

ZyWALL (ZLD) Guest Wi-Fi

Supported Devices

[ZyWALL 110 – running firmware version 4.10 to 4.13](#)

[ZyWALL 310 – running firmware version 4.10 to 4.13](#)

[ZyWALL 1100 – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 40 – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 40W – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 60 – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 60W – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 110 – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 210 – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 310 – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 1100 – running firmware version 4.10 to 4.13](#)

[ZyWALL USG 1900 – running firmware version 4.10 to 4.13](#)

Overview

A Guest Wi-Fi network allows the user to allow visitors access to the internet without leaving private computers and devices exposed to threats and/or attacks from the guest/visitor devices.

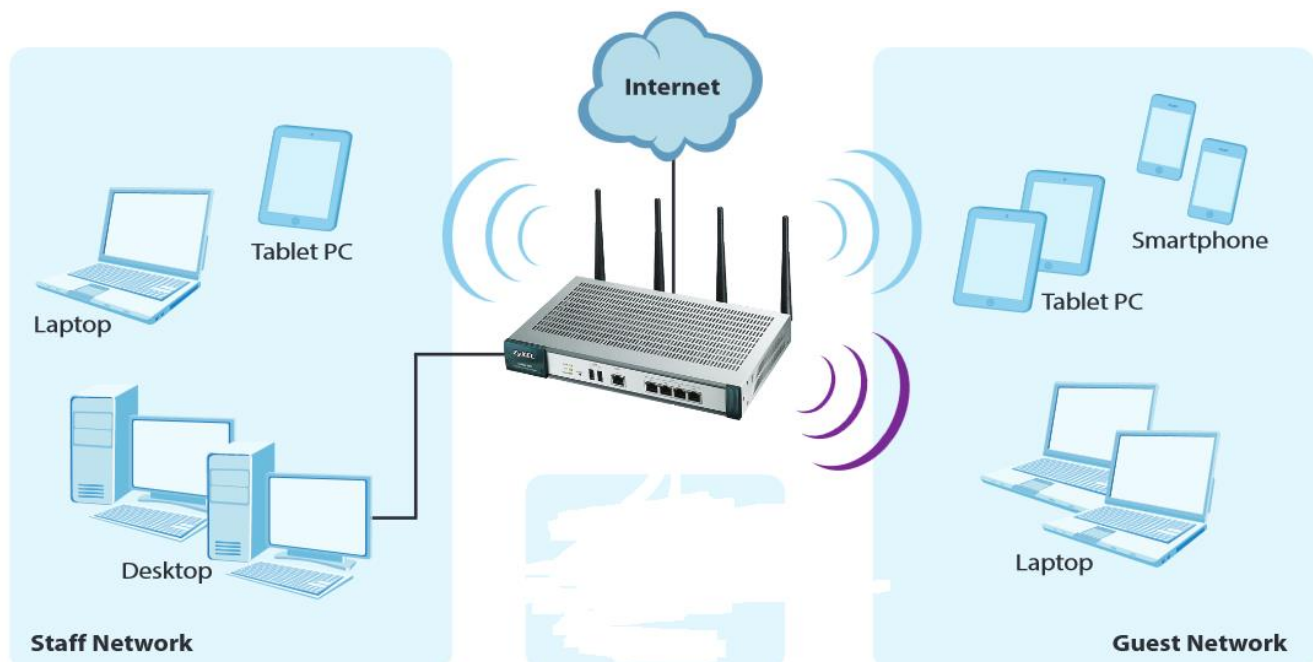


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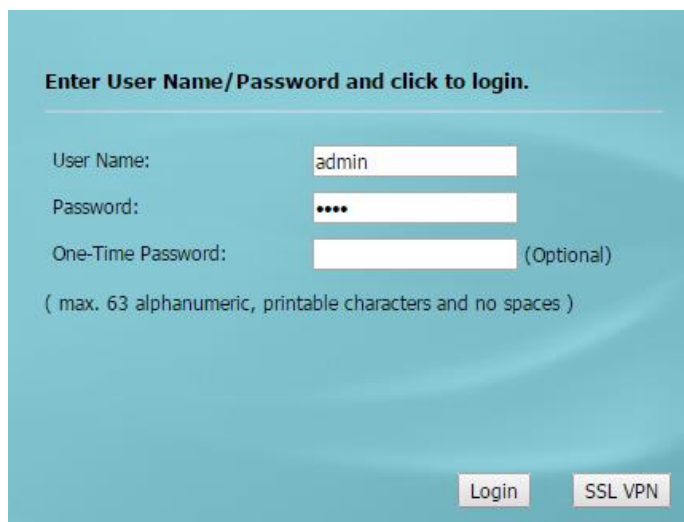
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Accessing the WebGUI

To access the ZyWALL's web configuration page please open a web browser on your computer (Internet Explorer, Mozilla Firefox, Google Chrome, etc.). On the address bar type <http://192.168.1.1> to access the WebGUI.



When prompted for user credentials, type in **admin** for the "User Name" and **1234** for the "Password". Click the **LOGIN** button to enter the WebGUI.

A screenshot of the ZyWALL WebGUI login page. The page has a light blue background. At the top, it says "Enter User Name/Password and click to login." Below this, there are three input fields: "User Name:" with the text "admin" entered, "Password:" with four dots entered, and "One-Time Password:" with an empty field and "(Optional)" to its right. Below the input fields, there is a note: "(max. 63 alphanumeric, printable characters and no spaces)". At the bottom right, there are two buttons: "Login" and "SSL VPN".

Note: If the default password has been changed, use the new password to login. If this is the first time setting up the device and it is not accepting the "1234" password please press the RESET button on the device (located in rear panel) and hold it down for 10-15 seconds.

