

# **ZYXEL**

## **Firmware Release Note**

**USG1100**

**Release V4.25(AAPK.1)C0**

Date: Jul 13, 2017

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## **ZYXEL USG1100**

### **Release V4.25(AAPK.1)C0**

#### **Release Note**

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Date: Jul 13, 2017

#### **Supported Platforms:**

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ZYXEL USG1100

#### **Versions:**

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ZLD Version: V4.25(AAPK.1) | 2017-07-13 10:43:53

#### **Files lists contains in the Release ZIP file**

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**File name: 425AAPK1C0.bin**

Purpose: This binary firmware image file is for normal system update.

Note: The firmware update may take five or more minutes depending on the scale of device configuration. The more complex the configuration, the longer the update time. Do not turn off or reset the ZyWALL/USG while the firmware update is in progress. The firmware might get damaged, if device loss power or you reset the device during the firmware upload. You might need to refer to Appendix 3 of this document to recover the firmware.

**File name: 425AAPK1C0.conf**

Purpose: This ASCII file contains default system configuration commands.

**File name: 425AAPK1C0.pdf**

Purpose: This release file.

**File name: 425AAPK1C0.ri**

Purpose: This binary firmware recovery image file is for emergent system firmware damage recovery only.

Note: The ZyWALL/USG firmware could be damaged, for example by the power going off or pressing Reset button during a firmware update.

**File name: 425AAPK1C0-MIB.zip**

Purpose: The MIBs are to collect information on device. The focus of the MIBs is to let administrators collect statistical data and monitor status and performance. The zip file includes several files: 425AAPK1C0-enterprise.mib, 425AAPK1C0-private.mib, ZYXEL-ES-SMI.MIB, ZYXEL-ES-CAPWAP.MIB, ZYXEL-ES-COMMON.MIB and ZYXEL-ES-ProWLAN.MIB. Please import ZYXEL-ES-SMI.MIB first.

**File name: 425AAPK1C0-opensource-list.xls**

Purpose: This file lists the open source packages.

**File name: 3G dongle compatibility table v106.xlsx, 3G patch file v106.wwan**

Purpose: Mobile broadband dongle support list.

## Read Me First

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1. The system default configuration is summarized as below:
  - The default device administration username is "admin", password is "1234".
  - The default LAN interface is ge3, which are P3 port on the front panel. The default IP address of lan1 is 192.168.1.1/24.
  - By default, WWW/SSH/SNMP service can only be accessed from LAN subnet.
  - The default WAN interface is ge1, and the secondary WAN interface is ge2. These two interfaces will automatically get IP address using DHCP by default.
  - For new model, requires connecting to myZyxel to complete device registration and Security Service activation.
2. Recommended upgrade to ZLD4.15 patch2 C0 or later version first before upgrading to ZLD4.25.
3. Please note we made some changes to download the latest security gateway firmware, for latest firmware download instruction please reference to: [Firmware Upgrade Service Guide](#).
4. It is recommended that user backs up "startup-config.conf" file first before upgrading firmware. The backup configuration file can be used if user wants to downgrade to an older firmware version.
5. If user upgrades from previous released firmware to this version, there is no need to restore to system default configuration.

6. When getting troubles in configuring via GUI (popup java script error, etc.), it is recommended to clear browser's cache first and try to configure again.
7. To reset device to system default, user could press RESET button for 5 seconds and the device would reset itself to system default configuration and then reboot.
  - Note: After resetting, the original configuration would be removed. It is recommended to backup the configuration before this operation.
8. If ZyWALL/USG can't reboot successfully after firmware upgrade, please refer to Appendix 3: Firmware Recovery.
9. If you use a WK-Version, please contact local Support Team for Upgrade Information.

## Design Limitations:

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Note: Design Limitations described the system behavior or limitations in current version. They will be created into knowledge base.

### APP Patrol

1. [SPR: 140425359, 140425375]

[Symptom]

If a profile is to block browser only (ex. Chrome, IE), it may not take effect because "user access website" have higher priority for matching.

### Build in Service

1. [SPR: 061208575]

[Symptom]

If users change port for built-in services (FTP/HTTP/SSH/TELNET) and the port conflicts with other service or internal service, the service might not be brought up successfully. The internal service ports include 50001/10443/10444/1723/2601-2604/2158/953. Users should avoid using these internal ports for built-in services.

[Workaround]

Users should avoid using these internal ports for built-in services.

### DNS

1. [SPR: 140425458]

[Symptom]

DUT does not support \*.com A-record PTR.

2. [SPR: 150122977]

[Symptom]

DNS security option will deny device local out DNS query

[Condition]

1. Edit the customize rule of DNS security option, and set the query recursion as deny.
2. If device's WAN IP address is in the customize address range, device local-out DNS query will be deny.

### GUI

1. Following are the table list for supporting GUI browser:

Operating System	For Administrator Login	For User Login
------------------	-------------------------	----------------

Windows 7 (X64) (SP1)	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version
Windows 7 (X32) (SP1)	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version
Windows 8.0, 8.1 (X64)	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version
Windows 8.0, 8.1 (X32)	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version	Internet Explorer 10.x, 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version
Windows 10 (X64)	Internet Explorer 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version edge latest version	Internet Explorer 11.x Chrome latest version Firefox latest version Opera latest version Safari latest version edge latest version
Linux OS(Ubuntu13.10x86)	Firefox latest version Opera latest version	Firefox latest version Opera latest version
Apple MAC OS X	Safari latest version Firefox latest version	Safari latest version Firefox latest version
iOS	8 latest version 9 latest version 10 latest version	8 latest version 9 latest version 10 latest version
Android	latest version	latest version

\* Not support Opera browser 10.6x

## 2. [SPR: 100415854]

[Symptom]

The GUI's initial help page's behavior was wrong.

[Condition]

1. In the GUI Interface page press the Site Map page, it will pop-up the window.
2. Press the question mark (?), GUI will open the Site Map's help page.
3. Close the help and Site Map window, press the Interface page's Help link.
4. It still opens the Site Map's help page.

## 3. [SPR: 100914249]

[Symptom]



IE7/8 sometimes shows "Stop running this script? A script on this page is causing Internet Explorer to run slowly. If it continues to run, your computer may become unresponsive." when configuring device.

Please update IE patch: <http://support.microsoft.com/kb/175500> for fixing this issue

## Interface

### 1. [SPR: 100105242, 100105292]

#### [Symptom]

PPTP might not be able to connect successfully if it is configured via Installation Wizard/Quick Setup. This is because:

1. Installation Wizard/Quick Setup only allows PPTP based interface to be configured with Static IP.
2. Installation Wizard/Quick Setup doesn't allow user to configure PPTP based interface's Gateway IP Address. This may cause PPTP cannot connect successfully if the PPTP Server IP is not at the same subnet with PPTP's based interface

#### [Workaround]

Before dial PPTP connection, configure the Gateway IP of PPTP interface's based interface

## IPSec VPN

### 1. [SPR: 070814168]

#### [Symptom]

VPN tunnel could not be established when:

1. a non ZyWALL/USG peer gateway reboot and
2. ZyWALL/USG has a previous established Phase 1 with peer gateway, and the Phase 1 has not expired yet. Under those conditions, ZyWALL/USG will continue to use the previous phase 1 SA to negotiate the Phase 2 SA. It would result in phase 2 negotiation to fail.

#### [Workaround]

User could disable and re-enable phase 1 rule in ZyWALL/USG or turn on DPD function to resolve problem.

### 2. [SPR: 100429119]

#### [Symptom]

VPN tunnel might be established with incorrect VPN Gateway

#### [Condition]

1. Prepare 2 ZyWALL/USG and reset to factory default configuration on both ZyWALL/USGs
2. On ZyWALL/USG-A:
  1. Create 2 WAN interfaces and configure WAN1 as DHCP Client
  2. Create 2 VPN Gateways. The "My Address" is configured as Interface type and select WAN1 and WAN2 respectively
  3. Create 2 VPN Connections named VPN-A and VPN-B accordingly which bind on the VPN Gateways we just created
3. On ZyWALL/USG-B
  1. Create one WAN interface
  2. Create one VPN Gateway. The Primary Peer Gateway Address is configured as WAN1 IP address of ZyWALL/USG-A and the Secondary Peer Gateway Address is configured as WAN2 IP address of ZyWALL/USG-A
4. Connect the VPN tunnel from ZyWALL/USG-B to ZyWALL/USG-A and we can see VPN-A is connected on ZyWALL/USG-A
5. Unplug WAN1 cable on ZyWALL/USG-A
6. After DPD triggered on ZyWALL/USG-B, the VPN Connection will be established again
7. On ZyWALL/USG-A, VPN-A is connected. But actually ZyWALL/USG-B should connect to VPN-B after step 5.

[Workaround]

Change the WAN1 setting of ZyWALL/USG-A to Static IP

3. [SPR: 140304057]

[Symptom]

After inactivating GRE over IPSec, old connection may remain if the traffic flows continuously. This may cause by traffic bounded with old connection.

[Workaround]

Stop traffic for 180 seconds and the internal connection record will time out.

4. [SPR: 140416738]

[Symptom]

Ignore don't fragment setting cannot take effect immediately if there already existed the same connection.

[Workaround]

Stop traffic for 180 seconds and the internal connection record will time out.

5. The following VPN Gateway rules configured on the ZyWALL/USG cannot be provisioned to the IPSec VPN Client:

1. IPv4 rules with IKEv2 version

2. IPv4 rules with User-based PSK authentication
3. IPv6 rules

## SSL VPN

1. Following are the table list for SSL VPN supporting applications and operating systems:

Applications Operating System	Full Tunnel Mode	Reverse Proxy Mode	RDP	VNC
		File Sharing(Web-based Application)		
Windows 7 (X64) (SP1)  Java 7u45 or later	Internet Explorer 10.x, 11.x  Chrome 45.x, 49.x, 50.x to latest version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x  Chrome 45.x, 49.x, 50.x to latest version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x	Internet Explorer 10.x, 11.x Chrome 45.x, 49.x, 50.x to latest version Firefox latest version Safari latest version
Windows 7 (X32) (SP1)  Java 7u45 or later	Internet Explorer 10.x, 11.x  Chrome 45.x, 49.x, 50.x to latest version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x  Chrome 45.x, 49.x, 50.x to latest version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x	Internet Explorer 10.x, 11.x Chrome 45.x, 49.x, 50.x to latest version Firefox latest version Safari latest version
Windows 8, 8.1 (X64)  Java 7u45 or later	Internet Explorer 10.x, 11.x  Chrome 44.x or previous version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x  Chrome 44.x or previous version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x	Internet Explorer 10.x, 11.x Chrome 44.x or previous version Firefox latest version Safari latest version
Windows 8, 8.1 (X32)  Java 7u45 or later	Internet Explorer 10.x, 11.x  Chrome 45.x, 49.x, 50.x to latest version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x  Chrome 45.x, 49.x, 50.x to latest version  Firefox latest version  Safari latest version	Internet Explorer 10.x, 11.x	Internet Explorer 10.x, 11.x Chrome 45.x, 49.x, 50.x to latest version Firefox latest version Safari latest version
Windows 10 (X64) Java 7u45 or later	Internet Explorer 11.x Chrome 45.x, 49.x, 50.x to latest version	Internet Explorer 11.x Chrome 45.x, 49.x, 50.x to latest version	Internet Explorer 11.x	Internet Explorer 11.x Chrome 45.x,

later	latest version Firefox latest version edge latest version	latest version Firefox latest version edge latest version		49.x, 50.x to latest version Firefox latest version
MAC OSX (10.9)	Safari latest version Chrome latest version	Safari latest version Chrome latest version	Not support	Firefox 45.0.x
Java 7	Firefox latest version			

## 2. [SPR: 100419034]

[Symptom]

SSLVPN of VNC cannot work if user connects VNC application by FQDN.

## L2TP VPN

- Following are the table list for L2TP VPN supporting L2TP client and operating systems:

L2TP Client	OS type
Windows L2TP client	Windows 7 32/64 Windows 8 32/64 Windows 10 32/64
iPhone/iPad L2TP client	iOS 8 latest Version iOS 9.latest Version
Android L2TP client	Google Phone
Mac L2TP client	X10.8.3

## 2. [SPR: N/A]

[Symptom]

L2TP connection will break sometimes with Android device. This issue comes from the L2TP Hollow packet will not be replied by Android system.

## User Aware

- [SPR: 070813119]

[Symptom]

Device supports authenticating user remotely by creating AAA method which includes AAA servers (LDAP/AD/Radius). If a user uses an account which exists in 2 AAA server and supplies correct password for the latter AAA server in AAA method, the authentication result depends on what the former AAA server is. If the former server is Radius, the authentication would be granted, otherwise, it would be rejected.

[Workaround]

Avoid having the same account in AAA servers within a method.

## IPv6

- HTTP/HTTPS not support IPv6 link local address in IE7 and IE8.

