Quick Start Guide

---Apply to WL-ODU350 5G Outdoor Router

V1.1

http://www.wlink-tech.com

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WL-ODU350

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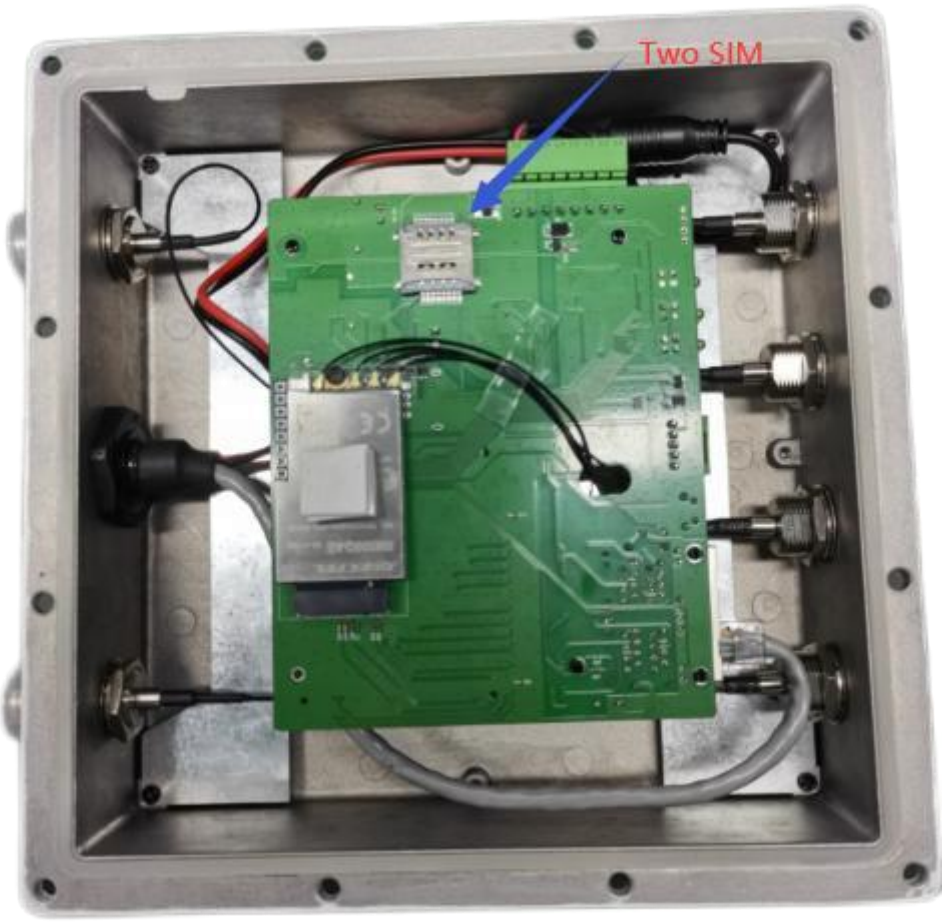
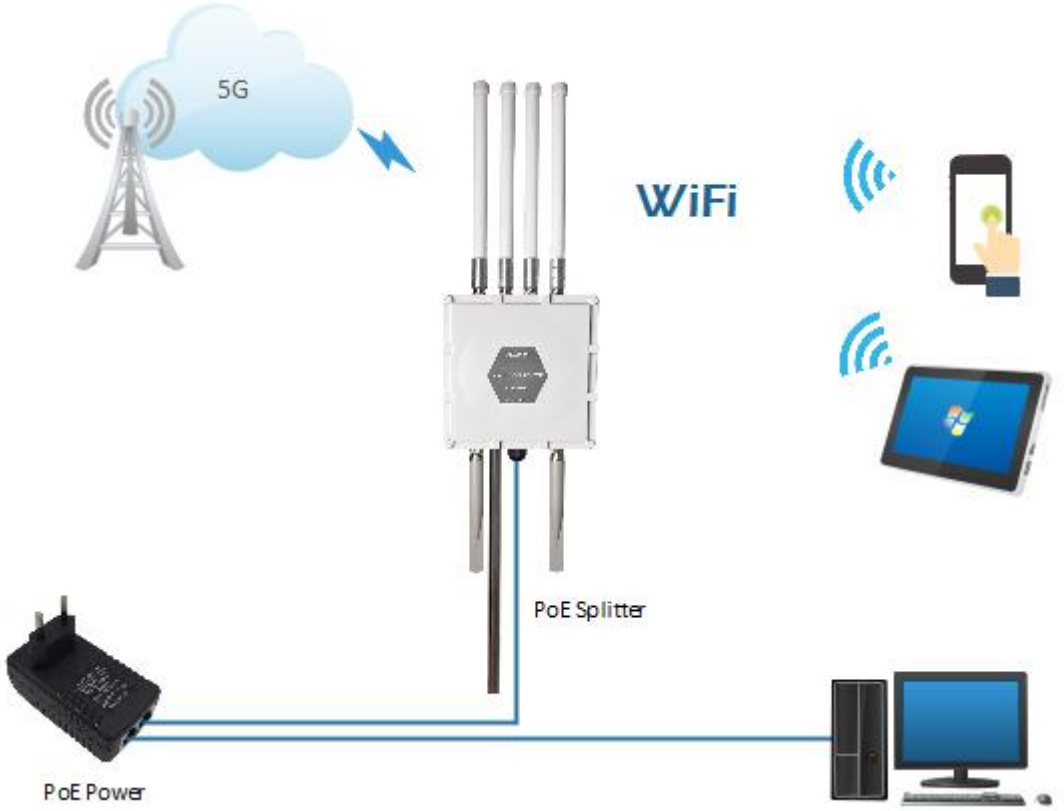
SIM1 slot is at bottom which is close to PCB board. SIM2 is at the upper slot.

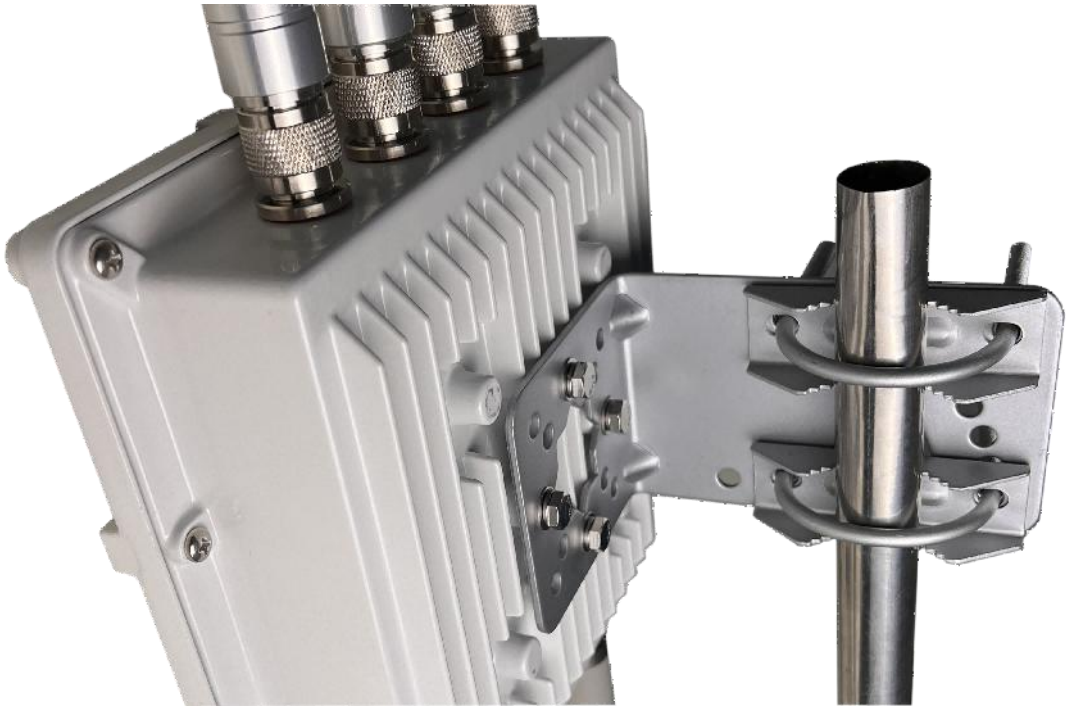


Power on Router

Connect PoE(passive) port via RJ45 Cable between WL-ODU350 and Wlink power adapter.
Connect LAN port of Power adapter to PC to configure the router.



Mount Kits Installation



LED Status Indication

silk-screen	status		Indication
Signal	Signal	Constant light	LED1: weak (CSQ0~10). LED2: good (CSQ11~19) LED3: strong (CSQ20~31)
	Signal 1	Blink	dialing
		Constant light	online
PWR	Constant Light		System power operation.
WLAN	Constant light		WLAN enable, but no data communication.
	Blinking quickly		Data in transmitting
	Light off		WLAN disable
ERR	Light off		System operation and 5G/4G online.
	Constant Light(Red)		System fail indicator. It indicates SIM card/ module fail.
LAN	Green	Constant light	Connected.
	Green	Blinking	Data in transmitting.
	Green	Light off	Disconnection.

Configuration

Login

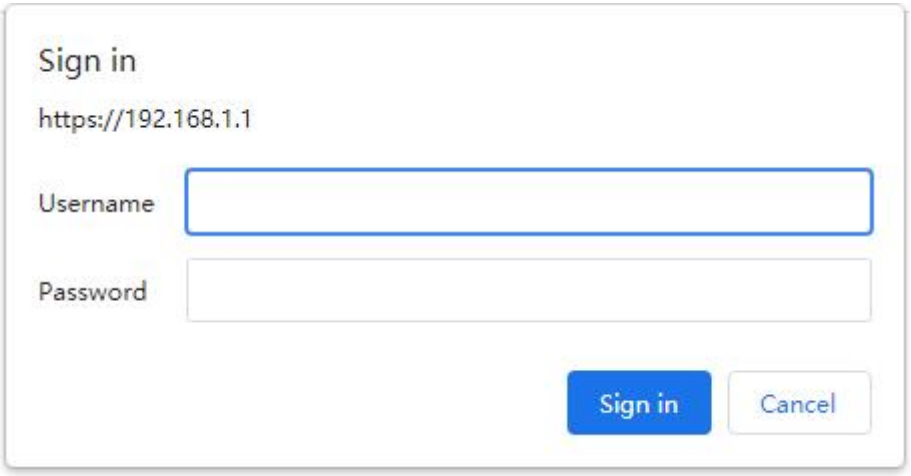
To access and configure certain features of the WL-ODU350, one needs to log in to the WL-ODU350. Connect one Ethernet cable to PoE interface of device and PoE adapter, and connect other Ethernet cable between LAN of PoE adapter and PC.

Click “start > control panel”, find “Network Connections” icon and double click it to enter, select “Local Area Connection” corresponding to the network card on this page. Refer to the figure below.

Figure 2-1 Network Connection

Step 2 Obtain a IP address automatically or set up IP address,192.168.1.xxx(XXX can be any number between 2～254)

Step 3 .Enter the default IP Address as **http://192.168.1.1** the login page will open as shown in the figure below.



User name: admin
Password: admin

Overview

The overview GUI will be display router system information, Ethernet ports status, VPN connection status, LAN information, 4G connection information and WLAN information.

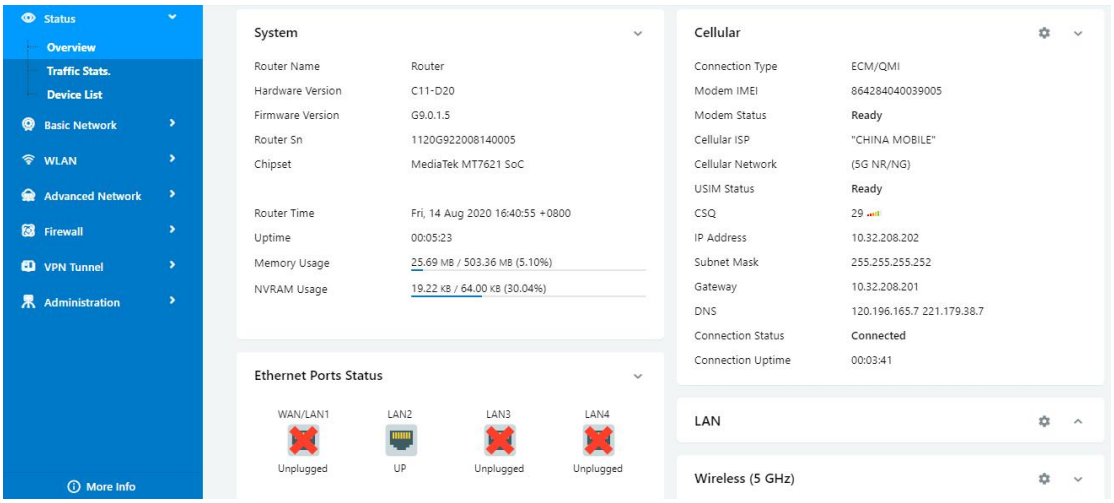


Figure 2-2 Router Status GUI

Traffic Stats.