The following screen will prompt to update the administrator password. Enter a new administrative password and click the **"Apply"** button to save the change.

Click **"Ignore"** to keep the default password (1234) and continue with the setup.

Update Admin Info

As a security precaution, it is highly recommended that you change the admin password.

New Password:

Retype to Confirm:




(max. 63 alphanumeric, printable characters and no spaces)

Wi-Fi Security Object

Wi-Fi security is used to protect data being transmitted between the wireless client(s) and wireless base station by encrypting the packets before they are sent over the air. This will ensure that wireless communications are secure from middleman sniffing out wireless packets.


On the ZyWALL's WebGUI go to the **Configuration → Object → AP Profile** menu and click on the *SSID* tab. Underneath the *SSID* tab menu there are options for *SSID List*, *Security List* and *MAC Filter List*, click on the "Security List" option to begin creating a wireless encryption object. Click the **Add** button to insert a new security profile to the list.

- Provide a name for the profile
- Select the security mode you wish to use from the drop down, options are: None, WEP, WPA2 or WAP2-Mix. (For this example WPA2 is selected)
- Scroll down to the "Authentication Settings" option and select **PSK** (if not selected by default)
- Type in a password on the "Pre-Shared Key" field (password can be between 8 and 63 characters long using WPA2)
- For WPA2 encryption the "Cypher Type" should be set to **AES** only
- Click the **OK** button to apply/save the settings


 Edit Security Profile Guest_Security  

General Settings

Profile Name:


Security Mode: 

Radius Settings

Radius Server Type: 

Authentication Settings


☐ 802.1X

Auth. Method: 

ReAuthentication Timer: (30~30000 seconds, 0 is unlimited)

☒ PSK

Pre-Shared Key:

Cipher Type: 

Idle timeout: (30~30000 seconds)

Group Key Update Timer: (30~30000 seconds)

Wi-Fi SSID Object

The SSID object refers to the name the wireless signal will carry (this is the name the wireless clients can see).