2. Windows XP default MS-DOS FTP client cannot connection to device's FTP server via IPv6 link-local address.
3. [SPR: 110803280]  
[Symptom]  
Safari cannot log in web with HTTPS when using IPv6
4. [SPR: 110803293]  
[Symptom]  
Safari fails to redirect http to https when using IPv6
5. [SPR: 110803301]  
[Symptom]  
Safari with IPv6 http login when change web to System > WWW, it pop up a logout message. (HTTP redirect to HTTPS must enable)

## Anti-Spam

1. Not support SMTPs , STARTTLS, POP3s, SMTP Extension command – BDAT

## MAC Authentication

1. [SPR: 150127103]  
[Symptom]  
Client use Internal MAC-Auth. connection Auth. Server can't get IP successful.  
[Workaround]  
Set short ARP timeout value on monitored interface's switch and gateway side.

## SecuExtender

1. Windows 7 users have not done Windows update before may have SecuExtender virtual Network interface card detection issue.  
[Workaround]  
Recommend installing all windows security patches before installing SecuExtender.  
One of reference: <https://support.microsoft.com/en-us/kb/3033929>

## Known Issues:

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Note: These known issues represent current release so far unfixed issues. And we already plan to fix them on the future release.

### IPSec VPN

1. [SPR: 120110586]

[Symptom]

When set IPSec VPN with certificate and enable x.509 with LDAP, the VPN session must dial over two times and the session will connect successfully

2. [SPR: 140317624]

[Symptom]

DUT fails to fall back using primary WAN port when all DUT WAN's IP address were same subnet.

3. [SPR: 140818615]

[Symptom]

After Enable and Disable NAT rule, IPSec VPN traffic cannot forward to LAN subnet immediately.

[Condition]

1. Topology:

PC1 ---LAN1 USG60W WAN1 ---- WAN1 USG60 LAN1 --- PC2 & PC3

2. USG60W

WAN1: 10.1.4.45/24

WAN2: 192.168.9.x/24 (Can reach to 172.23.x.x network through NAT router.)

LAN1: 192.168.181.x/24

PC1: 192.168.181.33

3. USG60

WAN1: 10.1.6.79/24

LAN1: 192.168.1.1/24

PC2: 192.168.1.33

PC3: 192.168.1.34

4. USG60 sets a policy route, src=192.168.1.0/24, dst=172.0.0.0/8, next-hop=VPN tunnel

USG60W sets

1. policy route, src= 172.0.0.0/8, dst=192.168.1.0/24, next-hop=VPN tunnel

2. policy route, src=192.168.1.0/24, dst=172.0.0.0/8, next-hop=WAN2

5. PC2 ping 172.23.x.x is OK
  6. Add a 1:1NAT rule which is from WAN1 10.1.6.79 mapping to 192.168.1.34 (PC3) on USG60.
  7. PC2 ping 172.23.x.x will fail now.
  8. Disable 1:1 NAT rule.
  9. PC2 still cannot ping to 172.23.x.x.  
\*Need to reboot device or wait several minutes, it works.
4. [SPR: 141209575]  
[Symptom]  
IPSec VPN tunnel sometimes can be built up while initiator and responder devices use CA with the same subject name in IKE authentication. This tunnel should not be allowed to build.
5. [SPR: 160106369]  
[Symptom]  
To set up Local ID type in "DNS" mode at Advance setting under IPSec > VPN Gateway > Edit or Add page to make sure the Certificate works normally.  
[Workaround]  
If you are using certificate under the other modes, please go through VPN wizard then login again to VPN Gateway GUI page to modify the setting.

## IPv6

1. [SPR: 131226738]  
[Symptom]  
Only one prefix delegation can be added in IPv6 address assignment.

## App Patrol

1. [SPR: 140605136]  
[Symptom]  
[App Patrol]Cannot block Skype off-line message
2. [SPR: 160322066]  
[Symptom]  
Ultrasurf can't be blocked by App Patrol.
3. [SPR: 170317753]  
[Symptom]  
[App Patrol][LOG] Log of FTP App Patrol was different with previous signature version

## SSL VPN

1. [SPR: N/A]  
[Symptom]  
Windows 7 users cannot use SSL cipher suite selection as AES256.  
[Workaround]  
You can configure Windows cipher with following information  
<http://support.microsoft.com/kb/980868/en-us>
2. [SPR: 121203072]  
[Symptom]  
Ext-group name and any password can login SSL VPN
3. [SPR: 160307230]  
[Symptom]  
If you use SecuExtender or Web GUI (SSL VPN) to login at same PC/Laptop, the pervious one will disconnect, i.e. SecuExtender will disconnect after Web GUI (SSLVPN) account login, vice versa.
4. [SPR: 160309776]  
[Symptom]  
GUI login can't auto connect/disconnect new SecuExtender tool in windows.
5. [SPR: 160324728]  
[Symptom]  
OWA (Outlook Web Access) will display incorrectly by using IE10.

## System

1. [SPR: 130207529]  
[Symptom]  
When change SSH, Telnet and FTP Service default port, the connect session still exist.
2. [SPR: 150529308]  
[Symptom]  
Console sometimes display "XXX daemon dead" message during reboot.
3. [SPR: 160420343]  
[Symptom]  
USG310/1100/1900 and ZyWALL 310/1100 Interface up time counter will not reset after link down. For example, the ge1 port uptime shows 41 second and inactive ge1 port (link down). The next link up time should re-count from 00:00:00, but after link up, the uptime continues count from 41 second.
4. [eITS: 170100444]



[Symptom]

Link sticking/Route Cache for dual WAN cannot work correctly with 4.25 as new implementation will be added at 4.30 Firmware.

## Anti-Virus

1. [SPR: 150522817]

[Symptom]

Upload Virus file by HTTP or Emails, the virus can be corrected detected and destroyed but the file name may be truncated in system log if the file name contains SPACE: ' ', SEMICOLON: ';' or DOUBLE-QUOTE: '"'.

2. [SPR: 150603299]

[Symptom]

Virus-infected mail sent via IMAP protocol cannot be detected effectively.

3. [SPR: 160329211]

[Symptom]

Upload file with virus to Dropbox or Google Drive cannot be detected.

4. [SPR: 170210431]

[Symptom]

Use Thunderbird to be a mail client send virus mail (SMTP), UTM cannot detect virus, but virus can be detected when mail client exchange to MultiMail (SMTP).

5. [SPR: 161019640]

[Symptom]

Anti-virus cannot detect uuencode eicar virus

## IDP

1. [SPR: 160329256]

[Symptom]

In custom UTM Profile > IDP > Custom Signatures > Payload option, if content have "[" word, GUI will show incorrect.

## SSL Inspection

1. [SPR: 160620353]

[Symptom]

LAN PC cannot use management IP to access Device HA Pro backup device GUI when match SSL Inspection policy.

[Workaround]

Set up another security policy to bypass.

## Wireless

1. [SPR: 150701137]

[Symptom]

Try to manage too many external APs over service/license count may cause capwap\_srv daemon dead.

2. [SPR: 151119567]

[Symptom]

When AP firmware fails to synchronize with cloud server, alert log will display frequently

3. [SPR: 151208470]

[Symptom]

When AP firmware download failed from cloud server, exist AP firmware will be deleted and GUI show "to be downloaded" message at Configuration > Wireless > AP Management > Firmware page.

4. [SPR: 151203302]

[Symptom]

It takes 30 seconds or above to update the AP controller information when using Zyxel Wireless Optimizer (ZWO) tool to monitor the status.

## Web Auth

1. [SPR: 151125943]

[Symptom]

After changing source address object name, LAN PC will not redirect to correct web portal.

2. [SPR: 161215730]

[Symptom]

[Billing] Guest B (Custom Fix IP) using same IP with Guest A and can access internet.

## AP

1. [SPR: 160603272]

[Symptom]

AP traffic Tx/Rx value show incorrectly in Email Daily Report.

## Printer

1. [SPR: 160113511]

[Symptom]

If Printer is a DHCP Client and IP changed may cause Printer sync fail.

[Workaround]

Do "Printer Discover" again and to reserve IP

## GUI

### 1. [SPR: 151127016]

[Symptom]

The check box is overlapping with content text at Initial Wizard > Wireless setting page when using IE browser.

[Workaround]

Change another browser and restart Initial Wizard to set up wireless.

### 2. [SPR: 151208533]

[Symptom]

"Object Reference" cannot work at Configuration > Network > Interface > Ethernet > Edit IPv6 Configuration page.

### 3. [SPR: 151208561]

[Symptom]

GUI will not redirect to login page automatically after firmware upgrade by using Chrome browser.

### 4. [SPR: 151214778]

[Symptom]

After the IPv4 address object created by "Create New Object" there's no updated IPv4 address object in IP address Pool list in Configuration > VPN > IPsec VPN > VPN connection > IPv4 Configuration > Add page.

[Workaround]

Close the "Add VPN Configuration" window and re-open again.

### 5. [SPR: 151217001]

[Symptom]

GUI always show "Loading..." message after apply below steps:

1. Apply system default configuration.

2. In [Configuration > VPN > IPsec VPN > VPN Gateway] page, add one rule

Enable, Name: ike1, interface: wan1, static address: 10.1.4.x, pre-shared key: 12345678

3. In [Configuration > VPN > IPsec VPN > VPN Connection] page, add one rule

4. Enable, Name: ipsec1, site-to-site, VPN gateway: ike1, local policy: LAN1\_subnet,

- remote policy: remote\_subnet(use create new object-> IPv4 address,  
Name:  
remote\_subnet, address type: subnet, network: 192.168.11.0, netmask:  
255.255.255.0)
5. In[Configuration>VPN>IPSec VPN>VPN Gateway]page, edit ike1 rule
6. GUI always shows "Loading..."  
[Workaround]  
Refresh GUI
6. [SPR: 151223305]  
[Symptom]  
The changes of "E-mail Server 2"column will not applied after reboot  
device at Configuration > Log & Report > Log settings > System Log >  
Active Log and Alert (AP) page.
7. [SPR: 160411770]  
[Symptom]  
Go to Configuration > UTM Profile > IDP > Profile page, add a profile (e.g.  
name:2016USG) then back to the profile list select this rule and click "clone"  
you will find the background GUI profile name become the same as Clone  
Profile name before you apply.
8. [SPR: 160503266]  
[Symptom]  
It doesn't show logout IP after upgrade firmware to ZLD4.20.
9. [SPR: 161219973]  
[Symptom]  
By using copy and paste to set PPPoE/PPTP IP address on Installation Setup  
Wizard. "Next" button can't be pressed.
10. [SPR: 170213467]  
[Symptom]  
Click "Buy" link will show 404 not found when enable HTTPS Domain Filter for  
HTTPS traffic.
11. [SPR: 170328262]  
[Symptom]  
Network risk warning information show null on ZyWALL series device
12. [SPR: 170323020]  
[Symptom]  
Exchange language setting, click MONITOR>>System Status>>Port Statistics  
start/stop button, it will show wrong language and need to click twice stop  
button to stop.

## Device HA

1. [SPR: N/A]

[Symptom]

Device-HA can't sync. AP firmware to backup device.

[Workaround]

Go to Configuration > Wireless > AP Management > Firmware page, click "Check" and "Apply" button to manually download AP firmware for backup device.

## Device-HA Pro

1. [SPR: 160226958]

[Symptom]

When the physical interface link down, the HTTP file downloading will terminate after failover to passive device.

2. [SPR: 160623509]

[Symptom]

Upgrade firmware from Active device and the upgrade process is to upgrade Passive device first. After Passive device finished firmware upgrade it will show device sync fail because of Active device is doing firmware upgrade and reboot.

3. [eITS: 160900786]

[Symptom]

Syslog didn't send out traffic category

4. [SPR: 161219917]

[Symptom]

Site-2-Site IPSec SA cannot sync. to the passive device.

## 3G Dongle

1. [SPR: 161215667]

[Symptom]

Budget set only download, action upload still has budget logs.

## Features: V4.25(AAPK.1)C0

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### Modifications in V4.25(AAPK.1)C0 - 2017/07/13

1. [ENHANCEMENT] System default settings change:  
Doesn't allow access device GUI via HTTPs or SSL VPN connect from WAN in system default.  
Note: This will not change the settings for upgrade from previous firmware version.
2. [ENHANCEMENT] GUI change:
  - a. all Service license Status change from "Licensed" "Not Licensed" to "Activated", "Not Activated"
  - b. if the license are transferred, then status will show "Not Licensed"
  - c. update layout change wording : Firmware Upgrade License to Firmware Upgrade Service
  - d. remove License Type and Expiration date from Firmware Management page
  - e. Add OneSecurity link (Troubleshooting icon): add icon at Firmware Management GUI page and redirect to OneSecurity Firmware Upgrade SOP
3. [ENHANCEMENT] Support for PayPal Brazilian Real (BRL)/Russian Ruble (RUB) currency
4. [ENHANCEMENT] Initial Wizard add Remote Management on/off switch
5. [BUG FIX] eITS# 170500228  
"Email daily report" is missing on web GUI setup page (Configuration > Log & Report > Email daily report).
6. [BUG FIX] eITS# 170500089  
After logging into the Web GUI, it will redirect to https://x.x.x.x/ext-js/app/view/pagestore/genie.html instead of the device dashboard
7. [BUG FIX] eITS# 161200145  
The authentication will fail when establishing L2TP VPN with MS-CHAPv2
8. [BUG FIX] eITS# 170100259, 170200190  
Sometimes user-based security policy rule doesn't work properly.
9. [BUG FIX] eITS# 170100903  
Fixed the anti-spam may delay the mail occasionally
10. [BUG FIX] eITS# 170100505  
Security Policies does not working properly in some circumstances
11. [BUG FIX] eITS# 161200446

When CF and App Patrol are enabled and there are peak abnormal "ACK" packets in the environment sent to the device. The device may reboot

12. [BUG FIX] eITS#170200139

Firewall rule sometimes will block SSO client's traffic

13. [BUG FIX] eITS#170300098

Fix: unable to update GeoIP database

14. [BUG FIX] eITS#170400322

Fix: Security Policy rule modification doesn't take effect immediately after modifying the address objects.

