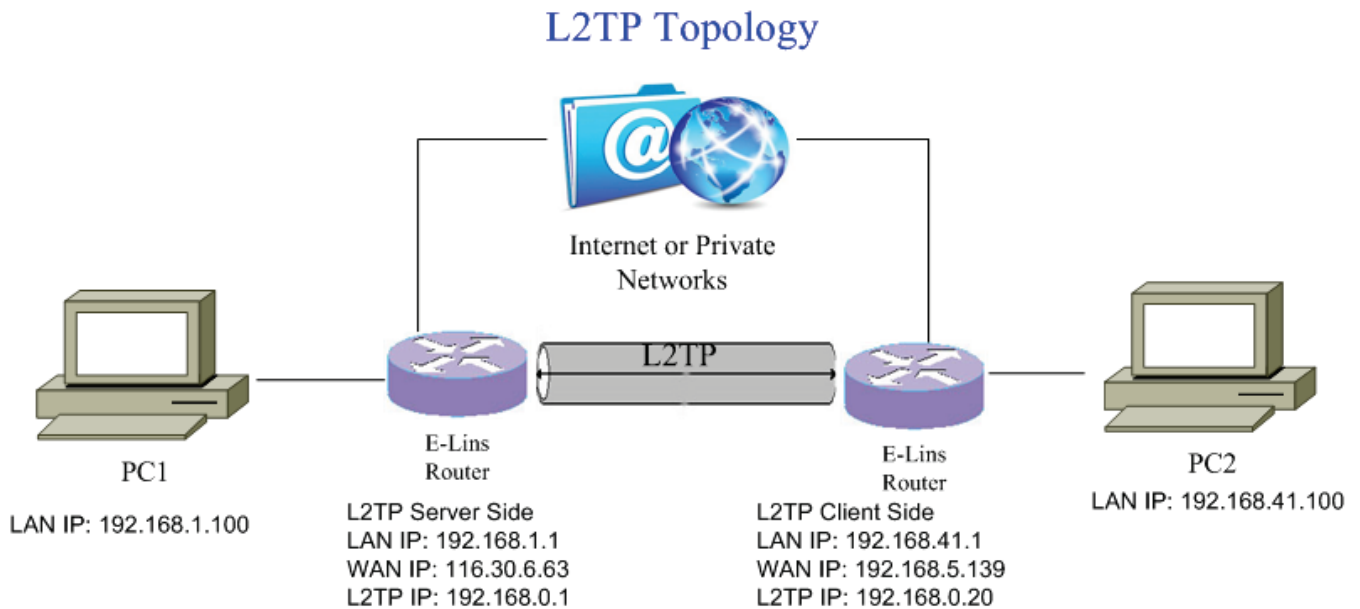


## VPN Setting Example - L2TP



### L2TP Server Side

1. Make sure the L2TP Server Router is online.

Status	Mobile	Mobile 2	WAN	LAN
Overview				
<b>Network</b>				
Firewall				
Routes				
System Log				
Kernel Log				
Reboot Log				
Realtime Graphs				
VPN				
<b>System</b>				
<b>Services</b>				
<b>Network</b>				
<b>Logout</b>				

WAN Status	
IPv4 WAN Status	Port: <a href="#">pppoe-wan</a>
	Protocol: pppoe
	<b>Address: 116.30.6.63</b>
	Netmask: 255.255.255.255
	Gateway: 116.30.4.1
	DNS 1: 202.96.128.166
	DNS 2: 202.96.134.133
	Uptime: 1h 27m 44s
	Mac Addr: 00:00:00:00:00:00
	RX: 23.07 MB (37977 Pkts.)
	TX: 4.01 MB (29648 Pkts.)

- Open web management page, click "Services" -> "VPN" at the left navigation bar, then click "L2TP" to open L2TP Configuration page.

The screenshot displays the L2TP Configuration page. On the left, the navigation menu has 'VPN' selected (01). The main content area has 'L2TP' selected in the top navigation bar (02). The page title is 'Layer 2 Tunneling Protocol'. Below the title is the 'L2TP Configuration' section. A table lists L2TP instances:

Name	Type	Enable	
L2tpd_server	Server	Yes	<span>Edit</span> <span>Delete</span>

Below the table is a form to 'Add New' instances. It includes a text input for 'New instance name', a dropdown for 'Role' (set to 'Client'), and an 'Add New' button (03). At the bottom of the configuration area, there is a checkbox for 'L2TP NAT enable' (checked) and buttons for 'Save & Apply', 'Save', and 'Reset'.

If there is no L2TP server instance in the list, input new instance name, select "Server" as role, and then click button "Add New".

Click button "Edit" in the list to configure L2TP server.


- Checked "Enable", set remote LAN IP address, change Remote IP addresses Range as you like.

## L2TP Server Instance: L2tpd\_server

### Main Settings

Enable	<input checked="" type="checkbox"/>
Local IP	<input type="text" value="192.168.0.1"/>
Remote IP range begin	<input type="text" value="192.168.0.20"/>
Remote IP range end	<input type="text" value="192.168.0.30"/>
Remote LAN IP	<input type="text"/>
Remote LAN netmask	<input type="text" value="255.255.255.0"/>

Username	Password	
<input type="text" value="l2tp-username"/>	<input type="password" value="....."/>	<input type="button" value="Delete"/>
<input type="button" value="Add"/>		
<input type="button" value="Save &amp; Apply"/> <input type="button" value="Save"/> <input type="button" value="Reset"/>		

If more than one user name is required, click button "Add" to add a new group username/password. Click button  behind password can show/hide password.