On the ZyWALL's WebGUI go to the **Configuration → Object → AP Profile** menu and click on the *SSID* tab. Underneath the SSID tab menu there are options for *SSID List*, *Security List* and *MAC Filter List*, click on the "SSID List" option to begin creating a name object for the wireless broadcast. Click the **Add** button to insert a new SSID profile to the list.

- Provide a name for the profile
- Create a name for the wireless signal under the "SSID" option
- Click on the "Security Profile" drop down and select the security object created in the *Security List* menu
- For this example we will be setting the guest Wi-Fi to be a member of a VLAN (VLAN ID: 10), if you do not wish to use a VLAN and would rather bridge the guest wireless network to the LAN2 or DMZ network, select the "Off" option for "VLAN Support" and set the Outgoing Interface as LAN2 or DMZ
- Check the box to "Enable Intra-BSS Traffic blocking" if you wish to have all wireless clients isolated from each other (optional)
- Click the **OK** button to apply/save the settings

Edit SSID Profile Guest WMM

Create new Object ▾

Profile Name:

SSID:

Security Profile: ▾

MAC Filtering Profile: ▾

QoS: ▾

VLAN ID: (1~4094)

☐ Hidden SSID

☐ Enable Intra-BSS Traffic blocking

Local VAP Setting

VLAN Support: ☒ On ☐ Off

OK Cancel

Wi-Fi Radio Setup

The radio setup refers to the wireless bands supported by the ZyWALL. Both the ZyWALL USG 40W/60W support 2.4GHz and 5GHz wireless spectrum. Each band is capable of broadcasting 8 SSID's (16 total, 2.4GHz and 5GHz spectrums combined). The radio setup stipulates what IEEE802.11 wireless standard to use and what channel to broadcast the signal on.

On the ZyWALL's WebGUI go to the **Configuration → Object → AP Profile**, there are two default profiles created on the list, one for the 2.4GHz radio spectrum (default) and one for the 5GHz radio spectrum (default2).

- Verify that the radio is active
- Set the IEEE802.11 standard to use under "Mode"
- Select a broadcast "Channel" (a wireless site survey may need to be ran first to determine which channel to use in the environment for optimal performance)
- Under "MBSSID Settings" there are 8 available slots to use to broadcast a Wi-Fi signal, select a slot to reveal a drop down window, from the drop down select the SSID object to apply to the open slot
- Click the **OK** button to apply/save the settings

Edit Radio Profile default

Show Advanced Settings Create new Object ▼

General Settings

☒ Activate

Profile Name: default

802.11 Band: 2.4G ▼

Mode: b/g/n ▼

Channel: 6 ▼

MBSSID Settings

Edit

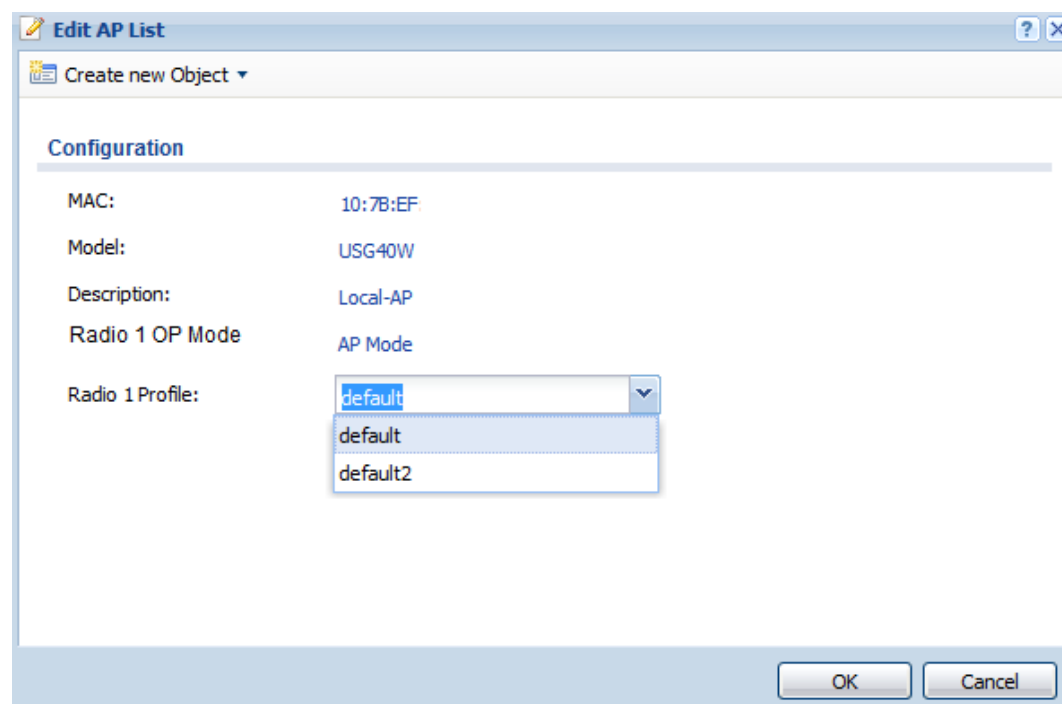
#	SSID Profile
1	default
2	Guest
3	disable
4	disable
5	disable
6	disable
7	disable
8	disable