Click Status->Traffic Stats. to enter the traffic stats.GUI.to check Cellular/WAN traffic in real-time.

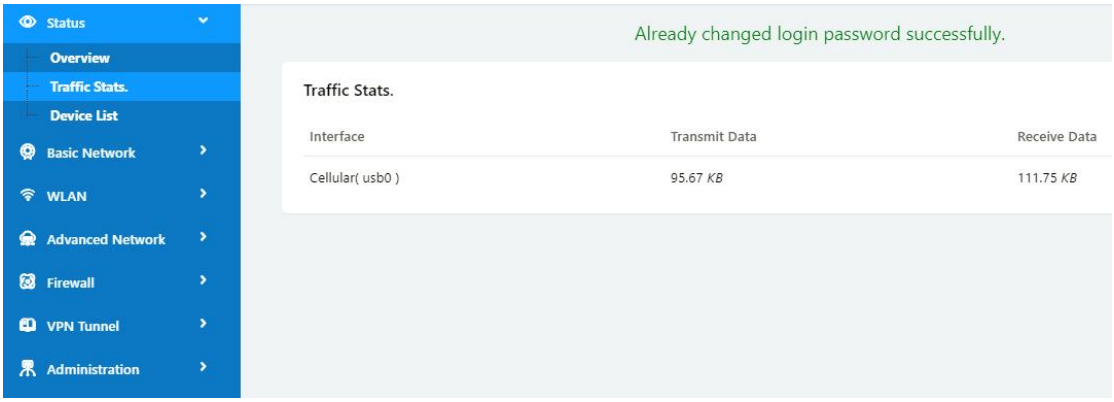


Figure 2-3 Traffic Stats. GUI

Device List

Click Status->Device List to enter the device list GUI.to check the connected devices information in the list.

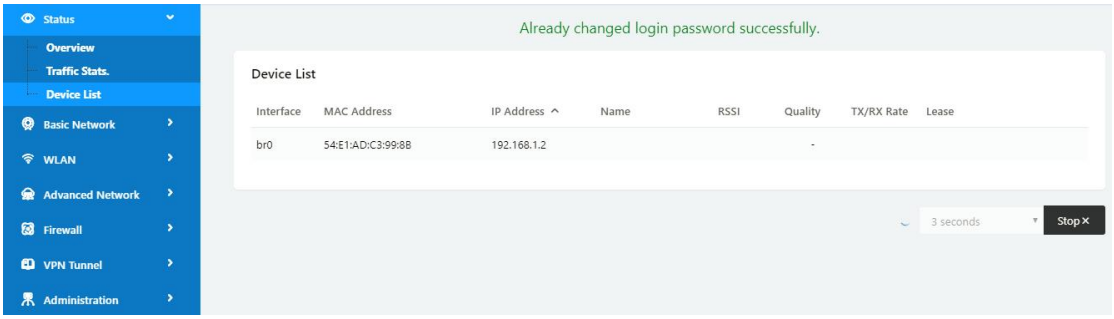


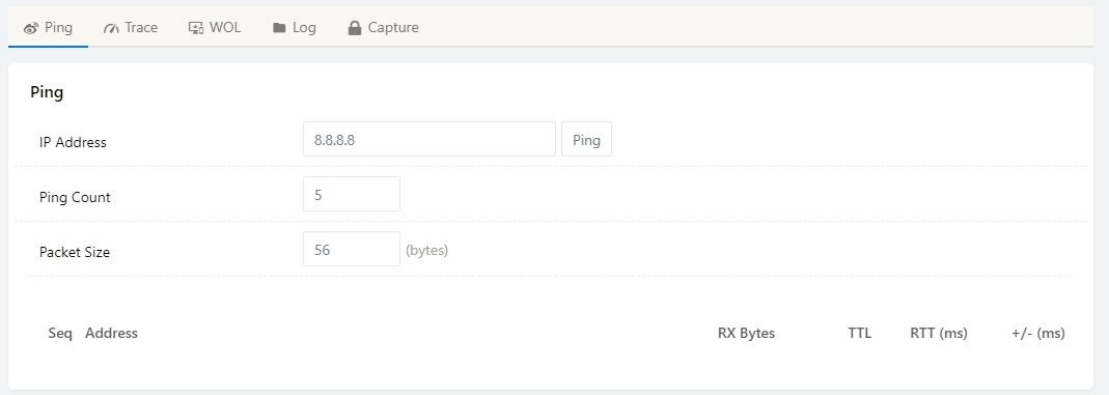
Figure 2-4 Device List GUI

Tool Column

Figure 2-5 Tool Column GUI

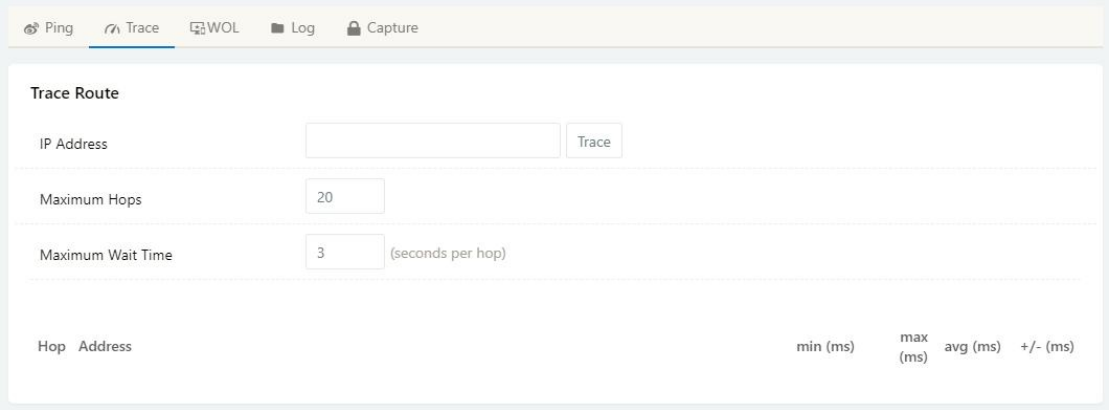
Ping

Click Tools->Ping to enter ping test GUI. Used to test the reachability of a host on an Internet IP network and to measure the round-trip time for messages sent from the originating host to a destination server.



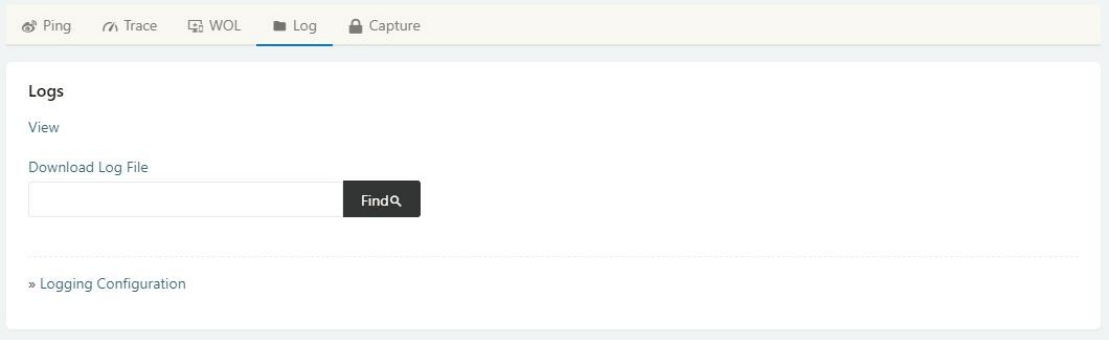
Trace

Click Tools->Trace to enter trace test GUI. diagnostic tool for displaying the routeand measuring transit delays of packets across an Internet IP network.



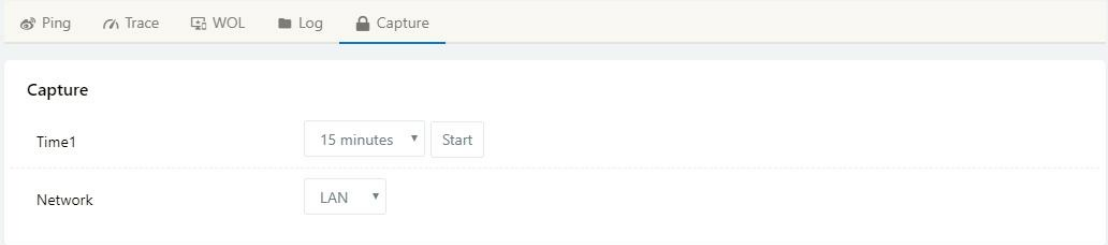
Log

Click Tools-> Log to enter Log GUI. Use to check logs in GUI, download GUI and send logs to server.



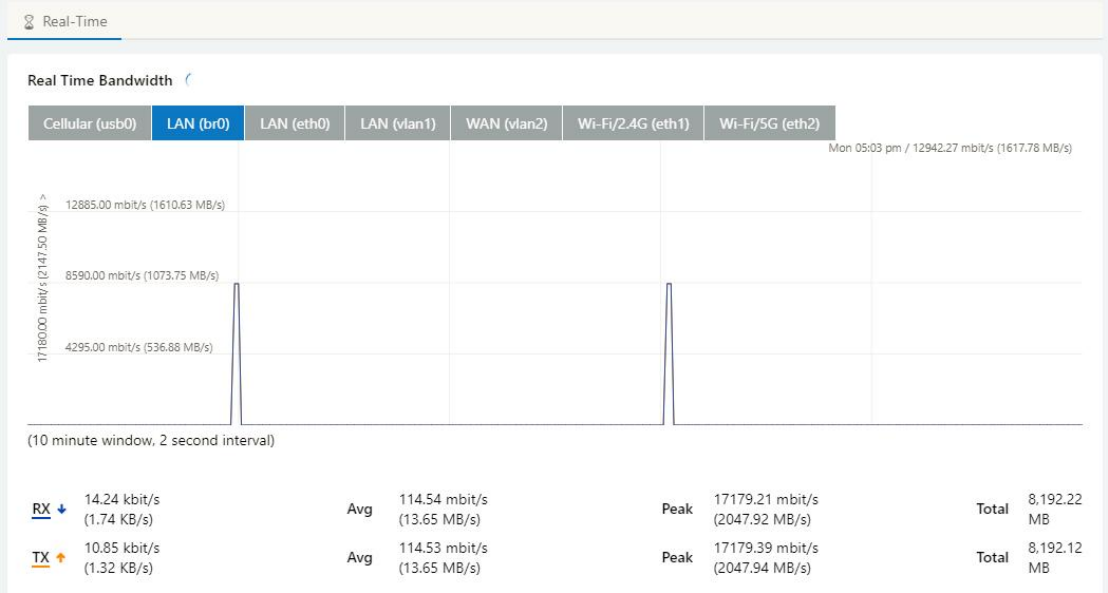
Capture

Click Tools-> Capture to enter capture data GUI. Use to capture LAN/WAN data packet to analyse what happen in the router.



Bandwidth

Click Bandwidth to enter bandwidth graphic GUI. Used to check cellular/LAN/Wi-Fi real-time bandwidth.