15. [BUG FIX] eITS#170400243

Fixed the device reboot accidentally issue

16. [BUG FIX] eITS#170300955, 170300215 , 170400039, 170400704

Fixed the VPN tunnel routing issue

17. [BUG FIX] eITS#170300561

Fixed AP connection lost issue.

18. [BUG FIX] eITS#170100742

Fixed USG310 Device HA Pro with https port different than 443 issue.

## Features: V4.25(AAPK.0)C0

### Modifications in V4.25(AAPK.0)C0 - 2017/04/21

1. [ENHANCEMENT] Openssl package upgrade to 1.02j
2. [ENHANCEMENT] UTM engine upgrade to 2.3.012
3. [ENHANCEMENT] Default IDP signature upgrade to 3.2.4.040(Base on 3.1.4 and add 518 app-behavior)
4. [ENHANCEMENT] AS and CF engine upgrade to 8.00.0125.1
5. [ENHANCEMENT] Support quick activation wizard to help user register device and activate UTM services in a short time.
6. [ENHANCEMENT] Support Grace Period for subscription license.
7. [ENHANCEMENT] add "Buy"/ "Renew" and "Activate" link at:
  - a. Dashboard Security Service List
  - b. Configuration > Licensing > Service Status List
  - c. Each Service function page
  - d. Security Service Warning page
8. [ENHANCEMENT] Support Country code GUI for USG/ZyWALL
  - a. Except for USG40W/USG60W/USG20-VPN/USG20W-VPN
9. [ENHANCEMENT] APC built-in FW replacement
  - a. Remove NWA5KN & 3KN series AP firmware
  - b. Add NWA5123-AC AP firmware
  - c. Keep NWA512x series AP firmware
10. [ENHANCEMENT] Support Hotspot Management License for USG110, USG210 and ZyWALL 110 with 30days trial.

Support models	Hotspot Management Service
USG110	Default 30days trial
USG210	LIC-HSM, Hotspot Management 1 year Subscription License
ZyWALL 110	LIC-HSM, Hotspot Management One-Time License

11. [ENHANCEMENT] Default value of VLAN DHCP lease time change from infinite to 2 days
12. [ENHANCEMENT] Extend max. number of Address Object for following models:

Models	Address Object Value	
	WAS	IS
USG20(W)-VPN	100	300
USG40(W)	100	300
USG60(W)	200	300

13. [ENHANCEMENT] Support SecuReporter (available in Q3, 2017)



14. [ENHANCEMENT] Support failure recoveries of configuration apply.
15. [ENHANCEMENT] Automatic Firmware update from USB storage
  - a. Default action is disable
  - b. Do not support Device HA/ Device HA pro scenario

Note: When using USB firmware upgrade in HA Pro devices, you need to insert USB at Passive device to upgrade Firmware first, and then do USB firmware upgrade at Active device.
16. [ENHANCEMENT] Support DHCP option 60 on External type Ethernet and VLAN interface
17. [ENHANCEMENT] Support SSH Client
18. [ENHANCEMENT] Support GeolP database auto-check & auto-update
19. [ENHANCEMENT] eITS#160200311

The log "Open /tmp/ext\_group\_info.conf\_1 configuration file has failed."  
Change the log description easy to understand as: Cannot open /tmp/ext\_group\_info.conf\_1 configuration file. Please check the settings of Auth. method and Ext-Group-User Accounts by AAA Server.
20. [ENHANCEMENT] eITS#160300976

To adjust "DHCP table / User Login" GUI display behavior.
21. [ENHANCEMENT] eITS#160800448

Manual control of firewall rule "Only FIN bit is set" for abnormal TCP flag packets transmission.
22. [FEATURE CHANGE] eITS#160600471

Bandwidth management cannot apply accurately by App Patrol
23. [BUG FIX] eITS#161100240

802.1P marking in BWM is disappeared in ZLD 4.20.
24. [BUG FIX] eITS#161100700

Fix ALG SIP Settings GUI disappear issue:
  - a. Restrict Peer to Peer Signaling Connection
  - b. Restrict Peer to Peer Media Connection
25. [BUG FIX] eITS#151200061

Support LTE E3276 dongle
26. [BUG FIX] eITS#160200024

No supporting for Huawei E3276 dongle.
27. [BUG FIX] eITS#160200048

Port statistics shows wrong information on GUI
28. [BUG FIX] eITS#160200540

An over length object name ruins the security policy function, also stop the device boot from start-up config.

29. [BUG FIX] eITS#160200591

After AP schedule applied, the device cannot boot normally and failover to last good config.

30. [BUG FIX] eITS#160300622

A standby HA device do download AP firmware. This should not happen if the active role is taken by another device.

31. [BUG FIX] eITS#160300733

Receiving a "Unicast" DHCP offer on WAN port because customer's ISP did so. (DHCP offer bootp flag: unicast)

32. [BUG FIX] eITS#160300990

NAT rule didn't work for the specific object.

33. [BUG FIX] eITS#160400211

Unable to apply NAT policy if a virtual interface has different subnet from its' physical. This works fine in 4.13 but not in 4.15 (Error message: Original IP address is not comprised in Incoming interface subnet.)

34. [BUG FIX] eITS#160400995

Cannot use full screen mode on IE11 RDP access. The SSL VPN tunnel works fine. Use RDP access but unable to use full screen mode (on IE11).

35. [BUG FIX] eITS#160500052

If user shows VLAN 10 in IP/MAC Binding monitor page, both VLAN 10 and VLAN 100 will display.

36. [BUG FIX] eITS#160500699

NAT rule doesn't work on general type interface.

37. [BUG FIX] eITS#160600575

Fix: In ZLD V3.30, customer set a set a "ppp" interface and name "eth1" and then users apply the configuration file (startup-config). It will show the error message "% System fatal error: 3005105." on the console.

38. [BUG FIX] eITS#160601251

A dead Zylogd triggers connectivity check and makes policy route on and off frequently, reboot is a temporarily solution.

39. [BUG FIX] eITS#160700403

Fix: VPN after rekeying no Traffic in Tunnel

40. [BUG FIX] eITS#160700500, 160101189

Site-to-site IPSec VPN Tunnel (IKEv1) and AES256/SHA256 encryption in Phase2 burst CPU usage.

41. [BUG FIX] eITS#160800459

Fix: USG 50. AD ext-group-user test fail

42. [BUG FIX] eITS#160800706

USG20-VPN will not send out "Forwarded website" to CF report server.

43. [BUG FIX] eITS#160800830

Modify address object setting didn't apply to configure file.

44. [BUG FIX] eITS#160800939

While move to other pages, the sorting by object IP address behavior abnormal.

45. [BUG FIX] eITS#160800995, 160800977

Unable to upload an overlong file name firmware via GUI.

46. [BUG FIX] eITS#160801122

The source IP address shows incorrect on Web GUI, (different model support for different pool addresses)

47. [BUG FIX] eITS#160900125

Fix: OneSecurity Anti-Spam PDF file corrupts.

48. [BUG FIX] eITS#160900128

Anti-Spam mail scan timeout rate is high.

49. [BUG FIX] eITS#160900147, 160900359

While DHCP function is disabled on all interfaces, the DNS proxy stop working.

50. [BUG FIX] eITS#160900449

The VPN throughput of USG1900 is low.

51. [BUG FIX] eITS#160900525

After SafeSearch enabled, the device did randomly unwanted reboot.

52. [BUG FIX] eITS#160900560

When editing exist BWM rule, try to enable or disable "Maximize Bandwidth Usage" function. It can't write into configuration.

53. [BUG FIX] eITS#160900579

After upgraded to ZLD4.20 firmware, there are additional AP image symbolic link in device, it will cause Device-HA Pro sync fail.

54. [BUG FIX] eITS#160900582

When add Anti-Virus, tick or untick white list, it always saves as enabled.

55. [BUG FIX] eITS#160900603

The customer creates a new application profile then adds some applications. The GUI meets loading nonstop when he wants to add other object into this application profile by Service searching.

56. [BUG FIX] eITS#160900614

Error message shows on trying to create Object > Service by just fill in starting port.

57. [BUG FIX] eITS#160900619

Some settings disappear from the configuration after a power fail.

58. [BUG FIX] eITS#160900702

Update Anti-Virus crashes Zyshd daemon if there is no connection to myZyXEL.com.

59. [BUG FIX] eITS#160900704

When the customer creates the new Radio profile, set Channel Selection to DCS, the A-MPDU and A-MSDU are enabled by default. However, after click OK button, then edit this profile again found A-MPDU and A-MSDU was not enabled.

60. [BUG FIX] eITS#160900708

DHCPv6 Request can't be added to DHCPv6 Request Options in PPPoE.

61. [BUG FIX] eITS#160900760

After upgraded from 4.15 to 4.20, they need to configure default policy rule as "Allow" instead of "Deny" otherwise they cannot surfing the Internet.

62. [BUG FIX] eITS#160900840

Fix: After build Device-HA, on backup device linkup and link-down Ge4 port. The Backup device status is standby but GE4 IP address exists. It affects the traffic pass through to Backup device but not master one

63. [BUG FIX] eITS#160901009

The tunnel interface is on the drop-down list of Public DNS Server setting.

64. [BUG FIX] eITS#160912324

Fix: [VPN] [info] Send check packet won't send on IKEv2 VPN rule (6in4, 4in6, 6in6)

65. [BUG FIX] eITS#161000053

If SafeSearch enabled, the Google log will be removed if accessing <https://www.google.at> or <https://www.google.com> (google family).

66. [BUG FIX] eITS#161000057

Remove service object from service-group will be failed.

67. [BUG FIX] eITS#161000062

Files with long names on Cyrillic (Russian) cannot be downloaded through SSL VPN / File Sharing. Files with short names will work.

68. [BUG FIX] eITS#161000092

The Interface egress setting will be effects after added virtual interface

69. [BUG FIX] eITS#161000311

Sorting by priority doesn't work correctly on all pages.

70. [BUG FIX] eITS#161000336

Fix SNMP location issue.

71. [BUG FIX] eITS#161000353

It is the VPN between ShrewClient and USG. It works fine under ZLD 4.15; however, after upgrading to ZLD 4.20, USG will send out DEL information to the client after establishing connection.

72. [BUG FIX] eITS#161000562

If you choose View: all session in Session Monitor, then the first page is displayed normally, but an error occurred on second page.

73. [BUG FIX] eITS#161000654

Firewall rule of user aware didn't work appropriate with GeoIP address object.

74. [BUG FIX] eITS#161000823

Fix GUI shows wrong information on NAT setting. (Select 1:1 mode, shows 1: Multiple)

75. [BUG FIX] eITS#161000908

Special characters are allowed on GUI but invalid in certification "+", ")" or ")".

76. [BUG FIX] eITS#161000911

Cannot create VLAN100 after VLAN10 on GUI.

77. [BUG FIX] eITS#161000912

There is no limitation of the DHCP pool range.

78. [BUG FIX] eITS#161017510

Fix: [VTI]disable VTI interface will be enable after open this disable (VTI)profile and click "OK"

79. [BUG FIX] eITS#161100136

Device will reboot only when CF is enabled on IPv6 and access some websites.

80. [BUG FIX] eITS#161100230

Supporting for longer LDAP/AD password length to 63 characters.

81. [BUG FIX] eITS#161100298

1:1 NAT Port Mapping Type can be select after change type to Virtual server and switch back to 1:1 NAT.

82. [BUG FIX] eITS#161100619

SSL Inspection not works if set in firewall rule on ZLD4.20

83. [BUG FIX] eITS#161100649

Fix myzyxel.com SSL time sync issue.

84. [BUG FIX] eITS#161200541

AP management VLAN configuration have limit on Name field, we cannot create VLAN more than 4.

85. [BUG FIX] eITS#161200689

Add more than 8 interface into a Trunk is allowed, but this setting got error and is automatically removed after reboot.

86. [BUG FIX] eITS#161200797

VPN policy object doesn't change after renaming an object.

87. [BUG FIX] eITS#170100010

"Host Name" and "Description" are missing under IP/MAC Binding

88. [BUG FIX] eITS#170100106

While just started up, any connection from MAC OS will reboot USG60W.  
(Android, Windows platform don't have this issue.)