Click button "Save & Apply" if everything is done.

### L2TP Client Side

1. Make sure the L2TP Client Router is online.

**Status**

- Overview
- Network**
- Firewall
- Routes
- System Log
- Kernel Log
- Reboot Log
- Realtime Graphs
- VPN

**System**

**Services**


**Network**

**Logout**

Mobile | **WAN** | LAN

## Mobile Status

### Mobile 1

Cellular Status	Up
Cell Modem	TRICHEER_LM92XX (1C9E_9B07 )
IMEI/ESN	862234024935001
Sim Status	SIM Ready
Strength	 31 / 31, dBm : -79
Selected Network	Automatic
Registered Network	Registered on Home network: "CHN-CT ????", 7,
Sub Network Type	LTE FDD

2. Check if L2TP Client Router can visit L2TP Server Router without L2TP. If cannot visit, the L2TP will not be connected.

**Status**

**System**

**Services**

**Network**

- Operation Mode
- Mobile
- LAN
- Wired WAN
- WAN IPv6
- Interfaces
- Wi-Fi
- Firewall
- Static Routes
- Switch
- DHCP and DNS
- Diagnostics**

## Diagnostics

### Network Utilities

116.30.6.63	www.google.com	www.google.com
IPv4 <input type="checkbox"/>	<input type="button" value="Ping"/>	<input type="button" value="Traceroute"/>
<input type="button" value="Nslookup"/>		

```

PING 116.30.6.63 (116.30.6.63): 56 data bytes
64 bytes from 116.30.6.63: seq=0 ttl=55 time=42.497 ms
64 bytes from 116.30.6.63: seq=1 ttl=55 time=42.097 ms
64 bytes from 116.30.6.63: seq=2 ttl=55 time=41.777 ms
64 bytes from 116.30.6.63: seq=3 ttl=55 time=41.497 ms
64 bytes from 116.30.6.63: seq=4 ttl=55 time=41.178 ms

--- 116.30.6.63 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 41.178/41.809/42.497 ms
    
```

3. Open web management page, click “Services”->”VPN” at the left navigation bar, then click “L2TP” to open L2TP Configuration page.

The screenshot displays the L2TP Configuration page. On the left, the navigation menu has 'VPN' selected. The main area shows the 'L2TP Configuration' section with a table of instances:

Name	Type	Enable	
L2tpc	Client	Yes	Edit Delete

Below the table, there is a form to add a new instance:

New instance name:  Role: Client

At the bottom, there is a checkbox for 'L2TP NAT enable' which is checked, and buttons for 'Save & Apply', 'Save', and 'Reset'.

Input new instance name, the example we input “L2tpc”, and then select “Client” as role, finally Click Button “Add New”.

Click button “Edit” in the row of “L2tpc” instance.

IPSec PPTP **L2TP** OpenVPN GRE Tunnel

## L2TP Client Instance: L2tpc

### Main Settings

Enable	<input checked="" type="checkbox"/>
Server	<input type="text" value="116.30.6.63"/>
Username	<input type="text" value="l2tp-username"/>
Password	<input type="password" value="*****"/>
Remote LAN subnet	<input type="text" value="192.168.1.0"/>
Remote LAN netmask	<input type="text" value="255.255.255.0"/>
MTU	<input type="text" value="1500"/>
Keep Alive	<input type="text" value="8"/>
Debug	<input type="checkbox"/>

Save & Apply

Save

Reset

Checked "Enable", fill in value of "Server" as L2TP Server WAN IP address. Here our PPTP Server Router has WAN IP address 116.30.6.63 and LAN IP address 192.168.1.1

Set username/password we configured on L2TP server.

Set Keep Alive and checkup interval.

Click button "Save & Apply" if everything is done.

4. Wait some seconds until the L2TP Client Router connects to L2TP Server Router via L2TP.  
Check the link status of L2TP Client Router.

Network	Status	Actions
L2TPC l2tp-l2tpc	Uptime: 0h 5m 41s RX: 46.00 B (4 Pkts.) TX: 52.00 B (4 Pkts.) IPv4: 192.168.0.20/32	Connect Stop Edit
LAN br-lan	Uptime: 1h 13m 0s MAC-Address: 90:22:06:80:20:01 RX: 1.11 MB (12802 Pkts.) TX: 6.10 MB (12571 Pkts.) IPv4: 192.168.41.1/24 IPv6: fd0b:920:a70d::1/60	Connect Stop Edit

Once the L2TP connection is up, the L2TP Client Router will display L2TP IP address at "Interface".

5. Ping from L2TP Client Router to L2TP Server Router (with L2TP IP 192.168.0.1)

192.168.0.1      www.google.com

IPv4    Ping    Traceroute

```

PING 192.168.0.1 (192.168.0.1): 56 data bytes
64 bytes from 192.168.0.1: seq=0 ttl=64 time=55.644 ms
64 bytes from 192.168.0.1: seq=1 ttl=64 time=56.024 ms
64 bytes from 192.168.0.1: seq=2 ttl=64 time=55.804 ms
64 bytes from 192.168.0.1: seq=3 ttl=64 time=54.384 ms
64 bytes from 192.168.0.1: seq=4 ttl=64 time=54.144 ms

--- 192.168.0.1 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 54.144/55.200/56.024 ms
    
```