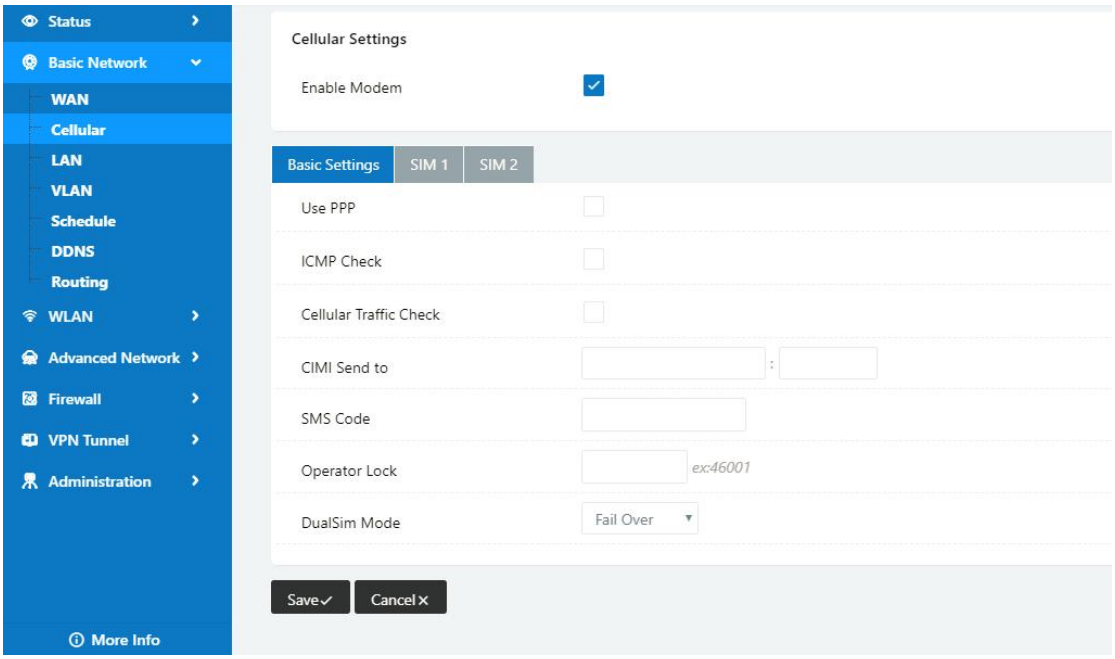
System

Click system to choose software reboot, hardware reboot and logout GUI.

Basic Network

Cellular Setting

Step 1 Basic Network-> Cellular, you can modify relevant parameter according to the application.



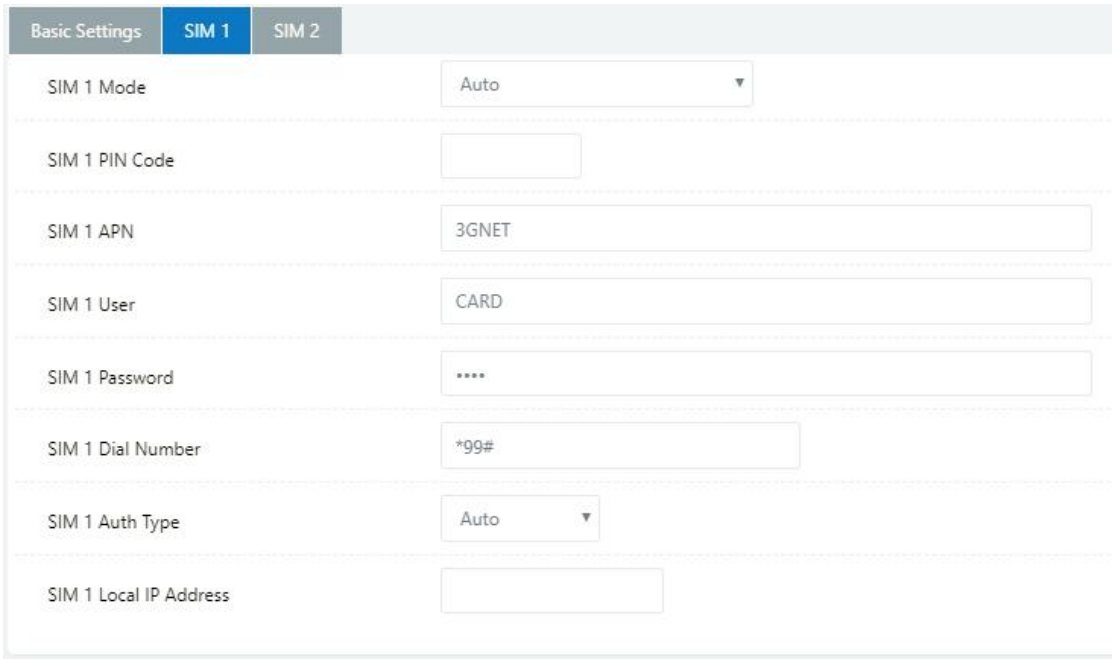


Table 2-1 WAN Setting Instruction

Parameter	Instruction
Enable Modem	Enable/Disable 5G mode.
Use PPP	ECM dialup as default. PPP is suitable for 4G connection only.
ICMP check	If enable ICMP check and setup a reachable IP address as destination IP, the router will reconnect/reboot once ICMP check failed.

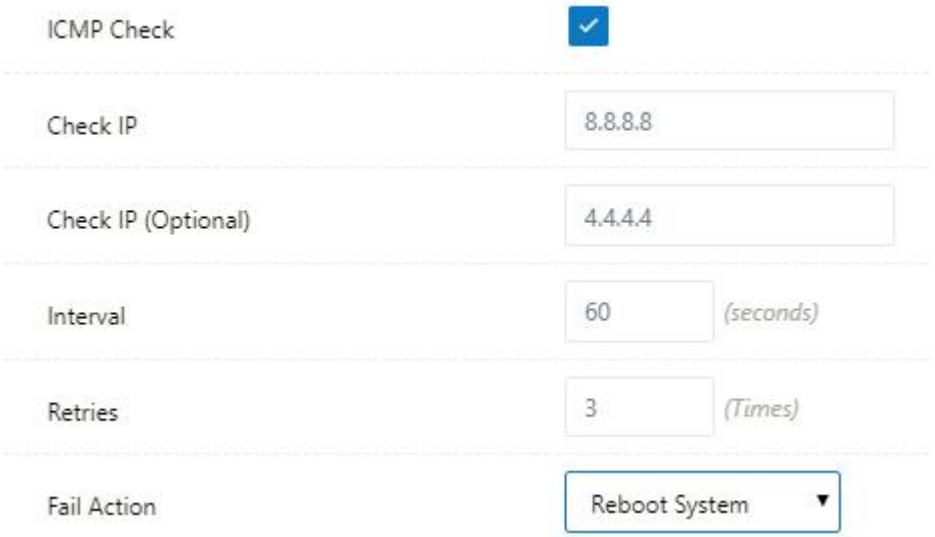
Parameter	Instruction
Cellular Traffic Check	The router will reconnect/reboot once there's no Rx/Tx data.
MTU	MTU configurable. 0 as default for MTU 1500
CIMI Send to	Send CIMI to a defined IP and port by TCP protocol.
SMS Code	Remote control the router by SMS. Only the configured SMS code will work.
Operator Lock	Lock a specified operator for the router by MCC/MNC code.
Dual SIM Mode	【Fail Over】Two SIM cards mutual backup. Once SIM1 failed, it'll switch to SIM2 and work on SIM2, and vice versa. 【SIM1 Only】Only SIM1 works. 【SIM2 Only】Only SIM2 works. 【Backup】SIM1 is the primary SIM. Once SIM1 failed, it'll switch to SIM2 and work on SIM2 for a specified period of time, then it switches back to SIM1.
Mode	【Auto】The router will automatically connect to 3G/4G/5G networks and give priority to 5G. 【5G NR】Router will connect to 5G only. 【LTE】Router will connect to 4G only. 【3G】Router will connect to 3G only.
Pin Code	Some SIM cards are locked with a Personal Identification Number (PIN) code in case they are lost or stolen.
APN	APN is provided by local ISP, usually CDMA/EVDO networks do not need this parameter.
User	SIM card user name is provided by ISP
Password	SIM card password is provided by ISP
Auth. Type	Auto/PAP/Chap/MS-Chap/MS-Chapv2 authentication optional.
SIM Local IP Address	Fix SIM IP. The feature is available if carrier can provide this service.

ICMP Check and Cellular Traffic Check are alternative.

【ICMP Check】

Enable ICMP, Router will automatically check whether the defined IP address is reachable per 60s. If the IP address is unreachable and ICMP check is timeout at the first time, it will check 2 times every 3 seconds. If the third time is still failed, the router will redial.

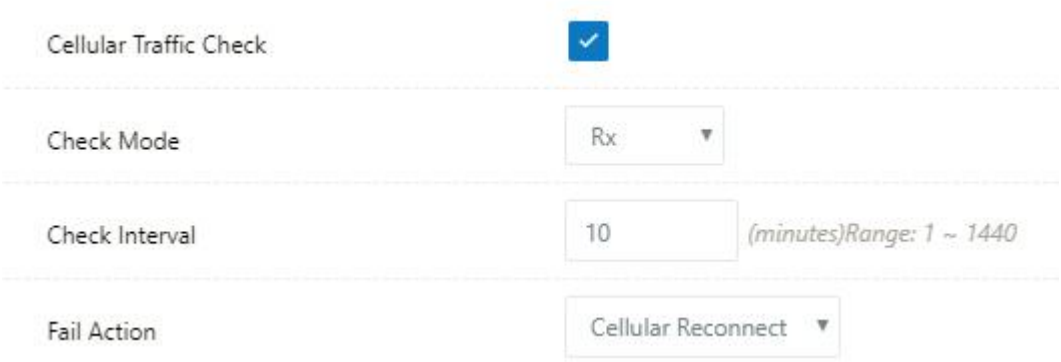
The ICMP Check IP is a public IP or company server IP address.



【Cellular Traffic Check】

【Check Mode】there are Rx(Receive), Tx(Transmission) and Rx/Tx check modes.

【Rx】Router will check the 3G/LTE cellular receiver traffic. If no receiver traffic within the defined check interval, the router will implement the specified action reconnect or reboot.



Step 2 After Setting, please click “save” icon.

----End

LAN Setting

Step 1 Basic Network>LAN to enter below interface

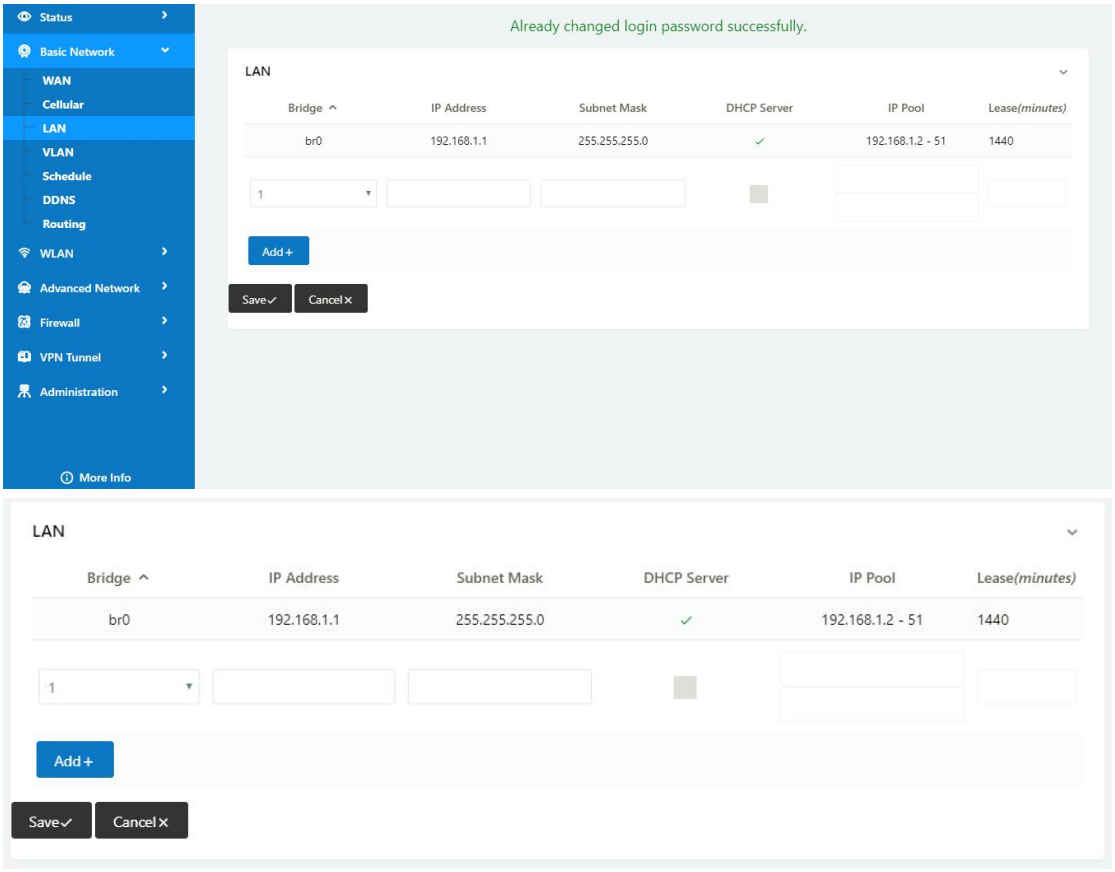


Table 2-2 LAN Setting Instruction

Parameter	Instruction
Bridge	Supports 4 LAN IP address for br0 to br3 interface. If need to support VLAN, please go to VLAN GUI.
Router IP Address	Router IP address, default IP is 192.168.1.1
Subnet Mask	Router subnet mask, default mask is 255.255.255.0
DHCP	Dynamic allocation IP service, after enable, it will show the IP address range and options of lease
IP Pool	IP address range within LAN
Lease	The valid time, unit as minute
Add	Add LAN IP address, supports 4 LAN IP addresses.