89. [BUG FIX] eITS#170100118

The FTP function which in packet capture does not work. (Can't upload to external FTP server)

90. [BUG FIX] eITS#170200061

When added PPP interface in to monitoring interface (Device-HA Pro), it will shows "The interface name is not accepted"

91. [BUG FIX] eITS#170200530

When Device-HA Pro switching status, the MAC address of secondary is not synced.

92. [BUG FIX] eITS#170200161

Fix: ZyWALL 310 (WLAN controller) - Some station info will be kept in station info list on the controller even the stations have been dissociated from the AP.

93. [BUG FIX] eITS#161000876

Unable to turn off Policy Control or Allow Asymmetrical Route via GUI.

94. [BUG FIX] eITS#160301606

USG310: error code2 drops ICMP Type3 packet

95. [BUG FIX] eITS#160400542

USG210 Fatal Error Cause System Reboot

96. [BUG FIX] eITS#161100313

USG110 IKEv2 dynamic tunnel suddenly stopped working

97. [BUG FIX] eITS#161100931

USG20-VPN - SIP Signaling Port not working

98. [BUG FIX] eITS#161100008

Fix: Cannot access some https website after enable domain filtering in CF.

## **Features: V4.20(AAPK.2)C0**

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### **Modifications in V4.20(AAPK.2)C0 - 2016/11/25**

1. [ENHANCEMENT] Add enhancement against ICMP type3 code3 DoS attack.

## Features: V4.20(AAPK.1)C0

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### Modifications in V4.20(AAPK.1)C0 - 2016/09/29

1. [BUG FIX] eITS#160800705  
Guest wizard in easy mode gets wrong.
  1. enable the Guest network via wizard
  2. No IP address and DHCP server but port role is correct.
2. [BUG FIX] eITS#160800624  
The GeoIP can't update successfully, and shows 124014 error.
3. [BUG FIX] eITS#160800733  
When collecting diag-info by GUI and also in console, the device will reboot.
4. [BUG FIX] eITS#160800621  
USG will keep send out "R\_U\_THERE" even though the DPD is not checked.
5. [BUG FIX] eITS#160800900  
Unable to create a new VLAN.  
[Condition]  
When clicking the add button, loading screen hangs.
6. [BUG FIX] eITS#160800995, 160800977  
Upload firmware with a long filename, it will fail.  
[Condition]
  1. Go to file manager>firmware management
  2. Update a firmware with a filename more than length 31
  3. Update will fail.
7. [BUG FIX] eITS#160401060  
After few days, the mail sessions reach the maximum threshold and Anti-Spam stop working.  
[Condition]  
User select drop action of spam SMTP mail in Anti-Spam profile setting.
8. [BUG FIX] eITS#160800622  
IDP signature Link has wrong destination.  
[Condition]  
On the dashboard, you can click the signature ID on the GUI. The URL is wrong.  
Click GUI will pop-out  
[https://onesecurity.com/pages/threat\\_info.php?virusid=1051723&type=policy](https://onesecurity.com/pages/threat_info.php?virusid=1051723&type=policy)  
But should be:



[https://onesecurity.zyxel.com/pages/threat\\_info.php?virusid=1051723&type=policy](https://onesecurity.zyxel.com/pages/threat_info.php?virusid=1051723&type=policy)

9. [BUG FIX] eITS#160900521

Firmware 4.20 - Every logged user is able to download "startup-config.conf"

10. [BUG FIX] eITS#160900525

USG110 with CF and Safesearch random reboots

11. [BUG FIX] eITS#160900582

When edit Anti-Virus rule, configuration change not writes correctly.

12. [BUG FIX] eITS#160900560

When edit exist BWM rule, and disable "Maximize Bandwidth Usage" function. It not writes into configuration.

13. [BUG FIX] SPR#160801023

Click "Configuration walk through" and "Troubleshooting" at NAT page, the link will display "Policy Route" information..

## Features: V4.20(AAPK.0)C0

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### Modifications in V4.20(AAPK.1)C0 - 2016/07/20

1. [ENHANCEMENT]

Easy Mode Support:

(1) Only for USG40/40W/60/60W, USG20-VPN/20W-VPN

Supported Models
USG20-VPN, USG20W-VPN
USG40, USG40W
USG60, USG60W

(2) Initial wizard pop-up when user first login in device under Easy Mode

\* Please be aware that Easy Mode is another user interface for different user market, it is not light version of Expert Mode. The changes made in Expert Mode may not be visualized correctly in Easy Mode.

If you made changes in Expert Mode, we suggest staying in Expert Mode to ensure reliable configuration.

2. [ENHANCEMENT]

Content Filter 2.0Support, more features add-on with the current Content Filter license.

(1) HTTPS Domain Filter

To block HTTPs web sites without deep inspection. Support on all models.

(2) SafeSearch Enforcement

To enforce safe search for the following search providers: Google, Bing, Yahoo, Yandex

\*Support on models with SSL inspection, USG110/ZyWALL110 or above.

(3) Geo IP blocking

Support IPv4/IPv6 geography type address object as the source or destination address of security policy.

(4) Content Filter log enhancement; log all web access action with category information.

3. [ENHANCEMENT]

Cloud Helper Support:

(1) Auto check and show up the firmware download icon on dashboard and the release note

information on firmware management page, if a new version is available.

(2) Support pause/resume/stop action while running the online firmware download from cloud

\* Please note that you have to go to [myZyXEL.com](http://myZyXEL.com) to register your device and activate firmware upgrade license and then to proceed the cloud firmware upgrade.

#### 4. [ENHANCEMENT]

IPSec VPN enhancement:

- (1) Route-based IPSec VPN - Static virtual tunnel interface for IPSec site-to-site VPN
- (2) Mode-config to assign IP address/DNS server/WINS server settings for IPSec client
- (3) IKEv2 VPN wizard
- (4) IKEv2 configuration provisioning to ZyXEL IPSec Client
- (5) IKEv2 support for Windows10

#### 5. [ENHANCEMENT]

SSL VPN enhancement:

- (1) Standalone SecuExtender client software for Windows

Please download the new SecuExtender client software from <http://vpnclient.zyxel.com>

- (2) SSL VPN login page URL, <https://<ip address>/ssl>

- (3) SSL VPN user portal behavior change,

- After login SSL VPN user portal, will not force logout even browser doesn't install Java Runtime
- After login SSL VPN user portal, will not auto download and install the SecuExtender client from device.

Please download the new SecuExtender client software from <http://vpnclient.zyxel.com>

- After login SSL VPN user portal, will not bring up the SecuExtender. Please install and launch the new SecuExtender client on desktop.

#### 6. [ENHANCEMENT]

Captive Portal authentication enhancement:

- (1) Support Multiple Portal (max. 4 portals)
- (2) Friendly captive portal page for mobile devices
- (3) User agreement type authentication
- (4) Support upload user customized captive portal page to USG/ZyWALL
  - Max. 4 customized portal package (.zip) file can be upload
  - Max. portal package (.zip) file size is 2MB (max. 5MB after unzip)

#### 7. [ENHANCEMENT]

Hotspot enhancement:

(1) Hotspot license for USG/ZyWALL advance/extreme series

Support Hotspot Management Models
ZyWALL 310/1100
USG310/1100/1900

(2) Features support with Hotspot license

- Dynamic guest account
- Billing profiles (Time usage, Traffic usage, Bandwidth limitation)
- SP350E printer ticketing
- SMS ticketing with ViaNett
- Online tickets payment via PayPal
- Walled Garden
- IPnP

\*Not support SP350E printer to connect on network of wan side.

\*After add SP350E into the management list. The dynamic IP address of printer will auto add into the DHCP reserve IP table.

8. [ENHANCEMENT]

Device HA Pro:

(1) Licensed feature

(2) Only support on ZW110/310/1100, USG110/210/310/1100/1900

Support Device HA Pro Models
ZyWALL 110/310/1100
USG110/210/310/1100/1900

(3) Dedicated port for heartbeat/synchronization between active and passive device

\*The latest copper Ethernet port is the heartbeat port, if enable Device HA pro function

(4) Auto negotiation the device role (active or passive)

(5) Synchronization information

- Configuration
- License status
- AV/IDP/App signatures, GeoIP database
- Certificates
- Customized Captive portal pages
- zysh script files
- Login users information
- IPv4/IPv6 TCP sessions
- Static site-to-site IPSec SAs

\*To avoid configuration conflicts, always make configuration changes on the active device

(6)Support firmware auto upgrade to passive device via GUI, FTP, Cloud Helper

\* To avoid firmware inconsistent, always upgrade firmware from the active device

Limitation:

- Not support with IP/MAC binding feature  
If enable MAC Binding interface. After device failover, all the traffic of DHCP clients will be blocked by the active device until renew DHCP IP address.
- To change from HA Pro mode back to HA mode. Both devices need to reconfigure the HA settings.

## 9. [ENHANCEMENT]

Link Aggregation Group (LAG) interface

(1) Only support on the following models

Support Link Aggregation Group interface Models
ZyWALL 310/1100
USG310/1100/1900

(2) Max. LAG interface: 4; Max. ports in one LAG interface: 4

(3) Link Aggregation Mode support

- Active-Backup
- LACP 802.3ad (hash policy support: layer 2, layer 2+3)
- Balance-ALB (active-active path)

## 10. [ENHANCEMENT]

Web GUI and SSL VPN login support TLS1.2

## 11. [ENHANCEMENT]

SSL Inspection enhancement :(\*Support models USG110/ZyWALL110 or above)

(1) Support inspect TLS-1.1/TLS-1.2 connection with the following cipher

- TLS\_RSA\_WITH\_AES\_128\_CBC\_SHA256
- TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA256
- TLS\_ECDHE\_RSA\_WITH\_AES\_128\_CBC\_SHA256
- TLS\_ECDHE\_RSA\_WITH\_AES\_256\_CBC\_SHA384

(2)Support server downgrade TLS version while negotiation and implementation

## 12. [ENHANCEMENT]

ADP enhancement:

(1) Teardrop Attack detection and block

- (2) TCP Fragment detection and block
- (3) ICMP Fragment detection and block
- (4) IP Address Spoof detection and block

13. [ENHANCEMENT]

Auto sync Time-Zone and Daylight-Saving from ZyXEL cloud server

14. [ENHANCEMENT]

Support L2TP WAN connection type

15. [ENHANCEMENT]

Support send RADIUS accounting data to external server

16. [ENHANCEMENT]

Service redirect for HTTP and SMTP traffic

17. [ENHANCEMENT]

DHCP clients table add leasing expiration time information

18. [ENHANCEMENT]

Add DHCP clients table in daily report

19. [ENHANCEMENT]

ZON utility support update location and system name

20. [ENHANCEMENT]

Extend max. Concurrent SIP calls number

Model	Value
USG20-VPN/20W-VPN USG40/40W USG60/60W	50
USG110 /ZyWALL 110 USG210 USG310 / ZyWALL 310	100
USG1100/ZyWALL 1100 USG1900	200

21. [ENHANCEMENT] Extend the Max. number of user create PPPoE interface

Model	Value
USG210	4 → 8
USG310 / ZyWALL 310	8 → 16
USG1100/ USG1900 / ZyWALL 1100	16 → 32

22. [ENHANCEMENT]

New license: "Concurrent Device Upgrade" for extending the concurrent login devices.

Model	Value
USG110/210/ZyWALL 110	200→300 (extend by license)
USG310/ZyWALL 310	500→800 (extend by license)
USG1100/ZyWALL 1100	800→1500 (extend by license)

USG1900	1500→2000 (extend by license)
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23. [ENHANCEMENT]

Feature behavior change: 1:1 NAT port settings is hidden on GUI

24. [ENHANCEMENT] "Use Static-Dynamic Route to Control 1-1 NAT Route" is enabled on system default setting.

25. [ENHANCEMENT] BEAST vulnerability mitigation

Support new CLI to disable TLS 1.0,

Router(config)# no ip http secure-server tlsv10

Router(config)# write

26. [BUG FIX] eITS#150700745

The customer is configured the Email Daily Report to send reports on a mail server that is located behind the IPSec-tunnel. Ping from the device to the mail server 192.168.5.15 successfully, but reports are not sent.

27. [BUG FIX] eITS#150801051

Top 5 viruses cannot be queried.

[Condition]

1. If clicking the Top 5 virus via dashboard, the URL cannot be downloaded successfully. It is because the URL is HTTPs. If changing it to HTTP, the explanation will show up.

28. [BUG FIX] eITS#150300296, 150900099

For eITS#150300296 and 150900099, enlarge the maximum number of the time period of connectivity check.

Was: The maximum number of the time period of connectivity check is 600 seconds

Is: The maximum number of the time period of connectivity check is 3600 seconds

29. [BUG FIX] eITS#150701032

Unable to build L2TP VPN. Connect hangs on checking account and is broken.

30. [BUG FIX] eITS#150900420

Edit the actions of some IDP rules from none to reject-both and save it, the actions become no instead of reject-both.

[Condition]

The issue can be easily reproduced with the following steps.