OK Cancel

AP Management

Once the wireless configuration object has been set up, it needs to be applied to the access point. The ZyWALL can act as a centralized wireless control manager for multiple wireless access points. From the AP Management menu you can apply the wireless configuration object to the built-in access point (ZyWALL USG 40W and 60W only) or one of the satellite access points being controlled by the ZyWALL.

To apply the wireless configuration object go to, **Configuration → Wireless → AP Management**. From this menu select the access point you wish to configure and click the Edit button. Click the “Radio Profile” drop down box to select the Radio profile you created (do this only if you have configured your own RADIO profile, if using the *default* profile skip this step)



The screenshot shows the 'Edit AP List' window with the following configuration details:

Configuration	
MAC:	10:7B:EF
Model:	USG40W
Description:	Local-AP
Radio 1 OP Mode	AP Mode
Radio 1 Profile:	default

The 'Radio 1 Profile' dropdown menu is open, showing the following options:

- default
- default2

At the bottom of the window are 'OK' and 'Cancel' buttons.

Creating a Guest Zone

The ZyWALL uses zones to isolate different network segments created on the ZyWALL. By default the ZyWALL is preconfigured with a WAN, LAN1, LAN2 and DMZ network segments each with a zone attached to it. The ZyWALL uses these zone objects to establish firewall rules that apply to each network segment.

On the ZyWALL's WebGUI go to the **Configuration → Object → Zone**, and click the **Add** button under "User Configuration" to create a zone for the guest network.

- Provide a name for the Zone
- Click the **OK** button to apply/save the settings

The screenshot shows the 'Add Zone' dialog box. The 'Name' field is set to 'Guest_VLAN'. The 'Member List' section is currently empty, with 'Available' and 'Member' lists. Navigation arrows are present between the lists. The 'OK' and 'Cancel' buttons are at the bottom right.

VLAN Setup

A VLAN (Virtual Local Area Network) allows a physical network to be partitioned into multiple logical networks. Stations on a logical network belong to one or more groups. With VLAN, a station cannot directly talk to or hear from stations that are not in the same group(s) unless such traffic first goes through a router.

Once you have added the zone for the VLAN go to **Configuration → Network → Interface → VLAN** to **Add** the VLAN interfaces.