Step 2 After setting, please click “save” to finish, the device will reboot.

----End

Dynamic DNS Setting

Step 1 Basic Network->DDNS to enter the DDNS setting page.

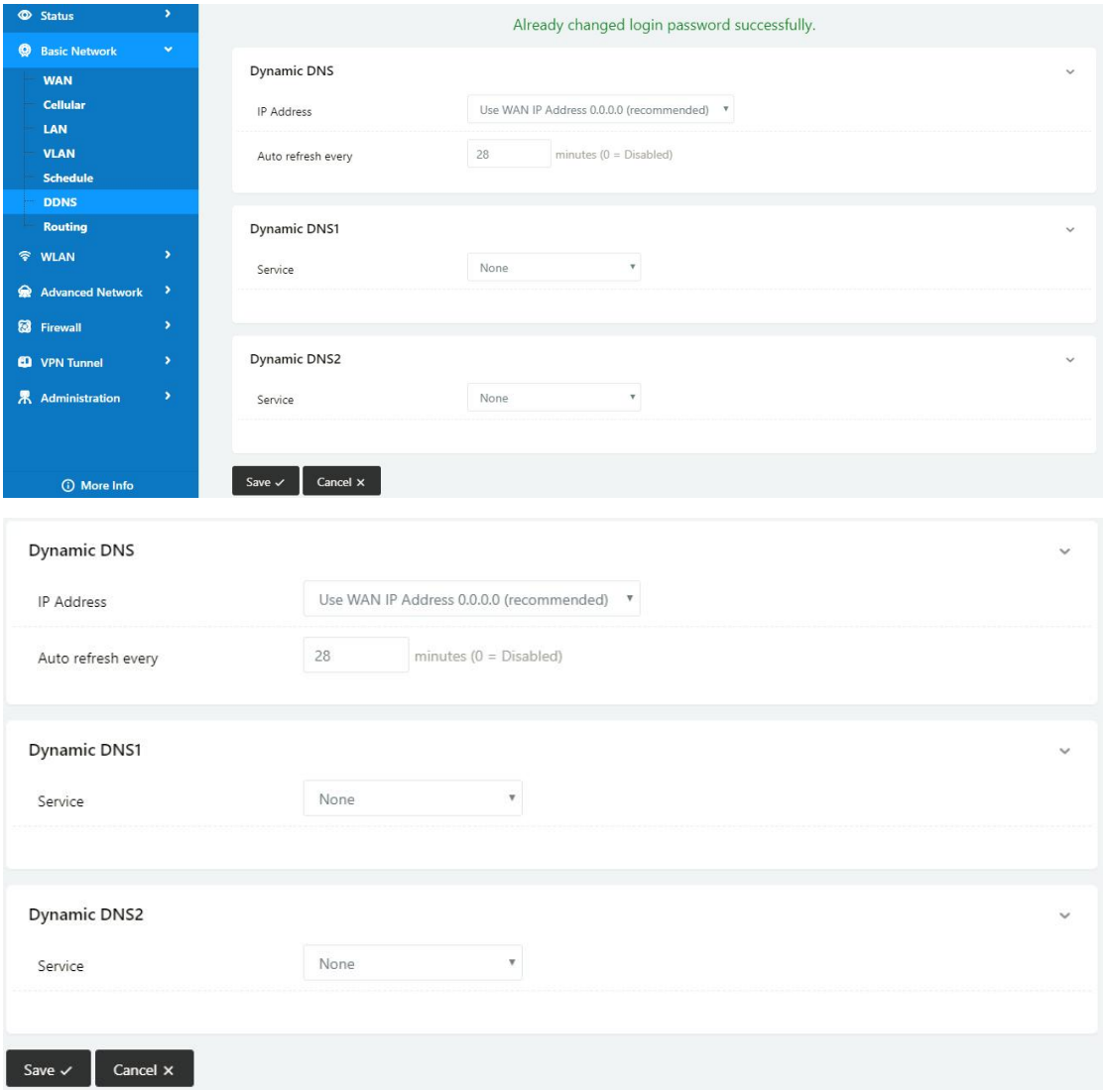


Table 2-3 DDNS Setting Instruction

parameter	Instruction
IP address	Default is standard DDNS protocol, for customized protocol, please contact Wlink engineer. Usually, use default IP 0.0.0.0
Auto refresh time	Set the interval of the DDNS client obtains new IP, suggest 240s or above
Service provider	Select the DDNS service provider that listed.

Step 2 Please Click “Save“ to finish.

----End

WLAN Setting

It’s mainly for router which support Wi-Fi, you can modify and configure WLAN parameter through Web GUI, below is the common setting.

Basic Setting

Step 1 WLAN->Basic Setting to configure relative parameter

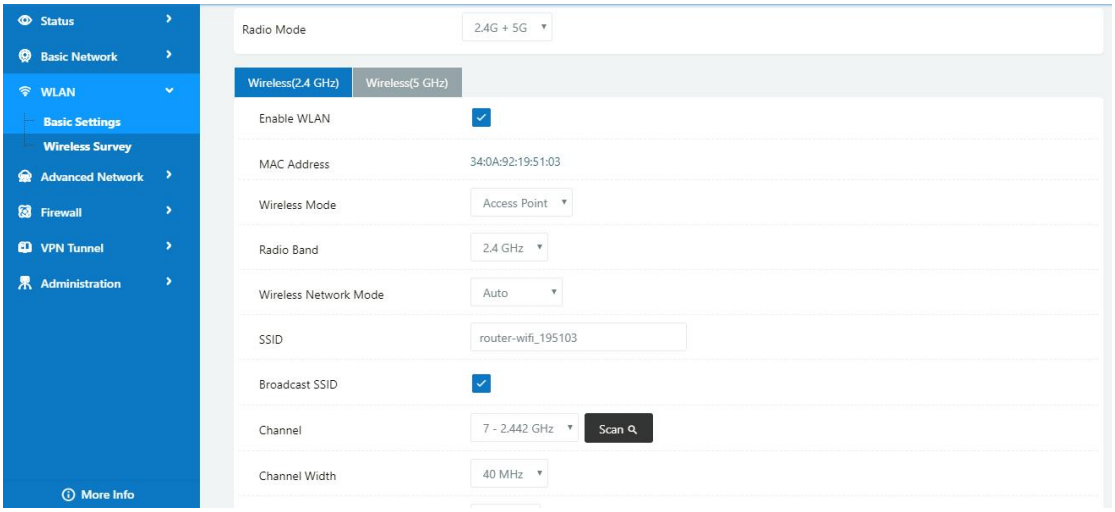


Table 2-4 Basic of WLAN Setting Instruction

Parameter	Instruction
Radio Mode	2.4G+5G mode as default. Support 2.4G, 5G modes optional. 2.4G+5G model, Wi-Fi bandwidth for 683Mbps 2.4G model, Wi-Fi bandwidth for 300Mbps 5G model, Wi-Fi bandwidth for 866Mbps
Enable wireless	Enable or Disable the Wireless
Wireless mode	Support AP mode and Client Optional.
Wireless Network protocol	Support Auto/b/g/n optional for 2.4G. Support Auto/A/N optional for 5G.
SSID	The default is router, can be modified as per application.
Channel	The channel of wireless network, suggest keep the default
Channel Width	20MHz and 40MHz alternative for 2.4G. 20MHz, 40MHz and 80MHzalternative for 5G.
Security	Support various encryption method as requested.

Step 2 Please click “Save” to finish.

----End

Advanced Network Setting

Port Forwarding

Step 1 Advanced Network > Port Forwarding to enter the GUI, you may modify the router name, Host name and Domain name according to the application requirement.

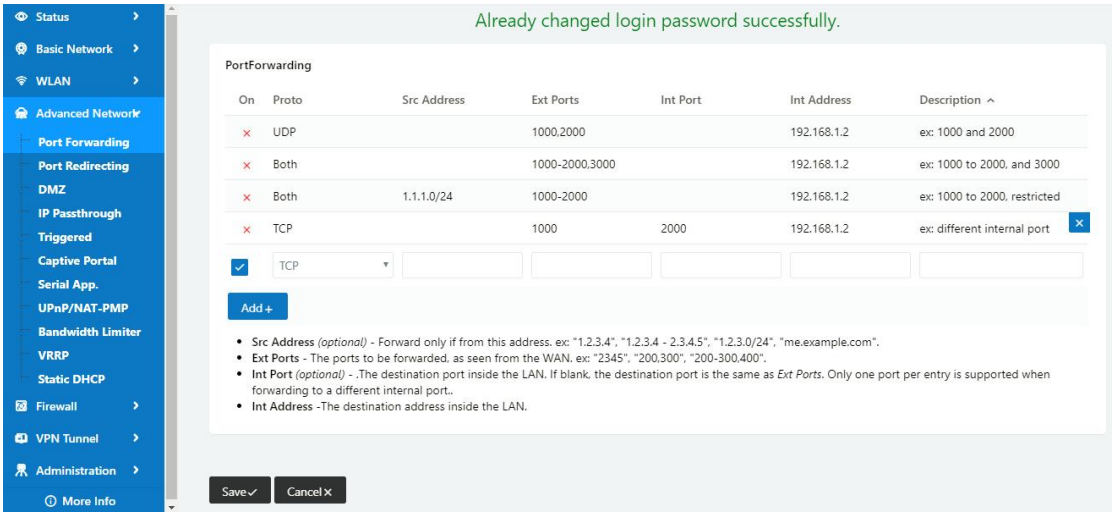


Table 2-5 Port Forwarding Instruction

Parameter	Instruction
Protocol	Support UDP, TCP, both UDP and TCP
Src. Address	Source IP address. Forward only if from this address.
Ext. Ports	External ports. The ports to be forwarded, as seen from the WAN.
Int. Port	Internal port. The destination port inside the LAN. If blank, the destination port is the same as Ext Ports. Only one port per entry is supported when forwarding to a different internal port.
Int. Address	Internal Address. The destination address inside the LAN.
Description	Remark the rule

Step 2 Please click ”save” to finish

----End

DMZ Setting

Step 1 Advanced Network> DMZ to check or modify the relevant parameter.