1. Create new IDP profile. Ex: Use wan base profile
2. Change the actions of some rules from none to reject-both and save it. Check these modified rules and user will find the actions are no instead of reject-both.

3. User needs to change the actions from no to reject-both again and save it.

31. [BUG FIX] eITS#150900398

After editing BWM rule, the error message pops up. Error Number: -37004  
Error Message: 'System internal error. Internal application error.'

32. [BUG FIX] eITS#150600517

The Web GUI will be slow if edit VPN rule when device has configured 300 VPN connection rules.

[Condition]

There are 300 VPN tunnels. If Enable/Disable with 10 rules in the same time, the web GUI will hang. (VPN tunnel is not established yet)

33. [BUG FIX] eITS#150800872

ZySH daemon will dead when collect the diag-info file.

[Condition]

When issue happens GUI and console will not be feasible to access and customer can only do power cycle to regain.

34. [BUG FIX] eITS#150901026

USG110 / L2TP fails user login

[Condition]

For the old accounts which were created before upgrading to WK37 firmware, L2TP tunnel can be established successfully; however, created some accounts after upgrading, L2TP will be failed due to incorrect username or password.

35. [BUG FIX] eITS#150600519

Solved "tunnel leak" issue when using a DDNS address in peer address.

36. [BUG FIX] eITS#150900987

USG1900 doesn't detect LTE dongle WLTUBA-107

37. [BUG FIX] eITS#150800739, 160400735

USG60W CPU random issue

[Condition]

The customer reported the CPU rate will be high, and the only recovery way is rebooting the USG. When the issue occurs, LAN users cannot access internet; however, the LAN users can communicate with each other.

38. [BUG FIX] eITS#151001056

Moscow, Kazan, Volgograd is using GMT+3 (without daylight savings), but in settings of USG it is GMT+4.

39. [BUG FIX] eITS#150901015



After rebooting the USG does not raise PPPoE automatically. The PPPoE could be connected if dial manually, but not automatically.

40. [BUG FIX] eITS#151000924

The error message is wrong when adding wrong format URL in field.

[Condition]

Enter the complete URL of the site including "http://" on Trusted Web Site column in Content Filter. The pop out message shows "IPv6 subnet in CIDR format error". The URL seems not related to IPv6.

41. [BUG FIX] eITS#150701192

ZyWALL series have IPSec VPN problem

[Condition]

Cannot establish VPN tunnel with Wlink device; however can connect successfully with downgrade firmware 3.2 on ZyWALL series.

42. [BUG FIX] eITS#150901170

The L2TP tunnel will frequent disconnects.

43. [BUG FIX] eITS#151001230, 151100428

Device reboot time to time

44. [BUG FIX] eITS#150800878

Error IP format still saved into configuration by CLI command

45. [BUG FIX] eITS#150900889

Solved IOP issue with Sophos UTM 9 Release 9.211-3.

46. [BUG FIX] eITS#151100824

PPPoE Dial In issue with Nailed-Up

[Condition]

To enable nail-up in the PPPoE interface, and pressed disconnect button. Repeating the action around 8-20 times, nail-up will not work.

The connection only can be established by press connect manually or reboot the device.

47. [BUG FIX] eITS#151101099

Unable to access the console from web by using Java 8 update 51 or above (any browser). There is no problem with Java 8 update 45 and previous versions.

48. [BUG FIX] eITS#151200212

The DNS query will pass through by local NIC's DNS address.(only happens on Win10)

49. [BUG FIX] eITS#151201300

USG210: Statefull Firewall does not work correctly for DNS over VPN

[Condition]

PC-----USG110=====VPN=====USG200

(1)PC's DNS IP is USG110's LAN1 interface.

(2)USG110 is establish VPN tunnel with USG200.

a. Add a domain zone forward: darkzone.local, IP: USG200's LAN1 interface

b.Disable default rule: From: IPsec VPN, To: ZyWALL, Action: allow. ->it means the traffic initiated from USG200 LAN site, the packets will hit default rule and drop.

(3)Add A record on USG200: ap.darkzone.local, IP: LAN subnet.

(4)Send DNS query for ap.darkzone.local from PC and cannot get IP for it.

50. [BUG FIX] eITS#151100310

Not possible delete VPN rules created by L2TP wizard

51. [BUG FIX] eITS#141001045

It shows incorrect expiration date of licenses on the GUI.

52. [BUG FIX] eITS#160100921

USG1100: SSL Inspection signs with SHA1

[Condition]

(1) Access https://www.google.ch without SSL Inspection activated and check the Google certificate == sha256 signed

(2) Activate SSL Inspection on USG1100 Firewall, use self-signed sha256 certificate on USG1100 for SSL Inspection configuration

(3) Access https://www.google.ch with SSL Inspection enabled ... no the Google certificate == sha1 signed

53. [BUG FIX] eITS#160100981

One wrong Russian translation

54. [BUG FIX] eITS#150800874

ZyWALL1100 DHCP relay offer is dropped.

[Condition]

The DHCP relay for unicast DHCP offer and ack (for apple's device) will be dropped.

55. [BUG FIX] eITS#151100489, 151000326, 151100898

USG Anti-Spam module Threshold flush not possible

[Condition]

Mails lost. (Mail session reached maximum 200/200 and never going down unless the device reboot)user has to modify the anti-spam behavior to let mail 'Forward' when mail scan reaches maximum in order to avoid mail lost.

56. [BUG FIX] eITS#160101287

The mail server can't receive mail from internet.

[Condition]

Device response "reached the maximum threshold of 200."

57. [BUG FIX] eITS#160200401, 160200399

SNMP port traffic does not work correctly

[Condition]

The customer use the network management software named PRTG (based on SNMP) and the port traffic doesn't work correctly.

The software will query SNMP to device every 60 seconds; however device will responds there is no traffic but will show the correct value after 5 minutes.

58. [BUG FIX] eITS#160300528

Auto Discovery from Office 365 doesn't work

[Condition]

When creating a new account in outlook, the auto-discover will fail when any UTM service has enabled.

59. [BUG FIX] eITS#160200111

Route Policy entry in packet flow is wrong

[Condition]

When creating policy route and set the specific service port in rule. In packet flow will shows incorrect and it will affect the site to site VPN routing.

60. [BUG FIX] eITS#160400165

USG310: ZySH daemon no response

[Condition]

After upgrade to the firmware to 4.15 patch 2, the ZySH daemon no response after 12.24hr.

61. [BUG FIX] eITS#150800388, 150800459

Proxy Cap SSH connection through USG

[Condition]

SSH daemon TCP forwarding does not work.

62. [BUG FIX] eITS#160101023

Traffic drop during the Device-HA synchronization

[Condition]

The RDP and cloud AP will disconnect during the Device-HA synchronization.

63. [BUG FIX] eITS#160200257

Remove the "DONT FRAGMENT BIT" from IP header of IKE packet for the MTU issue.

64. [BUG FIX] eITS#160400549

Device-HA sync failed

65. [BUG FIX] eITS#160500683

Enhance DPD timer in IPSec PM and fix DPD handshaking twice issue.

66. [BUG FIX] eITS#160601226

Memory leakage

67. [BUG FIX] eITS#160200037

iOS client logout when trigger rekey.

[Condition]

(1) Setup a ikev2 VPN rule.

IKE: AES256, SHA256, DH14

IPSec: AES256, SHA256

(2) Use iOS 9.3 to connect to DUT.

(3) After 480 seconds, iOS rekey and then user logout.

68. [BUG FIX] eITS#160300715

When CF is active no http/https traffic possible

## **Features: V4.15(AAPK.3)C0**

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### **Modifications in V4.15(AAPK.3)C0 - 2016/07/06**

1. [BUG FIX] eITS#160601199  
Device can't update license successfully

## Features: V4.15(AAPK.2)C0

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### Modifications in V4.15(AAPK.2)C0 - 2016/03/17

1. [ENHANCEMENT]APC 1.97

Support new AP model
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WAC6103D-I
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NWA5123-AC
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2. [BUG FIX] eITS#160101036

The AP images update incomplete randomly

## **Features: V4.15(AAPK.1)C0**

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### **Modifications in V4.15(AAPK.1)C0 - 2016/02/24**

1. [ENHANCEMENT] Patch for Vulnerability CVE-2015-7547.

## Features: V4.15(AAPK.0)C0

### Modifications in V4.15(AAPK.0)C0 - 2015/12/31

1. [ENHANCEMENT] AP Firmware Cloud Update
2. [ENHANCEMENT] Force users to change password
3. [ENHANCEMENT] APC 1.95

Support new AP model
WAC6502D-E
WAC6502D-S
WAC6503D-S
WAC6553D-E
NWA5301-NJ

4. [ENHANCEMENT] Support generating SHA2 Certificate
5. [ENHANCEMENT] One Security Icon
6. [ENHANCEMENT] IPSec VPN Rule Number Parameters Change

Model	IPSec VPN Rule Number
USG40/40W	20
USG60/60W	40

7. [ENHANCEMENT] Max number of control AP Change

Model	Max number of control AP
USG40/40W/60/60W	18
USG110/ZW110/USG210/ZW310/USG310	34
ZW1100/USG1100/USG1900	66

8. [BUG FIX] eITS#150701258

The customer configured wan1\_ppp. In Ethernet > wan1, he configured static IP with 0.0.0.0. (The modem issues IP 192.168.1.0/24, so he configures static IP as 0.0.0.0.) However, it shows 192.168.4.1 on the dashboard.

9. [BUG FIX] eITS#150701098

When added external group user(RADIUS), and using space in group identifier, it will caused RADIUS daemon dead per 3 mins,

10. [BUG FIX] eITS#150700521

The customer found out that the PPPoE is not able to connect while there's specific combination of characters in username (\$ and @)

11. [BUG FIX] eITS#150700453

Incorrect sorting in MONITOR > UTM Statistics > IDP > Occurrence.

12. [BUG FIX] eITS#150700327

If the DNS server of LAN PC is pointed to USG, the URL cannot be resolved. Via the console, the named is not existed.

13. [BUG FIX] eITS#150601043, 150701260

Device HA status will keep Active-Fault-Active-Fault.



[Condition]

After enabling Device-HA, the VLAN client cannot ping to USG, and the Device-HA status is not stable.

14. [BUG FIX] eITS#150600669, 150601080

Internal server error after attempts to log in to device web GUI.

15. [BUG FIX] eITS#150600524

When Device HA activated. The Backup device syncs with Master device, the backup device will establishing VPN tunnel with remote site by management IP address.

16. [BUG FIX] eITS#150600517

There are over 300 VPN rule in configuration. When configuring rule, the device will hanging.

17. [BUG FIX] eITS#150600437

Deactivate VLAN interface before activate Device HA function. Then enable Device HA function. the PC still get IP address from VLAN interface again.

18. [BUG FIX] eITS#150600368

The daily-report can't send success to specific ISP. Our SMTP TLS by default will use STARTTLS but Swisscom does not support STARTTLS.

19. [BUG FIX] eITS#150600248

USG100: DHCP Daemon crash. Configure virtual service IP address on wrong Incoming interface let dhcp dead. To check IP address are Incoming interface subnet.

20. [BUG FIX] eITS#150600243

Enhance the speed when switching the page between Application object and Application group. (this has been enhanced with DF 411AAKZ2ITS-WK28-2015-08-04-150600243.rar)

21. [BUG FIX] eITS#150600067

USG100 dhcp server size > 254 When configure DHCP server, to check each Interface to alert overlap Error.

22. [BUG FIX] eITS#150501127

USG110 interface status while using trunk is wrong even though the connection is down, the wan1\_ppp interface still shows alive.

23. [BUG FIX] eITS#150500830, 150701013

When user login/logout from GUI, device will deletes exist TCP session.

24. [BUG FIX] eITS#150500671

The device work fine for few days, but when symptom happening the device can't access to internet any more.(needs reboot device to recover it)

25. [BUG FIX] eITS#150500646

Enabled SSL inspection function on the device, and work perfect with few days. When symptom happening, the HTTPs page will became very slower until can't open any more. The symptom needs boot to resolve this situation.

26. [BUG FIX] eITS#150300227

When authentication with WPA2-Enterprise to authentication with 802.1X, the client can't authentication success.

27. [BUG FIX] eITS#150200529

DHCPv6 DIUD length is too short compare to RFC definition.

28. [BUG FIX] eITS#150200167

Ping virtual interface successfully even if the virtual interface is deleted.

29. [BUG FIX] eITS#150200142

USG110 WPA2-enterprise for controlled ap not working when using ad as aaa-server.

30. [BUG FIX] eITS#150100917

SNMP MIBs ifOperStatus and ifSpeed incorrect for port-grouping interface.

31. [BUG FIX] eITS#140900194

When enable Anti-spam, client can't receive the mail.

[Condition]

Disable zypktorder duplicated ACK send when AS mail inspection stage.  
(USG60 - Cannot get mails from external Mail server through USG)

## **Features: V4.13(AAPK.1)C0**

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### **Modifications in V4.13(AAPK.1)C0 - 2015/08/30**

1. [BUGFIX]

Some objects cannot be correctly added or removed by CloudCNM.