- Enable the new interface
- Click the drop down for "Interface Type" and select **INTERNAL**
- Type in "10" following *vlan* on the "Interface Name"
- Click the drop down for "Zone" and select the zone object created for the guest network
- Select LAN1 for the "Base Port"
- VLAN ID is "10"
- Under "IP Address Assignment" specify the IP scheme for the guest network
- Scroll down to the "DHCP Settings" and set the DHCP option to DHCP Server from the drop down
- Enter a starting IP address and IP address pool size
- Set the DNS server settings that will be provided to guest clients
- Click the **OK** button to apply/save the settings

Edit VLAN

Show Advanced Settings

General Settings

☒ Enable Interface

Interface Properties

Interface Type: internal
Interface Name: vlan10
Zone: Guest_Vlan
Base Port: lan1
VLAN ID: 10 (1-4094)
Description: (Optional)

IP Address Assignment

IP Address: 192.168.10.1
Subnet Mask: 255.255.255.0
☐ Enable IGMP Support
IGMP Version: IGMPv2
☐ IGMP Upstream
☒ IGMP Downstream

Interface Parameters

Egress Bandwidth: 1048576 Kbps

DHCP Setting

DHCP: DHCP Server
IP Pool Start Address: 192.168.10.100 Pool Size: 50
First DNS Server (Optional): ZyWALL
Second DNS Server (Optional): None
Third DNS Server (Optional): None
First WINS Server (Optional):
Second WINS Server (Optional):
Default Router: vlan10 IP
Lease Time: ☒ infinite
☐ days hours (Optional) minutes (Optional)

OK

Cancel

Policy Control Setup

A security policy is a template of security settings that can be applied to specific direction of packets (from/to), specific source and destination address objects, specific type of traffic, user/group or schedule.

To create a security policy to allow the guest network access to the internet go to, **Configuration → Security Policy → Policy Control**. Click the **Add** button to insert a new rule entry.

- Provide a name for the policy rule
- Select the zone that was created for the guest network for “From” field
- Select the WAN zone for the “To” field
- Scroll down to the “Action” option and set this to **ALLOW** the traffic
- Click the **OK** button to apply/save the settings

The screenshot shows the 'Add corresponding' dialog box in the ZyXEL configuration interface. The dialog has a title bar with a green plus icon and the text 'Add corresponding'. Below the title bar is a tab labeled 'Create new Object'. The main area contains several fields and checkboxes. The 'Enable' checkbox is checked. The 'Name' field is 'Guest_Outgoing'. The 'Description' field is empty, with '(Optional)' to its right. The 'From' dropdown is 'Guest_Vlan' and the 'To' dropdown is 'WAN'. Below these are 'Source', 'Destination', 'Service', 'User', and 'Schedule' dropdowns, all set to 'any'. The 'Action' dropdown is 'allow'. The 'Log matched traffic' dropdown is 'no'. At the bottom is the 'UTM Profile' section, which contains five rows of settings: 'Application Patrol', 'Content Filter', 'IDP', 'Anti-Virus', and 'Anti-Spam'. Each row has a checkbox (all are unchecked), a dropdown menu (all are set to 'none'), and a 'Log' dropdown (all are set to 'by profile'). At the bottom right are 'OK' and 'Cancel' buttons.

<input checked="" type="checkbox"/> Enable		
Name:	Guest_Outgoing	
Description:	(Optional)	
From:	Guest_Vlan	
To:	WAN	
Source:	any	
Destination:	any	
Service:	any	
User:	any	
Schedule:	none	
Action:	allow	
Log matched traffic:	no	
UTM Profile		
<input type="checkbox"/> Application Patrol:	none	Log: by profile
<input type="checkbox"/> Content Filter:	none	Log: by profile
<input type="checkbox"/> IDP:	none	Log: by profile
<input type="checkbox"/> Anti-Virus:	none	Log: by profile
<input type="checkbox"/> Anti-Spam:	none	Log: by profile

Testing/Troubleshooting Tips

Unable to establish a successful connection to the wireless signal?

1. Disable encryption on the AP profile (**Configuration → Object → AP Profile → SSID**)
2. Change the wireless channel (too much interference may prevent the connection from successfully establishing), to change the wireless channel go to **Configuration → Object → AP Profile → Radio**
3. Reboot the ZyWALL
4. Reboot your computer
5. Update your computers wireless card drivers (visit the computer manufacturer website or the wireless card manufacturer website for updates to the cards drivers)
6. Make sure the ZyWALL's firmware is up to date and call ZyXEL Tech Support for further assistance.