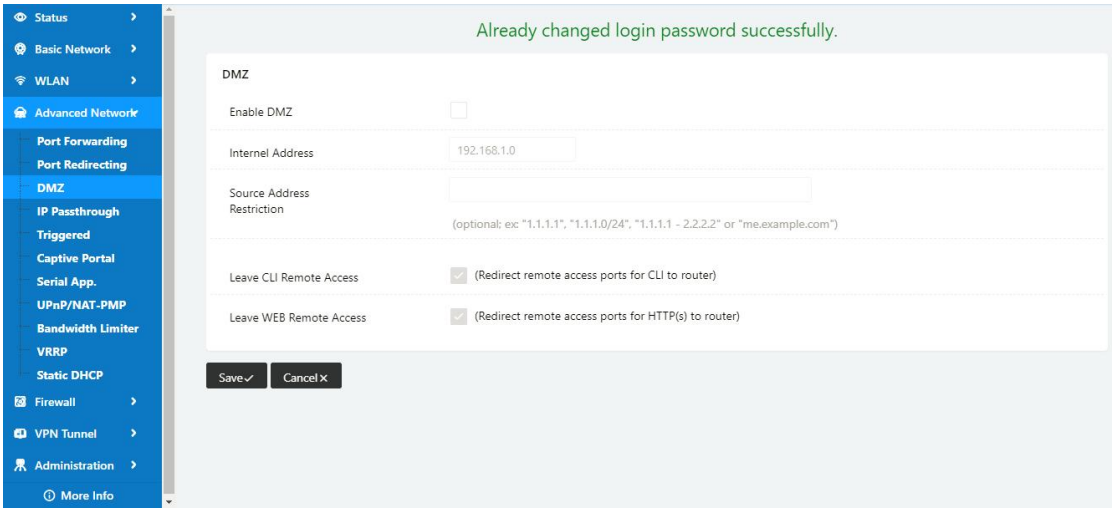


Table 2-6 DMZ Instruction

parameter	Instruction
Destination Address	The destination address inside the LAN.
Source Address Restriction	If no IP address inside, it will allow all IP address to access. If define IP address, it will just allow the defined IP address to access.
Leave Remote Access	

Step 2 Please click ”save” to finish

----End

IP Passthrough Setting

Step 1 Advanced Network> IP Passthrough to check or modify the relevant parameter.

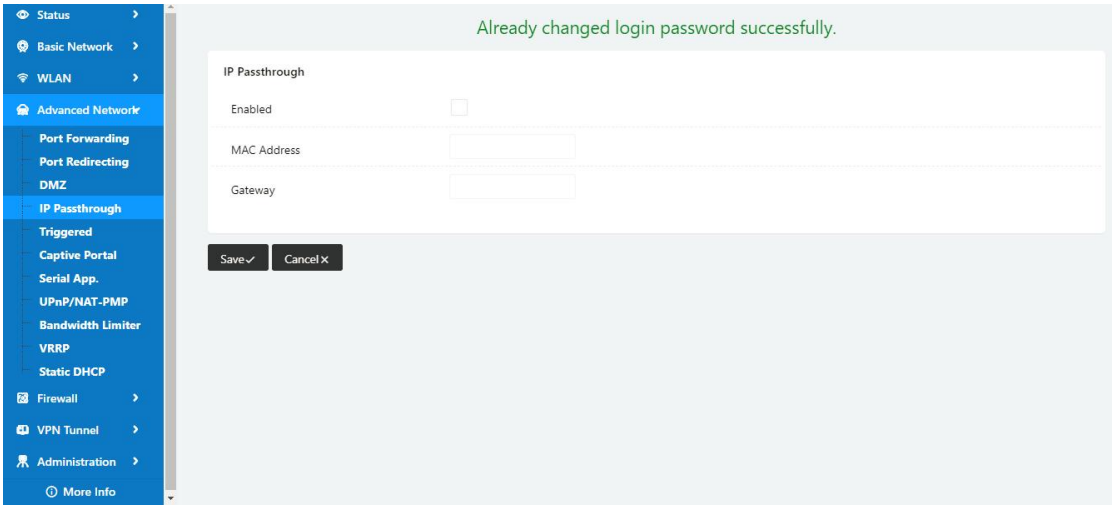


Table 2-7 IP Passthrough Instruction

parameter	Instruction
Enable	Enable IP Passthrough
MAC Address	Enable DHCP of device. Configure device Mac. Device will be assigned SIM IP.
Gateway	If WL-G200 connect to multiple device, input other device gateway. The device might access to router GUI.

Step 2 Please click ”save” to finish

----End

Triggered Setting

Step 1 Advanced Network> Triggered to check or modify the relevant parameter.

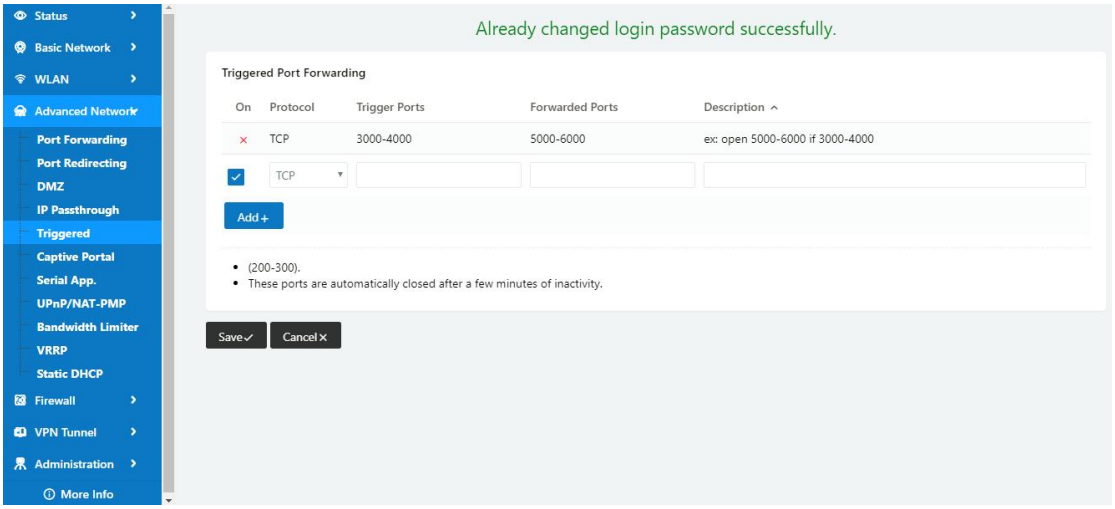


Table 2-8 Triggered Instruction

parameter	Instruction
Protocol	Support UDP, TCP, both UDP and TCP
Triggered Ports	Trigger Ports are the initial LAN to WAN "trigger".
Transferred Ports	Forwarded Ports are the WAN to LAN ports that are opened if the "trigger" is activated.
Note	Port triggering opens an incoming port when your computer is using a specified outgoing port for specific traffic.

Step 2 Please click ”save” to finish.

----End

Captive Portal

Step 1 Advanced Network> Triggered to check or modify the relevant parameter.

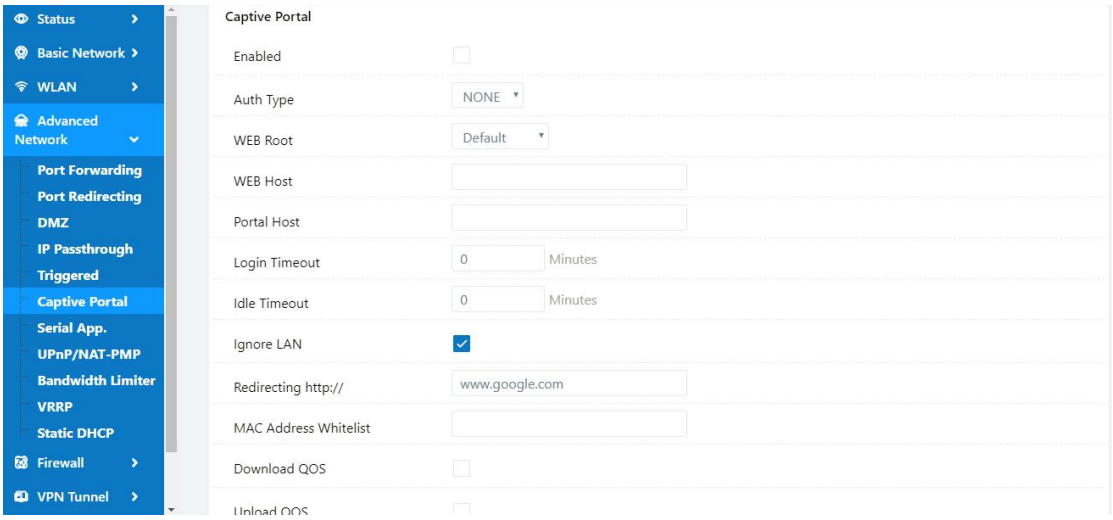


Table 2-9 Captive Portal Instruction

Parameter	Instruction
Enable	Enable Captive portal feature.
Auth Type	Reserved.
Web Root	Choose captive portal file storage path. Default: Captive portal file is in the firmware as default. In-storage: Captive portal file is in router's Flash. Ex-storage: Captive portal file is in extended storage such as SD card.
Web Host	Configure domain name for the captive portal access. For example, Configure as wlink.tech.com, we might directly access to captive portal page in the website as wlink.tech.com
Portal Host	Reserved.
Logged Timeout	Maximum time user has connectivity. User need to re-login Captive Portal page after defined time.
Idle Timeout	Maximum time user has connectivity if no network activity from Wi-Fi User.If User need to re-login Captive page to surf internet.
Ignore LAN	If enabled, LAN devices will bypass the Captive Portal page.
Redirecting	Router will redirect to the defined link after accepting the terms and conditions on the Captive Portal page.

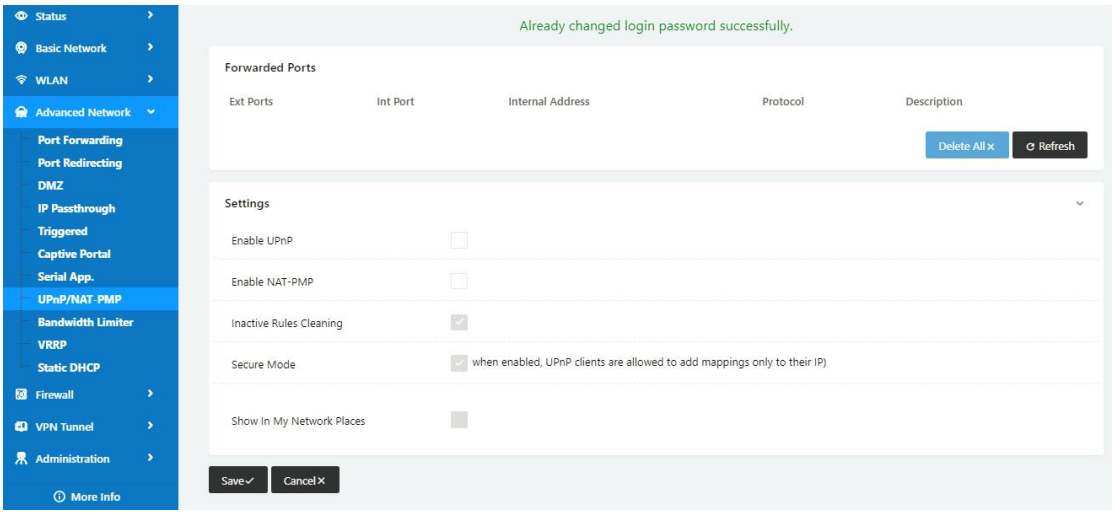
Parameter	Instruction
MAC Whitelist	No captive portal page for Wi-Fi device.
Download QoS	Enable to apply the Download and Upload per user limits.
Upload Qos	Maximum download speed available to each user.

Step 2 Please click ”save” to finish.

----End

UPnp/NAT-PMP Setting

Step 1 Advanced Network> Upnp/NAT-PMP to check or modify the relevant parameter.



Step 2 Please click ”save” to finish.

----End

Bandwidth Control Setting

Step 1 Advanced Network> Bandwidth Control to check or modify the relevant parameter.