## Features: V4.13(AAPK.0)C0

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### Modifications in V4.13(AAPK.0)C0 - 2015/08/15

#### 1. [ENHANCEMENT]

Management Feature Enhancement:

1. Support CloudCNM, a cloud-based network management system.

4.13 CloudCNM feature support includes:

- Batch import of managed devices at one time using one CSV file
- See an overview of all managed devices and system information in one place
- Monitor and manage devices
- Install firmware to multiple devices of the same model at one time
- Backup and restore device configuration
- View the location of managed devices on a map
- Receive notification for events and alarms, such as when a device goes down
- Graphically monitor individual devices and see related statistics
- Directly access a device for remote configuration
- Create four types of administrators with different privileges
- Perform Site-to-Site, Hub & Spoke, Fully-meshed and Remote Access VPN provisioning.

2. Support Russian Language

3. VPN MIB Support: eITS#150317956

SNMP VPN status MIBs.

The VPN status MIB is a MIB table containing the following information:

- Connection name
- VPN gateway
- IP version
- Active status
- Connected status.

Followings are the example of snmpwalk for the added MIBs;

VPN status MIB table:

- 1.3.6.1.4.1.890.1.6.22.2.4.1.1.1 = INTEGER: 1 --> table index
- 1.3.6.1.4.1.890.1.6.22.2.4.1.1.2 = INTEGER: 2
- 1.3.6.1.4.1.890.1.6.22.2.4.1.1.3 = INTEGER: 3
- 1.3.6.1.4.1.890.1.6.22.2.4.1.2.1 = STRING: "vpnconn1" --> name
- 1.3.6.1.4.1.890.1.6.22.2.4.1.2.2 = STRING: "vpnconn2"
- 1.3.6.1.4.1.890.1.6.22.2.4.1.2.3 = STRING: "vpn6conn1"

- 1.3.6.1.4.1.890.1.6.22.2.4.1.3.1 = STRING: "usg110\_1" --> gateway
- 1.3.6.1.4.1.890.1.6.22.2.4.1.3.2 = STRING: "usg110\_1"
- 1.3.6.1.4.1.890.1.6.22.2.4.1.3.3 = STRING: "vpn6\_1"
- 1.3.6.1.4.1.890.1.6.22.2.4.1.4.1 = STRING: "IPv4" --> IP version
- 1.3.6.1.4.1.890.1.6.22.2.4.1.4.2 = STRING: "IPv4"
- 1.3.6.1.4.1.890.1.6.22.2.4.1.4.3 = STRING: "IPv6"
- 1.3.6.1.4.1.890.1.6.22.2.4.1.5.1 = INTEGER: 0 --> active status
- 1.3.6.1.4.1.890.1.6.22.2.4.1.5.2 = INTEGER: 1
- 1.3.6.1.4.1.890.1.6.22.2.4.1.5.3 = INTEGER: 1
- 1.3.6.1.4.1.890.1.6.22.2.4.1.6.1 = INTEGER: 0 --> connected status
- 1.3.6.1.4.1.890.1.6.22.2.4.1.6.2 = INTEGER: 0
- 1.3.6.1.4.1.890.1.6.22.2.4.1.6.3 = INTEGER: 0

VPN connection counter MIBs.

The VPN connection counter MIB is a MIB group containing:

- Total VPN connection configured
- Number of activated connection
- Number of connected connection
- Number of disconnected connection

Followings are the example of snmpwalk for the added MIBs;

VPN connection counters:

- 1.3.6.1.4.1.890.1.6.22.2.5.1.0 = Counter32: 3 --> Total connection configured
- 1.3.6.1.4.1.890.1.6.22.2.5.2.0 = Counter32: 2 --> Number of active connection
- 1.3.6.1.4.1.890.1.6.22.2.5.3.0 = Counter32: 0 --> Number of connected connection
- 1.3.6.1.4.1.890.1.6.22.2.5.4.0 = Counter32: 2 --> Number of disconnected connection

MIB table for VPN SA monitor

The new OID is 1.3.6.1.4.1.890.1.6.22.2.6.

The MIB table contains the following columns:

- 1.3.6.1.4.1.890.1.6.22.2.6.1.1 --> VPN connection index
- 1.3.6.1.4.1.890.1.6.22.2.6.1.2 --> VPN connection name
- 1.3.6.1.4.1.890.1.6.22.2.6.1.3 --> VPN connection policy
- 1.3.6.1.4.1.890.1.6.22.2.6.1.4 --> VPN connection uptime
- 1.3.6.1.4.1.890.1.6.22.2.6.1.5 --> VPN connection timeout
- 1.3.6.1.4.1.890.1.6.22.2.6.1.6 --> Number of in-bound packets for the connection

- 1.3.6.1.4.1.890.1.6.22.2.6.1.7 --> Number of in-bound octets for the connection
  - 1.3.6.1.4.1.890.1.6.22.2.6.1.8 --> Number of out-bound packets for the connection
  - 1.3.6.1.4.1.890.1.6.22.2.6.1.9 --> Number of out-bound octets for the connection
4. Support license refresh immediately while device-ha backup device become active.
  5. Add pre-defined configuration (or pre-defined UTM profile) by default.
  6. Offering DHCP option 138 has been disabled by default.

## 2. [ENHANCEMENT]

### Connectivity Feature Enhancement:

1. Support RPS(Receive Packet Steering) to ensure that packets for the same stream of data are sent to the same CPU, which could help to increase performance in a congest(low bandwidth or high latency) network environment, eITS#150200442, 150200636.
2. We enlarge static DHCP host pool from 512 to 1024 for ZyWALL 1100, USG1100, and USG1900, eITS#150100773
3. Adjust Spec for SSLVPN Connections

Model	Default SSLVPN Connections	Maximum SSLVPN Connections
USG40/40W	5	15
USG60/60W	5	20
USG110	25	150
USG210	35	150
USG310	50	150
USG1100	250	500
USG1900	250	750
ZyWALL 110	25	150
ZyWALL 310	50	150
ZyWALL 1100	250	500

## 3. [ENHANCEMENT]

### Security Feature Enhancement:

1. ADP engine and IDP engine upgrade to support more social networking application behavior, such as FACEBOOK like, FACEBOOK share...etc.
4. [ENHANCEMENT] eITS#150200756  
UDP session timeout value can be configured up to 28800 seconds.
  5. [ENHANCEMENT]

Patches for CVE-2015-0204, FREAK: OpenSSL vulnerability.

6. [ENHANCEMENT]

Patches for CVE-2015-4000, Logjam: TLS vulnerabilities (CVE-2015-4000).

7. [ENHANCEMENT]

Patches for vulnerability of HTTP authentication module which may cause USG behave as an open proxy to proxy HTTP request from external clients to internal servers.

8. [ENHANCEMENT]

Add CLI "no ipicmp-redirects" command to disable ICMP redirects manually.

9. [BUG FIX] eITS#150317956

[OID]OID formats are different between USG40W and USG1900.

[Condition]

MIBs...1.3.6.1.4.1.890.1.15.3.1.6.0.....

USG40W: V4.11(AALB.0)/1.01 | Aug 28 2013 14:19:07/2015-03-13 06:53:46

USG1900: V4.11(AAPL.0)/1.10/2015-03-13 01:27:44

10. [BUG FIX] eITS#150301008, 150701094

DNS Security configuration can't change.

[Condition]

1. Go to Configuration > System > DNS > Click Show Advanced Settings > Security Option Control > Edit default profile e.g. Query Recursion deny > Click OK button
2. You will find the OK button no function.

11. [BUG FIX] eITS#150300062

If adding radius server into auth. method, L2TP cannot be established successfully. [Condition]

1. Go to Configuration > Object > AAA Server > RADIUS.
2. Set Server address: R1.domain.tw
3. Set Backup Server address: R2.domain.tw (PS. R1.domain.tw and R2.domain.tw need result same ip address)
4. Radiusd daemon couldn't bring on fail.

12. [BUG FIX] eITS#150300789

Combo-box show field is in wrong location.

[Condition]

1. In the settings of WLAN-interface, the input fields "802.11 band" and "Channel" are incorrectly positioned.
2. The problem occurs only in the browser IE 11

13. [BUG FIX] eITS#150300851

Limited admin user fails to view click diagnostic page

[Condition]

1. Add a limited admin account
2. Login by limited admin
3. Go to Maintenance > Diagnostic
4. You will find USG GUI no response

14. [BUG FIX] eITS#150300910, 150400430

DHCP Relay may not work in Device HA environment.

[Condition]

When master device change status from fault state to active state, the DHCP relay function may not work.

15. [BUG FIX] eITS#150400012, 150200484, 150500302, 150600123, 150301005, 150501020, 150301061

In some cases, apply configuration will fail and cause zyshd dead. This may occur during the firmware upgrade progress or manually apply configuration.

16. [BUG FIX] eITS#150400115

[SSO][Authentication] Without SSO enabled, user can be correctly authenticated and associated with the AD-group "Internet Users". However, with SSO enabled, the user from the AD-group "Internet Users" always appears only in the group of "ext-user (ad-users)".

17. [BUG FIX] eITS#150301062

VLAN Packets can still be sent out even the base interface is disabled.

18. [BUG FIX] eITS#150300850

Configure many static DHCP address up to maximum, the CLI command may not correctly be configured and cause "incomplete entry" error each time DUT reboot.

19. [BUG FIX] eITS#150401185

In USG310, 1100, 1900, ZyWALL 310, 1100, it will show error message when configuring the port negotiation type on port 8.

20. [BUG FIX] eITS#150400882

When trying to sort the table (Hits) of "Top 5 Viruses" and "Top 5 Intrusions" in Dashboard by descending/ascending, sorting is only by the first digit.

21. [BUG FIX] eITS#150500769

Unable to edit application object page if it contains ",", character.

22. [BUG FIX] eITS#150300799, 150400336, 150401001, 150401067, 150401143, 150200666



SSO does not work correctly sometimes.

23. [BUG FIX] eITS#150300240

Unable to open IDP signature name to see the description in MONITOR > UTM Statistics > IDP

24. [BUG FIX] eITS#150200331

Fix unexpected reboot related to packet processing.

25. [BUG FIX] eITS#140900194, 150600194, 150600840

In some cases, user cannot get mails from external mail server through USG.

26. [BUG FIX] eITS#150200355

When we set speed on port1, the traffic doesn't work and show some abnormal message.

27. [BUG FIX] eITS#150600082

The CF report in monitoring page and report server record not match.

28. [BUG FIX] eITS#150600688

In some cases, DUT will crash when trying to establish L2TP.

29. [BUG FIX] eITS#150501015

In some cases, enable connectivity check in policy route rules may cause zyshd daemon dead.

30. [BUG FIX] eITS#150600137

In some cases, AV signature cannot be successfully updated.

31. [BUG FIX] eITS#150700094

Self-Signed DSA certificate can be created but cannot show on the GUI.

32. [BUG FIX] eITS#150300324

In USG110, USG210 and ZyWALL 110, DUT will become pure switch in a short period during booting process. When external AP and USG reboot at the same time, there might have possibility that AP will acquire IP address from outer DHCP server instead of DUT LAN DHCP server.

33. [BUG FIX] eITS#150600585

Wrong German translation, "Intra-BSS-Verkehraktivieren" should be corrected to "Intra-BSS-Verkehrblockieren"

34. [BUG FIX] eITS#150200663, 150500327

Some mails with attached files transferred from WAN to LAN cannot be received while Anti-Spam enabled.

35. [BUG FIX] eITS#150100252, 150200029, 150200072, 150300445

TFTP over IPSec cannot work well in the following topology.

TFTP        Server-----USG40/60=====VPNtunnel=====USG20-----TFTP  
Client

36. [BUG FIX] eITS#150100898

After Device HA fallback to Master, IP on VLAN interface become 0.0.0.0.

37. [BUG FIX] eITS#150500371

3G dongle E372 cannot work well in ZLD 4.11 Firmware.

38. [BUG FIX] eITS#150200205

Some session will hit wrong BWM rules with application service type and application object is not any.

39. [BUG FIX] eITS#150200080

ZyXEL VPN Client cannot establish VPN tunnel when using DUT default certificate to do IKE authentication.

40. [BUG FIX] eITS#141200576

Fix the issue that 'Disconnect Connections Before Falling Back' cannot work.

41. [BUG FIX] eITS#140800138

When setting Email Daily Report, strange log "msg="/USR/SBIN/CRON: (root) MAIL (mailed 369 bytes of output but got status 0x0001)" will dump in system log.

## **Features: V4.11(AAPK.2)C0**

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### **Modifications in V4.11(AAPK.2)C0 - 2015/04/28**

1. [BUG FIX] eITS#150400012

Apply configuration which has SSID "VLAN Support" may causes zyshd daemon dead and device cannot be managed any more. User must reset device to default for recovery.

## **Features: V4.11(AAPK.1)C0**

---

### **Modifications in V4.11(AAPK.1)C0 - 2015/04/21**

1. [BUG FIX] eITS#150301160  
Content Filter doesn't work at all after 4.11 upgrade.
2. [BUG FIX] eITS#150200801  
Radius daemon will fail to launch if the radius server (in AAA server) is configured with domain name and DNS is not ready during device boot-up.
3. [BUG FIX] eITS#150301005  
When SSID "VLAN Support" has been enabled, device will fail to load start-up config after reboot. User must reset device to default for recovery.

