifies the

				name of the certificate to be deleted.
		list		List all my certificate names and basic information.
		rename <old name> <new name>		Rename the specified my certificate. <old name> specifies the name of the certificate to be renamed. <new name> specifies the new name as which the certificate is to be saved.
		def_selfsigned [name]		Set the specified self-signed certificate as the default self-signed certificate. [name] specifies the name of the certificate to be set as the default self-signed certificate. If [name] is not specified, the name of the current self-signed certificate is displayed.
	ca_trusted			
		import <name>		Import the PEM-encoded certificate from stdin. <name> specifies the name as which the imported CA certificate is to be saved.
		export <name>		Export the PEM-encoded certificate to stdout for user to copy and paste. <name> specifies the name of the certificate to be exported.
		view <name>		View the information of the specified trusted CA certificate. <name> specifies the name of the certificate to be viewed.
		verify <name> [timeout]		Verify the certification path of the specified trusted CA certificate. <name> specifies the name of the certificate to be verified. [timeout] specifies the timeout value in seconds (optional). The default timeout value is 20 seconds.
		delete <name>		Delete the specified trusted CA certificate. <name> specifies the name of the certificate to be deleted.
		list		List all trusted CA certificate names and basic information.
		rename <old name> <new name>		Rename the specified trusted CA certificate. <old name> specifies the name of the certificate to be renamed. <new name> specifies the new name as which the certificate is to be saved.
		crl_issuer <name> [on off]		Specify whether or not the specified CA issues CRL. <name> specifies the name of the CA certificate. [on off] specifies whether or not the CA issues CRL. If [on off] is not specified, the current crl_issuer status of the CA.
	remote_trusted			
		import <name>		Import the PEM-encoded certificate from stdin. <name> specifies the name as which the imported remote host certificate is to be saved.
		export <name>		Export the PEM-encoded certificate to stdout for user to copy and paste. <name> specifies the name of the certificate to be exported.
		view <name>		View the information of the specified trusted remote host certificate. <name> specifies the name of the certificate to be viewed.
		verify <name> [timeout]		Verify the certification path of the specified trusted remote host certificate. <name> specifies the name of the certificate to be verified. [timeout] specifies the timeout value in seconds (optional). The default timeout value is 20 seconds.
		delete <name>		Delete the specified trusted remote host certificate. <name> specifies the name of the certificate to be deleted.
		list		List all trusted remote host certificate names and basic information.
		rename <old name> <new name>		Rename the specified trusted remote host certificate. <old name> specifies the name of the certificate to be renamed. <new name> specifies the new name as which the certificate is to be saved.
	dir_service			
		add <name>		Add a new directory service. <name> specifies a descriptive name

		<addr[:port]> [login:pswd]		as which the added directory server is to be saved. <addr[:port]> specifies the server address (required) and port (optional). The format is "server-address[:port]". The default port is 389. [login:pswd] specifies the login name and password, if required. The format is "[login:password]".
		delete <name>		Delete the specified directory service. <name> specifies the name of the directory server to be deleted.
		view <name>		View the specified directory service. <name> specifies the name of the directory server to be viewed.
		edit <name> <addr[:port]> [login:pswd]		Edit the specified directory service. <name> specifies the name of the directory server to be edited. <addr[:port]> specifies the server address (required) and port (optional). The format is "server-address[:port]". The default port is 389. [login:pswd] specifies the login name and password, if required. The format is "[login:password]".
		list		List all directory service names and basic information.
		rename <old name> <new name>		Rename the specified directory service. <old name> specifies the name of the directory server to be renamed. <new name> specifies the new name as which the directory server is to be saved.
	cert_m anager			
		reinit		Reinitialize the certificate manager.

Bandwidth management Related Command

(All commands can be used in both Router Mode and Bridge Mode)

[Home](#)

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
		wan	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
		dmz	enable	<bandwidth xxx>	Enable bandwidth management in DMZ 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 DMZ
		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.

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				<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
	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.
		wan	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.
		dmz	add #	bandwidth xxx	<name xxx>	Add a class with bandwidth xxx bps in DMZ. 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 DMZ. 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 DMZ.

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		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 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 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.
	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.
		wan	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.
		dmz	add #	Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol		Add a filter for class # in DMZ. 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 DMZ.
		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.
	show	interface	lan			Show the interface settings of LAN
			wan			Show the interface settings of WAN
			dmz			Show the interface settings of DMZ
			wlan			Show the interface settings of WLAN
		class	lan			Show the classes settings of LAN
			wan			Show the classes settings of WAN
			dmz			Show the classes settings of DMZ
			wlan			Show the classes settings of WLAN
		filter	lan			Show the filters settings of LAN
			wan			Show the filters settings of WAN
			dmz			Show the filters settings of DMZ
			wlan			Show the filters settings of WLAN
		statistics	lan			Show the statistics of the classes in LAN
			wan			Show the statistics of the classes in WAN
			dmz			Show the statistics of the classes in DMZ
			wlan			Show the statistics of the classes in WLAN
	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.
		wan	<#>			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.
		dmz	<#>			Monitor the bandwidth of class # in DMZ. If the class is not specific, all the classes in DMZ 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.
	config	save				Save the configuration.
		load				Load the configuration.
		clear				Clear the configuration.

Bridge Related Command

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Command				Flag	Description
bridge				R + B	
	cnt			R + B	related to bridge routing statistic table
		disp		R + B	display bridge route counter
		clear		R + B	clear bridge route counter
	iface			R + B	Related to "bridge mode" access interface
		active	<yes/no>	R + B	Active bridge mode iface or not
		address	[ip]	B	Remote access IP address
		dns1	[ip]	B	First DNS server
		dns2	[ip]	B	Second DNS server
		dns3	[ip]	B	Third DNS server
		mask	[network mask]	B	Network mask
		gateway	[gateway ip]	B	Network gateway
		display		B	Display whole interface information
	stat			R + B	related to bridge packet statistic table
		disp		R + B	display bridge route packet counter
		clear		R + B	clear bridge route packet counter