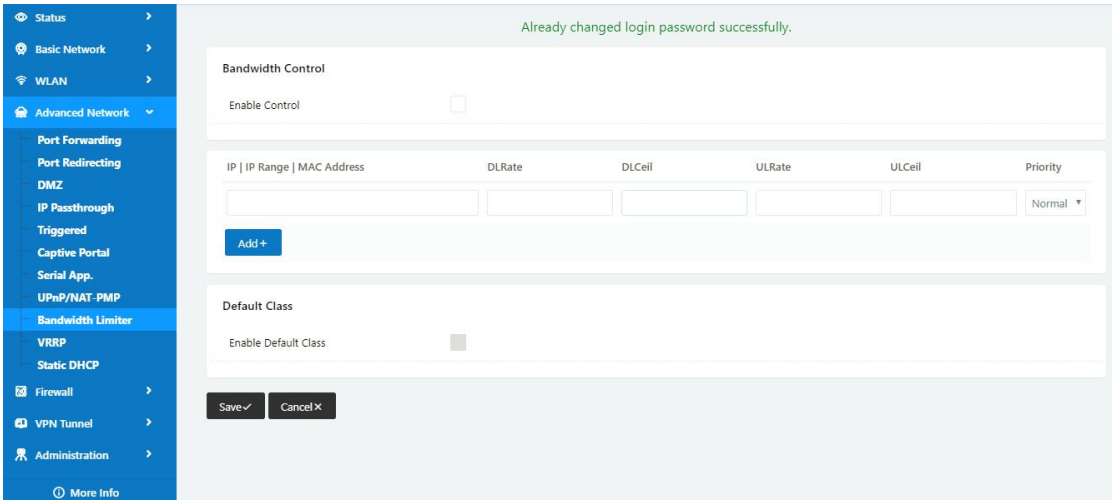


Table 2-10 Bandwidth Control Instruction

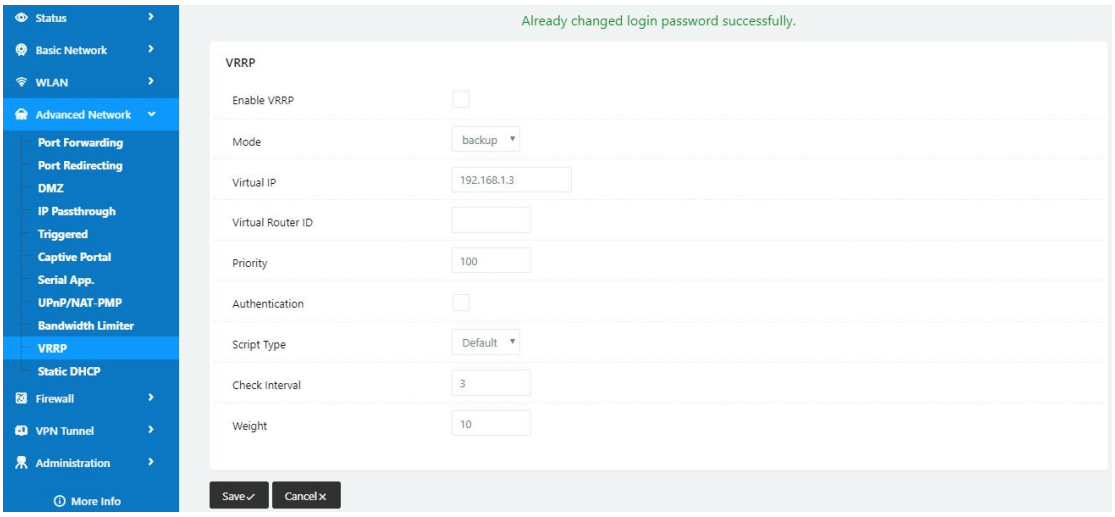
Max Available Download	Speed limit for router.
Max Available Upload	Speed limit for router.
IP/ IP Range/ MAC Address	Limit devices speed for specified IP/IP Range/ MAC Address.
DL Rate	Mix Download rate
DL ceil	Max download rate
UL Rate	Mix Upload rate
UL ceil	Max upload rate
Priority	The priority of a specific user.
Default Class	If no specified IP/MAC, the download and upload limit for total speed for all of device.

Step 2 Please click ”save” to finish.

----End

VRRP Setting

Step 1 Advanced Network> VRRP to check or modify the relevant parameter.

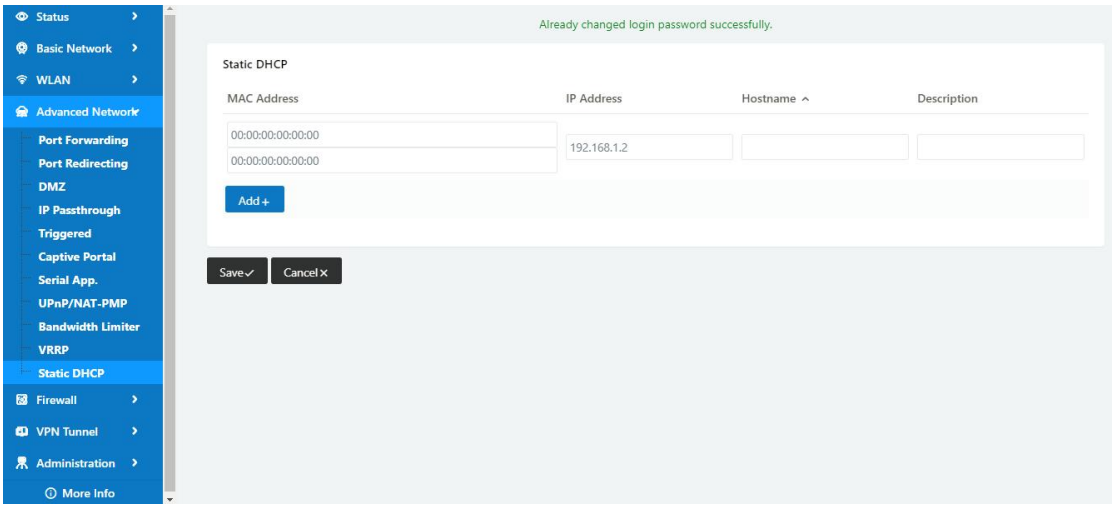


Step 2 Please click ”save” to finish.

----End

Static DHCP Setting

Step 1 Advanced Network> Static DHCP to check or modify the relevant parameter.



Step 2 Please click ”save” to finish.

----End

VPN Tunnel

GRE Setting

Step 1 VPN Tunnel> GRE to check or modify the relevant parameter.

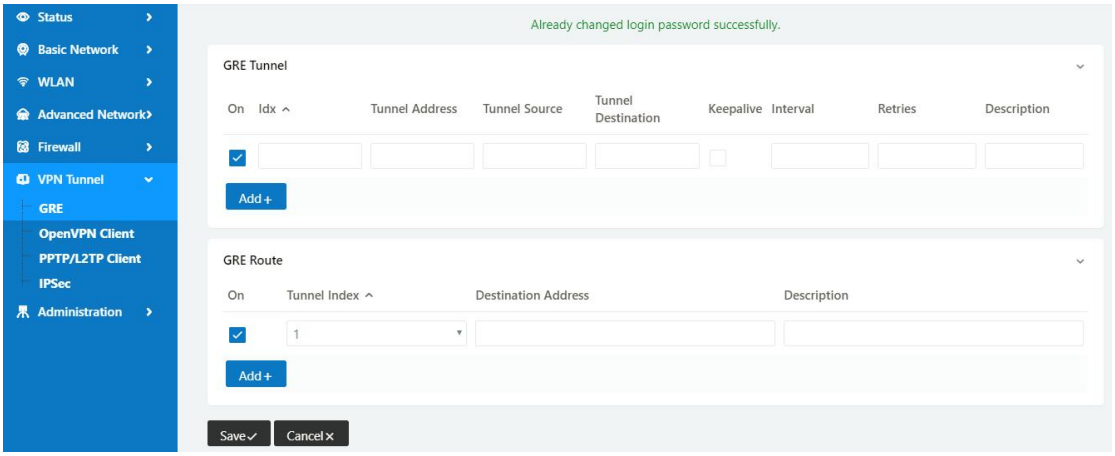


Table 2-11 GRE Instruction

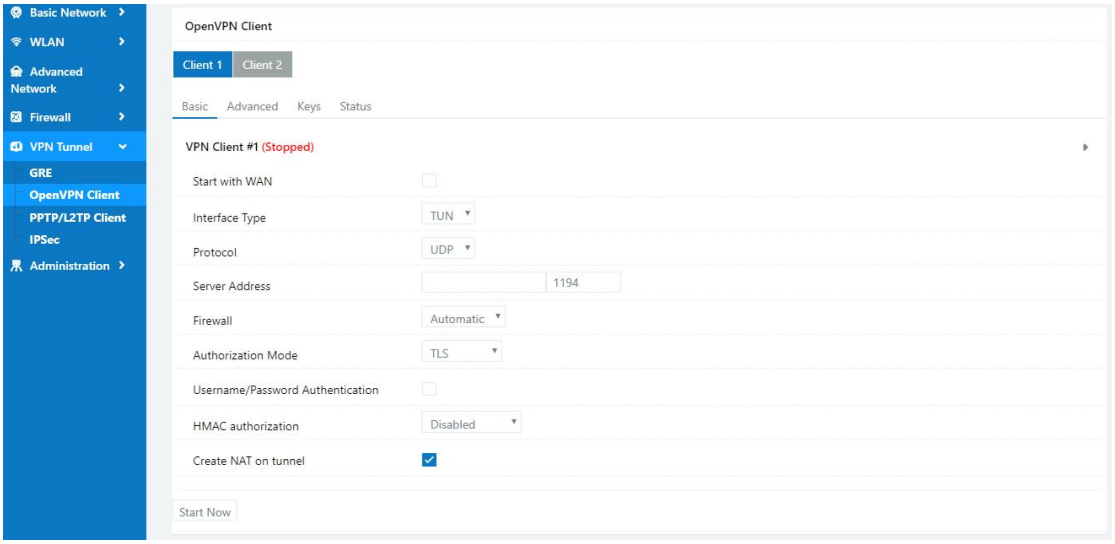
Parameter	Instruction
IDx	GRE tunnel number
Tunnel Address	GRE Tunnel local IP address which is a virtual IP address.
Tunnel Source	Router's 3G/WAN IP address.
Tunnel Destination	GRE Remote IP address. Usually a public IP address
Keep alive	GRE tunnel keep alive to keep GRE tunnel connection.
Interval	Keep alive interval time.
Retries	Keep alive retry times. After retry times, GRE tunnel will be re-established.
Description	

Step 2 Please click "save" to finish.

----End

OpenVPN Client Setting

Step 1 VPN Tunnel> OpenVPN Client to check or modify the relevant parameter.


Basic Network
WLAN
Advanced Network
Firewall
VPN Tunnel
GRE
OpenVPN Client
PPTP/L2TP Client
IPSec
Administration
OpenVPN Client
Client 1
Client 2
Basic
Advanced
Keys
Status
VPN Client #1 (Stopped)
Start with WAN
Interface Type
TUN
Protocol
UDP
Server Address
1194
Firewall
Automatic
Authorization Mode
TLS
Username/Password Authentication
HMAC authorization
Disabled
Create NAT on tunnel
Start Now