## Features: V4.11(AAPK.0)C0

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### Modifications in V4.11(AAPK.0)C0 - 2015/03/12

#### 1. [ENHANCEMENT]

Management feature enhancement:

1. ZON Utility Support (Device Discovery, Change Admin Password, Firmware Upgrade, Reboot Device, Web GUI Link)
2. Smart Connect Support (Device Discovery, Web GUI Link)

#### 2. [ENHANCEMENT]

Connectivity feature enhancement:

1. AP Controller Technology 1.9
2. LTE dongle support
3. VLAN 802.1P marking support

#### 3. [ENHANCEMENT]

Security feature enhancement:

1. Antivirus white/black list
2. Support ADP scan IPv6 traffic
3. ADP block time period
4. DNS security option control
5. SNMPv3
6. Add Reject Option in Security Policy
7. Add AV EICAR Detect Option
8. Add Action for untrusted cert chain of SSL Inspection
9. SSL Inspection certificate support cloud update.
10. UTM Performance Tuning #eITS141100375, 150100136, 150100251, 150200495

#### 4. [ENHANCEMENT]

Usability enhancement

1. Wireless Initial Installation Wizard
2. Network Diagnostic tools on GUI
3. Security Policy Rules Filter & Clone
4. UTM Profile Viewer
5. Policy Route Rule Filter
6. NAT rule support service group
7. Dual image enhancement
8. Multi-Lingual GUI

#### 5. [ENHANCEMENT]

VPN Feature Enhancement:

1. L2TP/IPSec behind NAT.
6. [ENHANCEMENT] eITS#141100032  
Certificate support space character in the following field: Organizational Unit, Organization, Town, State (Province), Country.
7. [ENHANCEMENT] eITS#141000153  
Support GUI check box "Use Static-Dynamic Route to Control 1-1 NAT Route" to change routing order. Static-Dynamic Route has higher priority to 1-1 NAT Route when it is enabled.
8. [ENHANCEMENT]  
Patches for CVE-2015-0235, GHOST Vulnerability of glibc.
9. [FEATURE CHANGE] SPR#141007503  
AP Controller default configuration changed from "Always Accept" to "Manual" setting.
10. [FEATURE CHANGE]  
WAS:  
AV, CF, AS black and white list and IDP custom signature **DO NOT** work without license.  
IS:  
AV, CF, AS black and white list and IDP custom signature **DO** work even without license.
11. [FEATURE CHANGE]  
Enlarge Log Entry Size by each model  
WAS:  
For USG110/210/310/ and ZyWALL110/310: 512  
For USG1100/1900 and ZyWALL 1100: 512  
IS:  
For USG110/210/310/ and ZyWALL110/310: 1024  
For USG1100/1900 and ZyWALL 1100: 2048  
USG40/40W/60/60W keep log entry size as 512.
12. [BUG FIX] eITS#150200052  
Dynu DDNS cannot work
13. [BUG FIX] eITS#150100468, 140900136  
Not connected to zyshd daemon due to deadlock by sshipsecpm connectivity check.
14. [BUG FIX] eITS#141200823  
DUT cannot connect to SSO agent and output CLI command as below:  
Router# show sso agent status  
% connect failed

% SSO: domain socket fial!

ZySSO Primary Agent: offline

ZySSO Secondary Agent: offline

15. [BUG FIX] eITS#150100588

Apply configuration failed in the following steps:

1. reset the device back to default
2. Modify the WWW HTTPs port from 443 to 447, and some NAT and policy route rules.
3. Download the startup.conf which with HTTPs port as 447.
4. Change the startup.conf name as test\_www and upload it.
5. Apply test\_wwwconfig.
6. After device boot up, the device will fall back to default.

16. [BUG FIX] eITS#141100503

Strange behavior when ZyWALL is in DNS proxy role.

[Condition]

1. Add zone forwarder 8.8.8.8 for zone \* via WAN interface
2. Add A-record for domain ftp.zanolari.net, IP 192.168.200.3
3. On PC, ping [www.zanolari.net](http://www.zanolari.net)
4. Run CLI 'show ipdns server cache' and check www.zanolari.net is in DNS cache
5. Capture packets on device for WAN interface and port 53 (DNS)
6. On PC, run command 'ipconfig /flushdns' to flush DNS cache on PC, and then ping www.zanolari.net again
7. From captured packets you will find device sends DNS query for [www.zanolari.net](http://www.zanolari.net) even if it is found in device's DNS cache.

17. [BUG FIX] eITS#141200186, 150100084

After enabling AS, the throughput is low.

18. [BUG FIX] eITS#141200341, 141200033

Move the log "App ID has been changed from 83886594 to 83886855" to debug log.

19. [BUG FIX] eITS#141001029

User cannot be configured in security policy rule with zone to zone rule from WAN to ZyWALL.

20. [BUG FIX] eITS#141100574

After rebooting, WAN gateway will disappear.

21. [BUG FIX] eITS#141100745

Device's management IP cannot be reachable while Device HA status changed.

22. [BUG FIX] eITS#141000415

The tunnel shows to be up in VPN Connections in both sides. However, no traffic can pass the tunnel and the log shows IPsec error with "no rule found, Dropping ESP packet".

23. [BUG FIX] eITS#141100945

Device HA failed to synchronize backup device with master device.

24. [BUG FIX] eITS#141200132

The IP pool size cannot be varied with the changing of IP pool start address on GUI.

[Condition]

1. Default "IP Address" is 192.168.1.1 and "IP Pool Start Address" is 192.168.1.33. The maximum pool size value is 223.
2. Change the "IP Pool Start Address" to 192.168.1.60, the pool size should be 196 but it is still 223.

25. [BUG FIX] eITS#141100753

Signature release date didn't display based on different time zone.

26. [BUG FIX] eITS#141100849

Changing the firewall rule to deny traffic to ZyWALL but not take effect immediately.

27. [BUG FIX] eITS#141100177

Building IPsec VPN tunnel with FortiGate, VPN tunnel cannot build after rekeying.

28. [BUG FIX] eITS#140800319

Download files may get stuck when UTM is activated.

29. [BUG FIX] eITS#141100097

Validation result of my certificate is failed.

30. [BUG FIX] eITS#141100402

Packets are sending out in the wrong interface.

31. [BUG FIX] eITS#141001052

Device has wrong or missing DNS cache record.

32. [BUG FIX] eITS#141000951

When using for SHA256 as intermediate certificate, the certificate path will shows "incomplete path".

33. [BUG FIX] eITS#141000870, 141100240

Rename a zone which has been used in Policy Control Rules will cause the zone field of these policy control rules cannot be changed or modified to other zones.

34. [BUG FIX] eITS#140900955



[RIP]When setting RIP redistribute OSPF as metric=3, reboot DUT will show error message and cause applying startup configuration failed.

35.[BUG FIX] eITS#140926122

[DHCPv6] When LAN interface set DHCPv6 client, it cannot send NS Packet.

36.[BUG FIX] eITS#140900251, SPR#140922847

[File Manager]Rename configuration file to 64 characters will fail with wrong CLI command.

37.[BUG FIX] eITS#141000516

[File Manager]Trying to download a file from download.microsoft.com or using the windows update service, in USG logs, IDP blocks the access

38.[BUG FIX] eITS#140900051

Route packets from a bridge interface according to the NAT result.

39.[BUG FIX] eITS#140900272

Ge3 is configured as IP/MAC binding enabled. Disable interface any one of ge4 ~ ge8. The DHCP client of ge3 is unable to ping the default gateway anymore.

40.[BUG FIX] eITS#141100569

[Interface]Routing didn't change even connective check failed.

41.[BUG FIX] eITS#150100603

IPSec VPN daemon causes high memory usage(99%).

## Features: V4.10(AAPK.2)C0

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### Modifications in V4.10(AAPK.2)C0 - 2014/12/03

1. [ENHANCEMENT] eITS#140600094  
Update driver to fix IOP issue with GenexisFiberXport device.
2. [ENHANCEMENT]  
Add CLI to show the mapping for internal and external interface. CLI:  
"debug interface show mapping"
3. [ENHANCEMENT] eITS#141000162  
Change log format as following:  
Before:  
category="ipsec" level="error" src="" dst="" msg="Failed to send packet,  
err=N"N: 1 or 2  
After:  
category="ipsec" level="debug" src="<source and port of packet>"  
dst="<destination and port of packet>" msg="Packet(PROTOCOL) cannot  
be sent, reason: REASON"  
PROTOCOL: ESP/AH/TCP/UDP/Unknown(protocol number)  
REASON: System dropped/Network congestion/Traffic control dropped
4. [ENHANCEMENT]  
Update bash binary for shellshock bash vulnerability issue
5. [ENHANCEMENT] eITS#140900846  
Support Huawei E303 USB 3G dongle with version 22.318.27.00.00
6. [ENHANCEMENT]  
Add SNMP VPN status and connection counter MIBs.  
The VPN status MIB is a MIB table containing the following information:  
Connection name, VPN gateway, IP version, active status, and connected  
status.  
The VPN connection counter is a MIB group containing:  
Total VPN connection configured, number of activated connection,  
number of connected connection, and number disconnected  
connection.  
Followings are the example of snmpwalk for the added MIBs;  
VPN status MIB table:  
1.3.6.1.4.1.890.1.6.22.2.4.1.1.1 = INTEGER: 1 --> table index  
1.3.6.1.4.1.890.1.6.22.2.4.1.1.2 = INTEGER: 2  
1.3.6.1.4.1.890.1.6.22.2.4.1.1.3 = INTEGER: 3  
1.3.6.1.4.1.890.1.6.22.2.4.1.2.1 = STRING: "vpnconn1" --> name

1.3.6.1.4.1.890.1.6.22.2.4.1.2.2 = STRING: ""vpnconn2""  
 1.3.6.1.4.1.890.1.6.22.2.4.1.2.3 = STRING: ""vpn6conn1""  
 1.3.6.1.4.1.890.1.6.22.2.4.1.3.1 = STRING: ""usg110\_1"" --> gateway  
 1.3.6.1.4.1.890.1.6.22.2.4.1.3.2 = STRING: ""usg110\_1""  
 1.3.6.1.4.1.890.1.6.22.2.4.1.3.3 = STRING: ""vpn6\_1""  
 1.3.6.1.4.1.890.1.6.22.2.4.1.4.1 = STRING: ""IPv4"" --> IP version  
 1.3.6.1.4.1.890.1.6.22.2.4.1.4.2 = STRING: ""IPv4""  
 1.3.6.1.4.1.890.1.6.22.2.4.1.4.3 = STRING: ""IPv6""  
 1.3.6.1.4.1.890.1.6.22.2.4.1.5.1 = INTEGER: 0 --> active status  
 1.3.6.1.4.1.890.1.6.22.2.4.1.5.2 = INTEGER: 1  
 1.3.6.1.4.1.890.1.6.22.2.4.1.5.3 = INTEGER: 1  
 1.3.6.1.4.1.890.1.6.22.2.4.1.6.1 = INTEGER: 0 --> connected status  
 1.3.6.1.4.1.890.1.6.22.2.4.1.6.2 = INTEGER: 0  
 1.3.6.1.4.1.890.1.6.22.2.4.1.6.3 = INTEGER: 0

VPN connection counters:

1.3.6.1.4.1.890.1.6.22.2.5.1.0 = Counter32: 3 --> total connection configured  
 1.3.6.1.4.1.890.1.6.22.2.5.2.0 = Counter32: 2 --> number of active connection  
 1.3.6.1.4.1.890.1.6.22.2.5.3.0 = Counter32: 0 --> number of connected connection  
 1.3.6.1.4.1.890.1.6.22.2.5.4.0 = Counter32: 2 --> number of disconnected connection

The number of disconnected connection is equal to the number of active connection minus the number of connected connection"

## 7. [ENHANCEMENT] eITS#140800801, 141000157

Improve SMB performance

## 8. [ENHANCEMENT] eITS#141000576

PPTP ALG support server in LAN scenario

## 9. [ENHANCEMENT]

Add an interface at GUI to setting SSL Inspection policy for untrusted certificate chain

## 10. [ENHANCEMENT]

Single Sign-on support authentication failover to web authentication. Note: With SSO Agent 1.0.4 or above.

[Condition]

When enable both Single Sign-on and Force User Authentication in web authentication policy. Once the Single Sign-On authentication fail, user will

be redirect to web authentication login page as second authentication method.

11. [FEATURE CHANGE] eITS#141000788

Turn off SSLV3 support in build-in service(HTTPs) by default due to Poodle vulnerability issue

12. [FEATURE CHANGE] eITS#141000154

WAS: The columns "IKE Name" and "Cookies" showed on VPN Monitor

IS: The columns "IKE Name" and "Cookies" are hidden on VPN Monitor by default.