Wi-Fi connection established but no IP Address was released?

1. Check the VLAN setup to make sure DHCP Settings is set to **SERVER (Configuration → Network → Interface → VLAN)**

DHCP Setting

DHCP:

DHCP Server

2. If the DHCP Server is enabled, verify there is a start IP address and adequate DHCP address pool size.

IP Pool Start Address:

192.168.10.100

Pool Size:

50

3. Check the logs on the ZyWALL for DHCP requests, if the computer is broadcasting a request for an IP address it will be on the logs

Logs

Display: DHCP

#	Time	Priority	Category	Message	Source	Destination	Note
6	2015-03-23 15:24:30	info	DHCP	DHCP server assigned 192.168.4.35 to (00:0C:29:)			DHCP ACK
7	2015-03-23 15:24:30	info	DHCP	Requested 192.168.4.35 from (00:0C:29:)			DHCP Request
8	2015-03-23 15:24:29	info	DHCP	DHCP server offered 192.168.4.35 to (00:0C:29:) [count=2]			DHCP Offer
9	2015-03-23 15:23:31	info	DHCP	DHCP released 192.168.4.35 with (00:0C:29:)			DHCP Release
10	2015-03-23 15:22:26	info	DHCP	DHCP server assigned 192.168.4.35 to (00:0C:29:)			DHCP ACK
11	2015-03-23 15:22:26	info	DHCP	Requested 192.168.4.35 from (00:0C:29:)			DHCP Request
12	2015-03-23 15:22:26	info	DHCP	DHCP server offered 192.168.4.35 to (00:0C:29:)			DHCP Offer

Able to connect to wireless but cannot access the internet?

1. Open a command prompt window (Windows) or terminal client (Linux, Mac OS) and send a PING/ICMP request to www.google.com.
2. Ping to Google fails:
 - If the ping test to www.google.com fails, try pinging 8.8.8.8
3. Ping to 8.8.8.8 fails:
 - If both pings fail, check the IP settings on your computer. Make sure the computer has obtained an IP address within the ZyWALL's IP scheme. The default IP scheme is 192.168.1.X
 - Check the ZyWALL's status page (Dashboard) to make sure it is getting an IP address on the WAN (Internet) port.

Name	Status	HA Status	Zone	IP Addr/Netmask	IP Assignm...	Action
wan1	100M/Full	n/a	WAN	21.22.23.24 / 255.255.255.128	Static	n/a
wan2	Down	n/a	WAN	0.0.0.0 / 0.0.0.0	DHCP client	Renew
opt	Inactive	n/a	OPT	0.0.0.0 / 0.0.0.0	Static	n/a
lan1	Up	n/a	LAN1	192.168.100.1 / 255.255.255.0	Static	n/a
lan2	Down	n/a	LAN2	0.0.0.0 / 0.0.0.0	Static	n/a
ext-wlan	Down	n/a	WLAN	0.0.0.0 / 0.0.0.0	Static	n/a
dmz	Down	n/a	DMZ	0.0.0.0 / 0.0.0.0	Static	n/a
aux	Inactive	n/a	WAN	0.0.0.0 / 0.0.0.0	Dynamic	n/a
wlan-1	n/a	n/a	n/a	n/a / n/a	n/a	n/a
wlan-1-1	Down	n/a	WLAN	10.59.1.1 / 255.255.255.0	static	n/a

- If the IP address on the WAN (Internet) port conflicts with the LAN port, change the ZyWALL's LAN IP scheme.
 - Once you have verified the WAN and your computer's IP settings, ping 8.8.8.8 again.
4. Ping to 8.8.8.8 works but ping to www.google.com fails:

- Check your computers IP settings to see what it received for DNS. If the computer does not have legitimate DNS servers, it cannot resolve domain names.
 - On Windows open command prompt and type `ipconfig /all` to get the info.
 - On Mac OS open a terminal window and type `cat /etc/resolv.conf` to view the DNS server settings.
 - On Linux open a terminal window and type `nmcli dev list | grep DNS` to view the DNS settings.
- If there is nothing under the DNS server, check the DHCP server to make sure there are DNS servers configured.