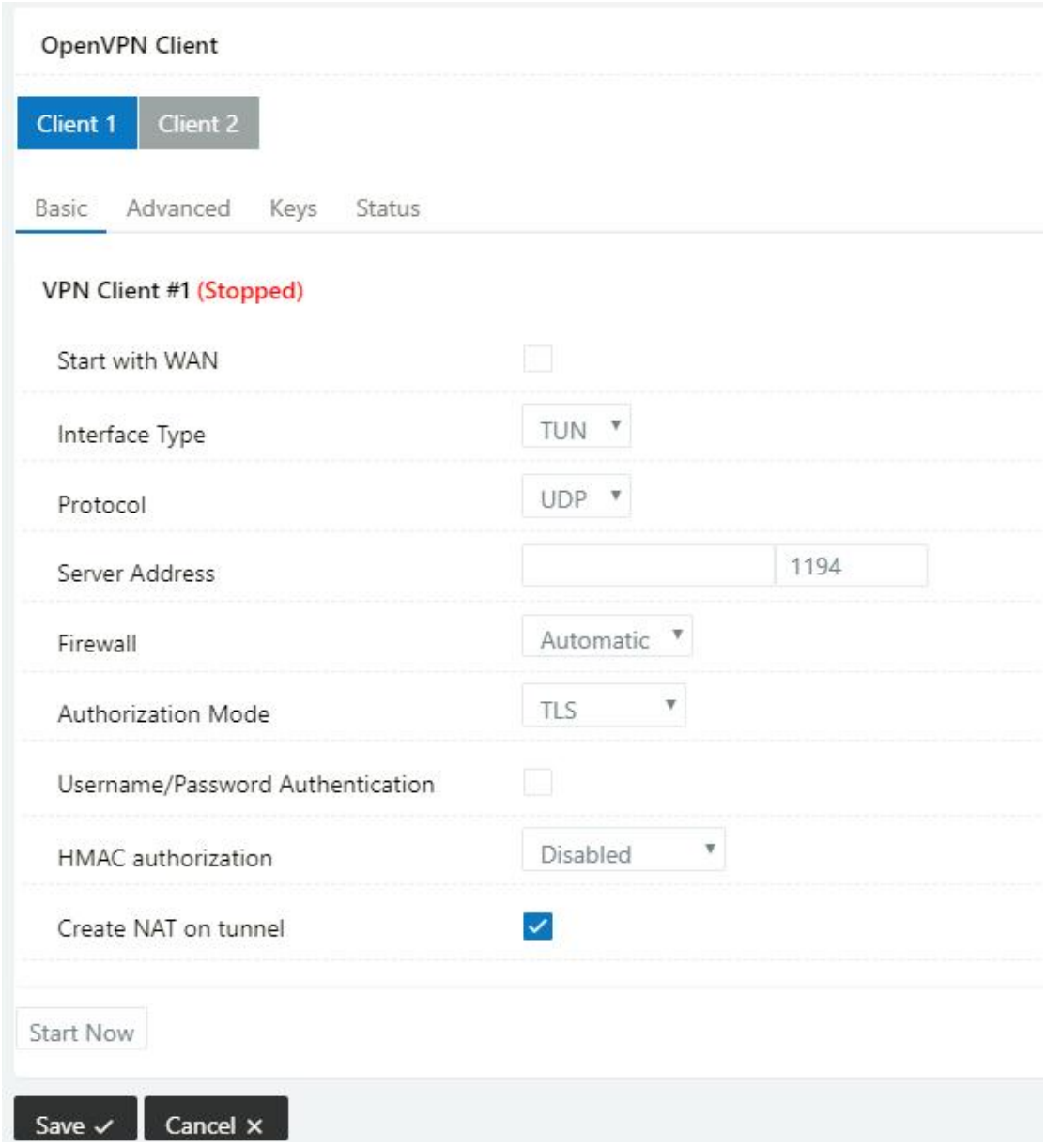

OpenVPN Client
Client 1
Client 2
Basic
Advanced
Keys
Status
VPN Client #1 (Stopped)
Start with WAN
Interface Type
TUN
Protocol
UDP
Server Address
1194
Firewall
Automatic
Authorization Mode
TLS
Username/Password Authentication
HMAC authorization
Disabled
Create NAT on tunnel
Start Now
Save
Cancel

Table 2-12 Basic of OpenVPN Instruction

Parameter	Instruction
Start with WAN	Enable the Openvpn feature for 4G/3G/WAN port.
Interface Type	Tap and Tun type are optional. Tap is for bridge mode and Tunnel is for routing mode.
Protocol	UDP and TCP optional.
Server Address	The Openvpn server public IP address and port.
Firewall	Auto, External only and Custom are optional
Authorization Mode	TLS, Static key and Custom are optional.
User name/Password Authentication	As the configuration requested.
HMAC authorization	As the configuration requested.
Create NAT on tunnel	Configure NAT in Openvpn tunnel.

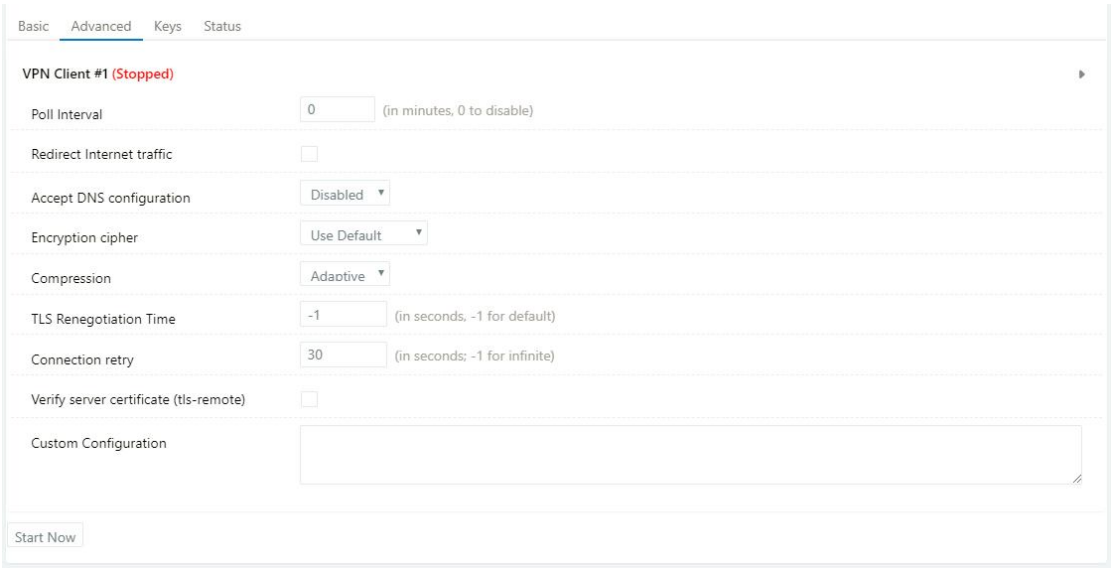


Table 2-13 Advanced of OpenVPN Instruction

Parameter	Instruction
Poll Interval	Openvpn client check router's status as interval time.
Redirect Internet Traffic	Configure Openvpn as default routing.
Access DNS	As the configuration requested.

Parameter	Instruction
Encryption	As the configuration requested.
Compression	As the configuration requested.
TLS Renegotiation Time	TLS negotiation time. -1 as default for 60s.
Connection Retry Time	Openvpn retry to connection interval.
Verify server certificate	As the configuration requested.
Custom Configuration	As the configuration requested.

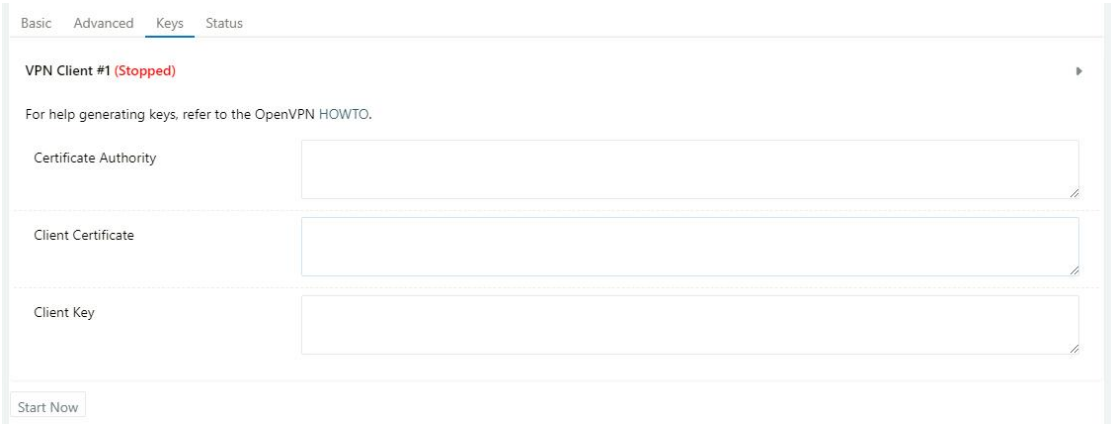


Table 2-14 Keys of OpenVPN Instruction

Parameter	Instruction
Certificate Authority	Keep certificate as the same as server
Client Certificate	Keep client certificate as the same as server
Client Key	Keep client key as the same as server

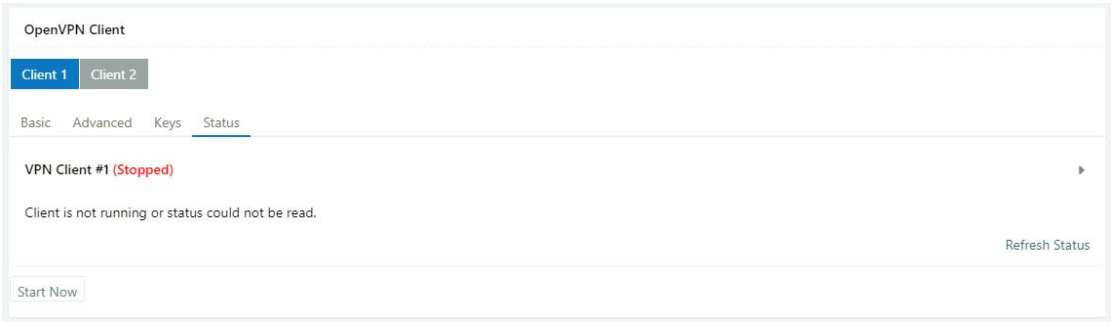


Table 2-15 Status of OpenVPN Instruction

Parameter	Instruction
Status	Check Openvpn status and data statistics.

Step 2 Please click ”save” to finish.

----End

PPTP/L2TP Client Setting

Step 1 VPN Tunnel> VPN Client to check or modify the relevant parameter.

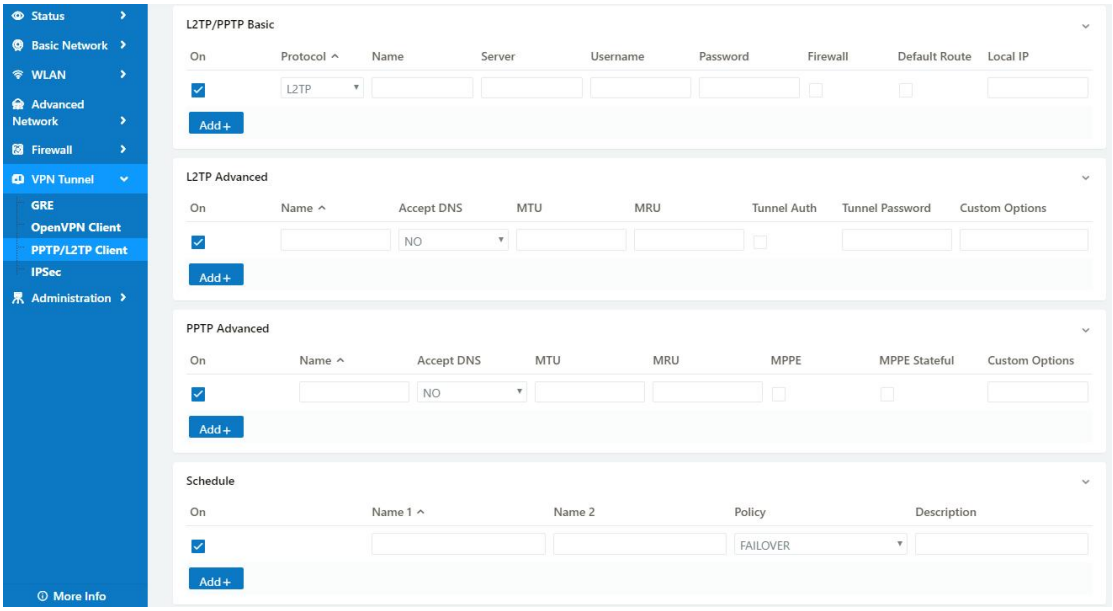


Table 2-16 PPTP/L2TP Basic Instruction

parameter	Instruction
On	VPN enable
Protocol	VPN Mode for PPTP and L2TP
Name	VPN Tunnel name
Server Address	VPN Server IP address.
User name	As the configuration requested.
Password	As the configuration requested.
Firewall	Firewall For VPN Tunnel
Local IP	Defined Local IP address for tunnel

Table 2-17 L2TP Advanced Instruction

On	L2TP Advanced enable
Name	L2TP Tunnel name
Accept DNS	As the configuration requested.
MTU	MTU is 1450bytes as default
MRU	MRU is 1450bytes as default
Tunnel Auth.	L2TP authentication Optional as the configuration requested.
Tunnel Password	As the configuration requested.
Custom Options	As the configuration requested.