13. [FEATURE CHANGE]

WAS: WLAN bind with lan1 by default

IS: WLAN bind with lan2 by default

14. [FEATURE CHANGE]

WAS:

Log entry is 256

IS:

Log entry is 512

PS: For ZyWALL 310 and USG310 only

15. [FEATURE CHANGE]

WAS:

IKE packet can be sent from any interface by routing even the packet's source IP doesn't match to the outgoing interface.

IS:

The IKE packet can only be sent from the interface bound the same IP with the packet's source IP. The above feature may cause some scenario of VPN establishment not work.

Please refer to KB:

<http://kb.zyxel.com/KB/searchArticle!viewDetail.action?articleOid=014363&lang=EN>

16. [BUG FIX] eITS#140900194

User cannot get mail from external mail server through USG due to duplicate ACK packet.

17. [BUG FIX] eITS#140800834

USG with wrong CEF syslog format

18. [BUG FIX] eITS#140800642

Device HA status not changed when monitored interface IP changed

19. [BUG FIX] eITS#141000158

SSLVPN reverse proxy RDP cannot work

- 20. [BUG FIX] eITS#140900380  
USG1100 / L2TP can't login user and with crazy log message
- 21. [BUG FIX] eITS#141000460, 141000461, 141000462  
Static ARP entry will gone if enabling device HA
- 22. [BUG FIX] eITS#141000171  
USG bootup makes switch function("Loop Guard") blocking port
- 23. [BUG FIX] eITS#141000157  
False alarm in CAPWAP protocol in ADP engine
- 24. [BUG FIX] eITS#141000155  
IKE packet sent at wrong interface and wrong IP
- 25. [BUG FIX] eITS#141000458  
DHCP will clear static ARP entry after send DHCP ACK
- 26. [BUG FIX] eITS#141001108  
USG110 cannot load Firmware if USB memory stick connected
- 27. [BUG FIX] eITS#140800642, SPR#140714684, 140804120, 141103007  
ZyWALL 1100 - VPN connect fail and hang
- 28. [BUG FIX] eITS#140700610, 141000163, SPR#140909287  
After device boot up, the log will show that the DHCP packets have been dropped by default firewall rule. However, WAN interface still gets the IP address from DHCP server.

## **Features: V4.10(AAPK.1)C0**

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**Modifications in V4.10(AAPK.1)C0 - 2014/10/01**

Release for manufacturing

## **Features: V4.10(AAPK.0)C0**

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**Modifications in V4.10(AAPK.0)C0 - 2014/08/22**

First release

## **Appendix 1. Firmware upgrade / downgrade procedure**

The following is the firmware **upgrade** procedure:

1. If user did not backup the configuration file before firmware upgrade, please follow the procedures below:
  - Use Browser to login into ZyWALL/USG as administrator.
  - Click Maintenance > File Manager > Configuration File to open the Configuration File Screen. Use the Configuration File screen to backup current configuration file.
  - Find firmware at [www.zyxel.com](http://www.zyxel.com) in a file that (usually) uses the system model name with a .bin extension, for example, "425AAPK1C0.bin".
  - Click Maintenance > File Manager > Firmware Package to open the Firmware Package Screen. Browser to the location of firmware package and then click Upload. The ZyWALL/USG automatically reboots after a successful upload.
  - After several minutes, the system is successfully upgraded to newest version.

The following is the firmware **downgrade** procedure:

1. If user has already backup the configuration file before firmware upgrade, please follow the procedures below:
  - Use Console/Telnet/SSH to login into ZyWALL/USG.
  - Router>**enable**\
  - Router#**configure terminal**
  - Router(config)#**setenv-startup stop-on-error off**
  - Router(config)#**write**
  - Load the older firmware to ZyWALL/USG using standard firmware upload procedure.
  - After system uploads and boot-up successfully, login into ZyWALL/USG via GUI.
  - Go to GUI → "File Manager" menu, select the backup configuration filename, for example, statup-config-backup.conf and press "Apply" button.
  - After several minutes, the system is successfully downgraded to older version.
2. If user did not backup the configuration file before firmware upgrade, please follow the procedures below:
  - Use Console/Telnet/SSH to login into ZyWALL/USG.
  - Router>**enable**
  - Router#**configure terminal**
  - Router(config)#**setenv-startup stop-on-error off**
  - Router(config)#**write**
  - Load the older firmware to ZyWALL/USG using standard firmware upload procedure.



- After system upload and boot-up successfully, login into ZyWALL/USG via Console/Telnet/SSH.
- Router>**enable**
- Router#**write**

Now the system is successfully downgraded to older version.

Note: ZyWALL/USG might lose some configuration settings during this downgrade procedure. It is caused by configuration conflict between older and newer firmware version. If this situation happens, user needs to configure these settings again.

## **Appendix 2. SNMPv2 private MIBS support**

SNMPv2 private MIBs provides user to monitor ZyWALL/USG platform status. If user wants to use this feature, you must prepare the following step:

1. Have ZyWALL/USG mib files(**425AAPK1C0-enterprise.mib** and **425AAPK1C0-private.mib**) and install to your MIBs application (like MIB-browser). You can see 410AAPJ2C0-private.mib (OLD is 1.3.6.1.4.1.890.1.6.22).
2. ZyWALL/USG SNMP is enabled.
3. Using your MIBs application connects to ZyWALL/USG.
4. SNMPv2 private MIBs support three kinds of status in ZyWALL/USG:
  1. CPU usage: Device CPU loading (%)
  2. Memory usage: Device RAM usage (%)
  3. VPN IPsec Total Throughput: The VPN total throughput (Bytes/s), Total means all packets(Tx + Rx) through VPN.

## Appendix 3. Firmware Recovery

In some rare situation(symptom as following), ZyWALL/USG might not boot up successfully after firmware upgrade. The following procedures are the steps to recover firmware to normal condition. Please connect console cable to ZyWALL/USG.

### 1. Symptom:

- Booting success but device show error message "can't get kernel image" while device boot.

```
U-Boot 2011.03 (Development build, svnversion: u-boot:422M, exec:exported)
(Build time: Feb 21 2013 - 10:15:57)

BootModule Version: V1.07 | 02/21/2013 10:45:46
DRAM: Size = 2048 Mbytes

Press any key to enter debug mode within 3 seconds.
.....
Wrong Image Format for bootm command
ERROR: can't get kernel image!
Start to check file system...
```

- Device reboot infinitely.

```
U-Boot 2011.03 (Development build, svnversion: u-boot:422M, exec:exported)
(Build time: Feb 21 2013 - 10:15:57)

BootModule Version: V1.07 | 02/21/2013 10:45:46
DRAM: Size = 2048 Mbytes

Press any key to enter debug mode within 3 seconds.
.....
U-Boot 2011.03 (Development build, svnversion: u-boot:422M, exec:exported)
(Build time: Feb 21 2013 - 10:15:57)

BootModule Version: V1.07 | 02/21/2013 10:45:46
DRAM: Size = 2048 Mbytes

Press any key to enter debug mode within 3 seconds.
.....
```

- Nothing displays after "Press any key to enter debug mode within 3 seconds." for more than 1 minute.

```
U-Boot 2011.03 (Development build, svnversion: u-boot:422M, exec:exported)
(Build time: Feb 21 2013 - 10:15:57)

BootModule Version: V1.07 | 02/21/2013 10:45:46
DRAM: Size = 2048 Mbytes

Press any key to enter debug mode within 3 seconds.
.....
█
```

- Startup message displays "Invalid Recovery Image".

```
U-Boot 2011.03 (Development build, svnversion: u-boot:422M, exec:exported)
(Build time: Feb 21 2013 - 10:15:57)

BootModule Version: V1.07 | 02/21/2013 10:45:46
DRAM: Size = 2048 Mbytes

Press any key to enter debug mode within 3 seconds.
.....

Invalid Recovery Image

ERROR

EnterDebug Mode

ZW1100>
```

- The message here could be "Invalid Firmware". However, it is equivalent to "Invalid Recovery Image".

```
Invalid Firmware!!!
ERROR
```

## 2. Recover steps

- Press any key to enter debug mode

```
U-Boot 2011.03 (Development build, svnversion: u-boot:422M, exec:exported)
(Build time: Feb 21 2013 - 10:15:57)

BootModule Version: V1.07 | 02/21/2013 10:45:46
DRAM: Size = 2048 Mbytes

Press any key to enter debug mode within 3 seconds.
.....

EnterDebug Mode

ZW1100>
```

- Enter `atgz -f -l 192.168.1.1` to configure FTP server IP address

```
>
>
>
>
> atgz -f -l 192.168.1.1
```

- Enter `atgof` to bring up the FTP server on port 1

```
ZyWALL 1100> atgof

Booting...
```

- The following information shows the FTP service is up and ready to receive FW

```
Building ...

Connect a computer to port 1 and FTP to 192.168.1.1 to upload the new file.
```

- You will use FTP to upload the firmware package. Keep the console session open in order to see when the firmware update finishes.
- Set your computer to use a static IP address from 192.168.1.2 ~ 192.168.1.254. No matter how you have configured the ZyWALL/USG's IP addresses, your computer must use a static IP address in this range to recover the firmware.
- Connect your computer to the ZyWALL/USG's port 1 (the only port that you can use for recovering the firmware).
- Use an FTP client on your computer to connect to the ZyWALL/USG. This example uses the ftp command in the Windows command prompt. The ZyWALL/USG's FTP server IP address for firmware recovery is 192.168.1.1
- Log in without user name (just press enter).
- Set the transfer mode to binary. Use "bin" (or just "bi" in the Windows command prompt).
- Transfer the firmware file from your computer to the ZyWALL/USG (the command is "put 310AAAC0C0.bin" in the Windows command prompt).

```
C:\>ftp 192.168.1.1
Connected to 192.168.1.1.
220-=(<*>)=-.:. << Welcome to PureFTPd 1.0.11 >> .:.-=(<*>)=
220-You are user number 1 of 50 allowed
220-Local time is now 00:00 and the load is 0.00. Server port: 21.
220-Only anonymous FTP is allowed here
220 You will be disconnected after 15 minutes of inactivity.
User <192.168.1.1:(none)>:
230 Anonymous user logged in
ftp> bin
200 TYPE is now 8-bit binary
ftp> put C:\ZLD_FW\310AAAC0C0.bin
```

- Wait for the file transfer to complete.

```
200 PORT command successful
150 Connecting to port 5001
226-944.6 Mbytes free disk space
226-File successfully transferred
226 5.540 seconds (measured here), 9.32 Mbytes per second
ftp: 54141580 bytes sent in 5.55Seconds 9760.52Kbytes/sec.
ftp>
```

- The console session displays "Firmware received" after the FTP file transfer is complete. Then you need to wait while the ZyWALL/USG recovers the firmware (this may take up to 4 minutes).

```
Firmware received ...
[Update Filesystem]
  Updating Code
  ..
```

- The message here might be "ZLD-current received". Actually, it is equivalent to "Firmware received".

```
ZLD-current received ...
[Update Filesystem]
  Updating Code
  ..
```

- The console session displays "done" when the firmware recovery is complete. Then the ZyWALL/USG automatically restarts.

```

.....
done
[Update Kernel]
  Extracting Kernel Image
  ..
  done
  Writing Kernel Image ... done
Restarting system.

```

- The username prompt displays after the ZyWALL/USG starts up successfully. The firmware recovery process is now complete and the ZyWALL/USG is ready to use.

```

U-Boot 2011.03 (Development build, svnversion: u-boot:422M, exec:exported)
(Build time: Feb 21 2013 - 10:15:57)

BootModule Version: V1.07 | 02/21/2013 10:45:46
DRAM: Size = 2048 Mbytes

Press any key to enter debug mode within 3 seconds.
.....
Start to check file system...
/dev/sda3: 33/20480 files (0.0% non-contiguous), 57481/81920 blocks
/dev/sda4: 97/23040 files (1.0% non-contiguous), 7623/92160 blocks
Done

INIT: version 2.86 booting
Initializing Debug Account Authentication Seed (DAAS)... done.
Setting the System Clock using the Hardware Clock as reference...System Cl
ock set. Local time: Tue May 28 08:54:07 GMT 2013

INIT: Entering runlevel: 3
Starting zylog daemon: zylogd zylog starts.
Starting syslog-ng.
Starting ZLD Wrapper Daemon....
Starting uam daemon.
Starting periodic command scheduler: cron.
Start ZyWALL system daemon....
.....
Got LINK_CHANGE
.....
Got LINK_CHANGE
Port [1] Copper is up --> Group [1] is up
.....Applying system configuration file, please
wait...
no startup-config.conf file, Applying system-default.conf
Use system default configuration file (system-default.conf)
ZyWALL system is configured successfully with system-default.conf

Welcome to ZyWALL 1100

Username:

```

- If one of the following cases occurs, you need to do the “firmware recovery process” again. Note that if the process is done several time but the problem remains, please collect all the console logs and send to ZyXEL/USG for further analysis.

- ◆ One of the following messages appears on console, the process must be performed again `./bin/sh: /etc/zyxel/conf/ZLDconfig: No such file`  
Error: no system default configuration file, system configuration stop!!