DHCP Setting

DHCP:	DHCP Server ▼		
IP Pool Start Address (Optional):	192.168.100.33	Pool Size:	200
First DNS Server (Optional):	ZyWALL ▼		
Second DNS Server (Optional):	Custom Defined ▼		
Third DNS Server (Optional):	Custom Defined ▼		
First WINS Server (Optional):			
Second WINS Server (Optional):			

- If the DNS server is pointing to the ZyWALL (192.168.1.1 for example) you need to make sure there are DNS programmed for the system (hardware). If your service is DHCP the ZyWALL would have automatically obtained the DNS server settings from your ISP. To check this go to **Configuration → System → DNS**.

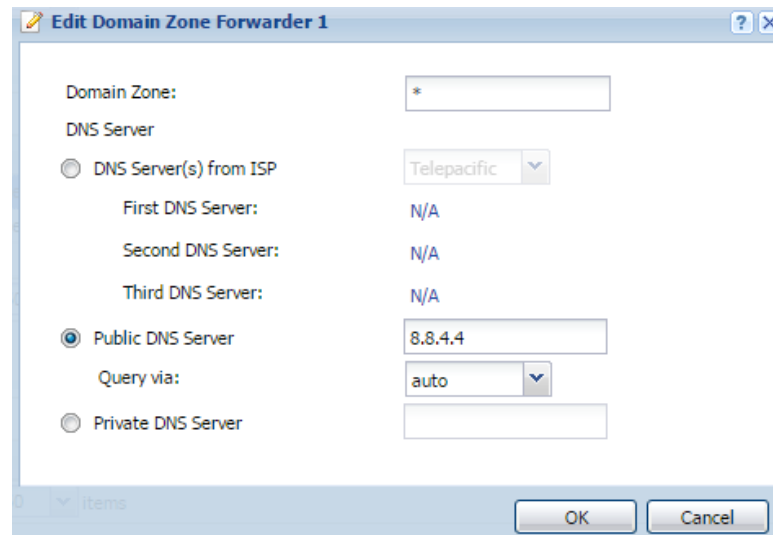
Domain Zone Forwarder

Add Edit Remove Move				
#	Domain Zone	Type	DNS Server	Query via
-	*	Default	172.28.2.2 172.28.2.2	wan1 wan1

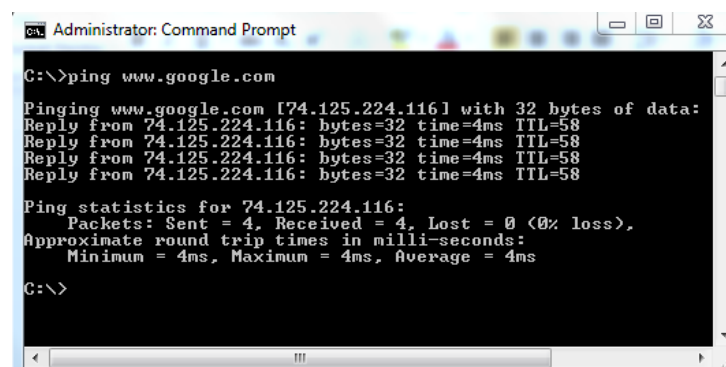
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- If your WAN IP was statically assigned the DNS settings will show "N/A" for the *Default* entry (the Default entry is for the

WAN ports DHCP client capability only), click the **Add** button to manually enter your ISP provided or public (OpenDNS, Google DNS, etc.) DNS servers.



- Refresh/Renew the computers IP settings and try pinging www.google.com again.



5. If you can ping www.google.com and 8.8.8.8 you have established a successful internet connection.