Table 2-18 PPTP Advanced Instruction

On	PPTP Advanced enable
Name	PPTP Tunnel name
Accept DNS	As the configuration requested.
MTU	MTU is 1450bytes as default
MRU	MRU is 1450bytes as default
MPPE	As the configuration requested
MPPE Stateful	As the configuration requested
Customs	As the configuration requested

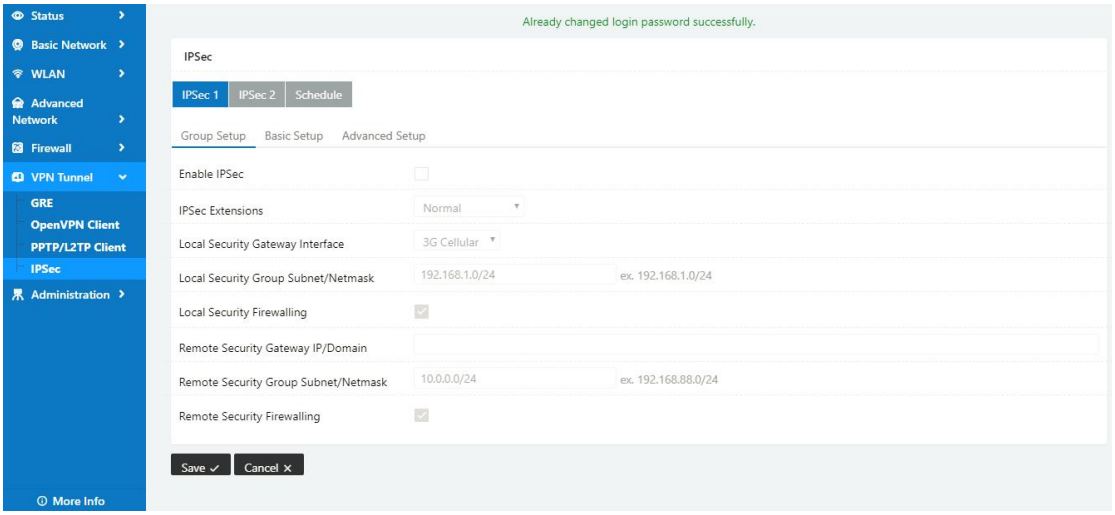
Table 2-19 SCHEDULE Instruction

On	VPN SCHEDULE feature enable
Name1	VPN tunnel name
Name2	VPN tunnel name
Policy	Support VPN tunnel backup and failover modes optional
Description	As the configuration requested

Step 2 Please click ”save” to finish.

---End

IPSec Setting



IPSec Group Setup

Step 1 IPSec> Group Setup to check or modify the relevant parameter.

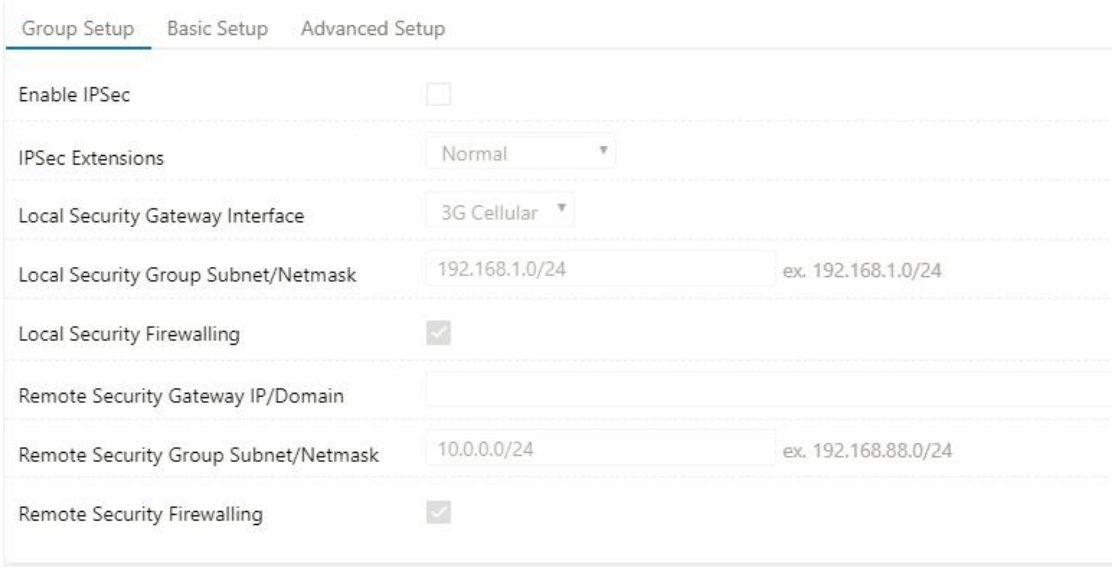


Table 2-20 IPSec Group Setup Instruction

parameter	Instruction
IPSec Extensions	Support Standard IPSec, GRE over IPSec, L2TP over IPSec
Local Security Interface	Defined the IPSec security interface
Local Subnet/Mask	IPSec local subnet and mask.

parameter	Instruction
Local Firewall	Forwarding-firewalling for Local subnet
Remote IP/Domain	IPsec peer IP address/domain name.
Remote Subnet/Mask	IPSec remote subnet and mask.
Remote Firewall	Forwarding-firewalling for Remote subnet

Step 2 Please click ”save” to finish.

IPSec Basic Setup

Step 1 IPSec >Basic Setup to check or modify the relevant parameter.

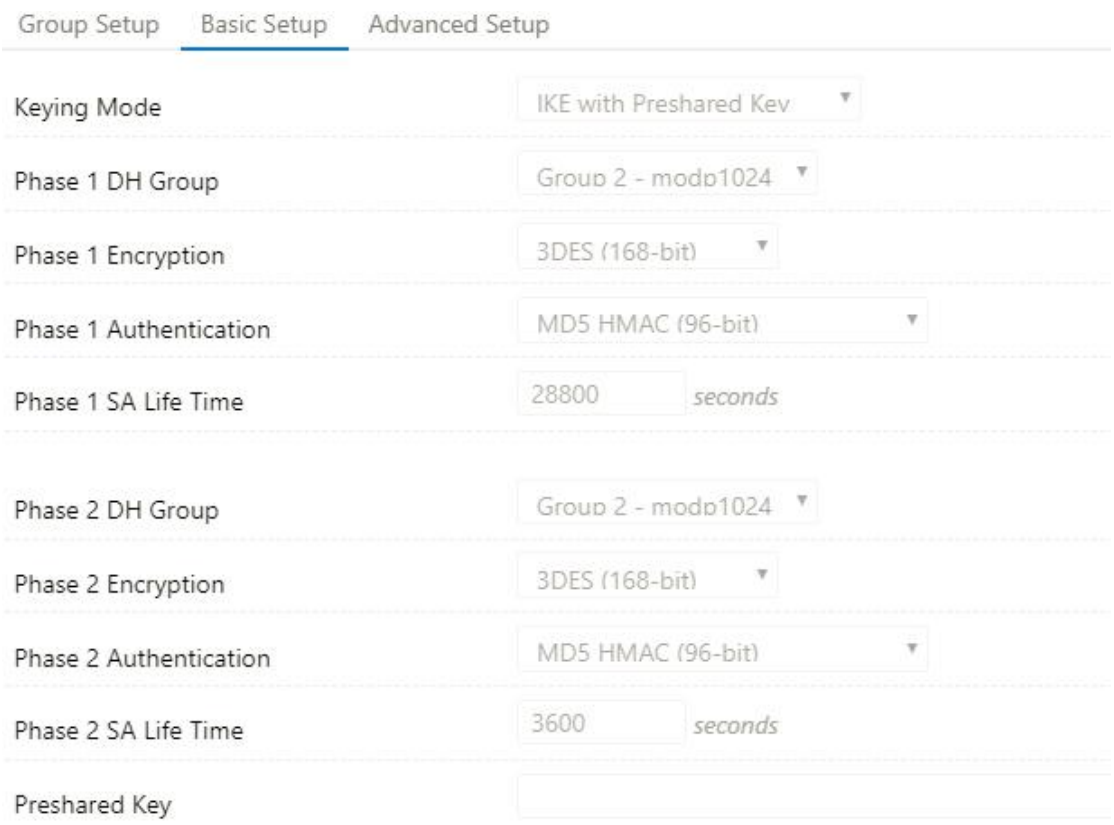


Table 2-21 IPSec Basic Setup Instruction

parameter	Instruction
Keying Mode	IKE preshared key
Phase 1 DH Group	Select Group1, Group2, Group5 from list. It must be matched to remote IPSec setting.
Phase 1	Support 3DES, AES-128, AES-192, AES-256

parameter	Instruction
Encryption	
Phase 1 Authentication	Support HASH MD5 and SHA
Phase 1 SA Life Time	IPSec Phase 1 SA lifetime
Phase 2 DH Group	Select Group1, Group2, Group5 from list. It must be matched to remote IPSec setting.
Phase 2 Encryption	Support 3DES, AES-128, AES-192, AES-256
Phase 2 Authentication	Support HASH MD5 and SHA
Phase 2 SA Life Time	IPSec Phase 2 SA lifetime
Preshared Key	Preshared Key

Step 2 Please click ”save” to finish.

IPSec Advanced Setup

Step 1 IPSec >Advanced Setup to check or modify the relevant parameter.

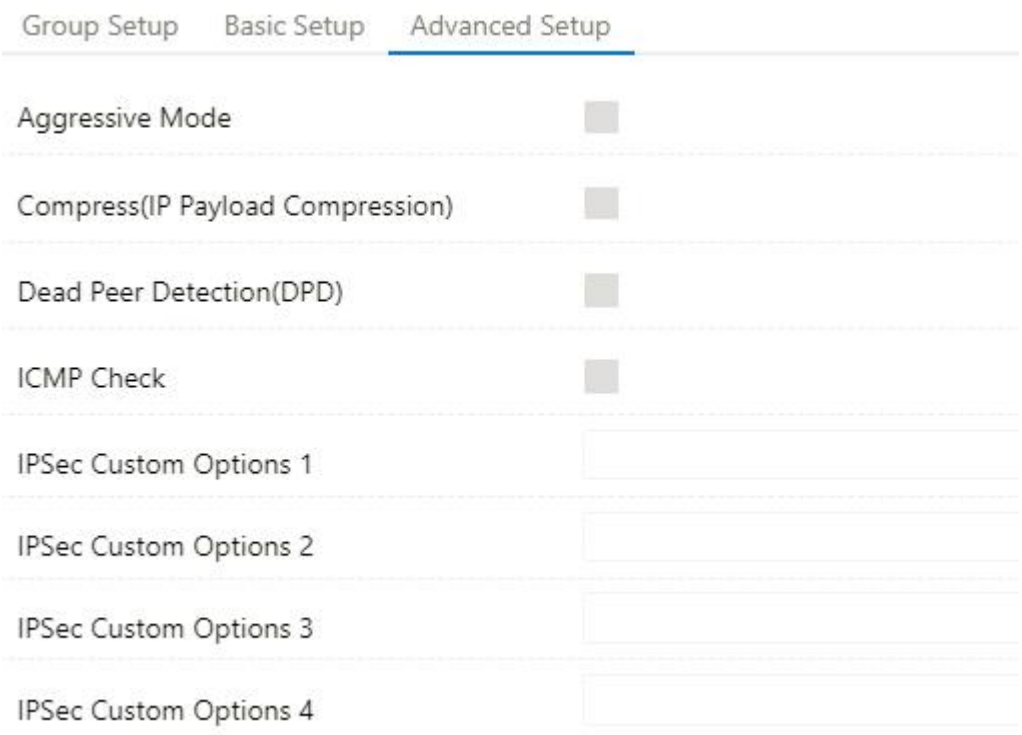


Table 2-22 IPSec Advanced Setup Instruction

parameter	Instruction
Aggressive Mode	Default for main mode
ID Payload Compress	Enable ID Payload compress
DPD	To enable DPD service
ICMP	ICMP Check for IPSec tunnel
IPSec Custom Options	IPSec advanced setting such as left/right ID.

Step 2 Please click ”save” to finish.

----End