

Application Guide

Hongdian Routing-WAN-LAN



Contents

Contents	2
Revision History	2
1 Overview	3
2 Description	3
2.1 Preparation.....	3
2.2 Operation.....	4

Revision History

Updates between document versions are cumulative. Therefore, the latest document version contains all updates made to previous versions.

Doc Version	Product	Release Data	Details
V1.0	Hongdian Router	2010.03.27	First Release

1 Overview

Routing is a important function for router, it can be applied to various networking, especially in VPN networking. Here is the example to configure the routing in Hongdian Router.

After you having build the VPN connection between Hongdian Router and your VPN server, you may refer to this document as the next step, to make the slave machine (which connects Hongdian Router by LAN) access the VPN network.

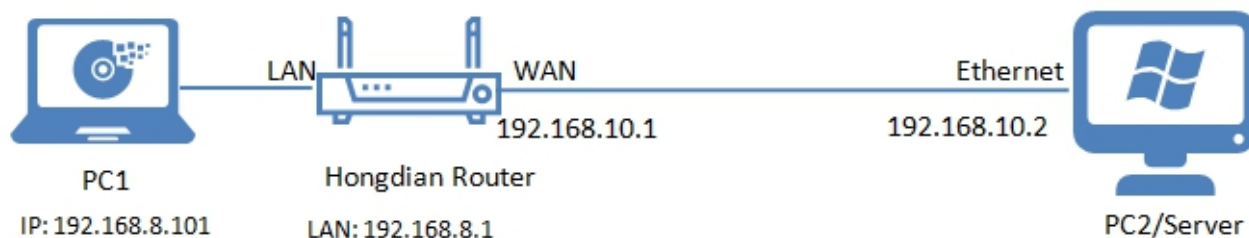
This document shows an example for the routing on Hongdian Router, allow the data packet can be forward from WAN to LAN.

2 Description

2.1 Topology

2.1.1 Demo diagram

In this demo, we are using 1 Hongdian Router and two PC. The diagram is as below.



PC1 is the slave machine and connect to Hongdian Router via LAN; Hongdian Roter WAN connection can access to PC2(can be seen as Server).

The question is, how can we ping PC1 from PC2?

2.1.2 Demo diagram of WiFi Connection

This is another similar demo diagram of WiFi connection.

The Hongdian enable WiFi station and connect to PC2's WiFi.

2.2 Operation

Note:

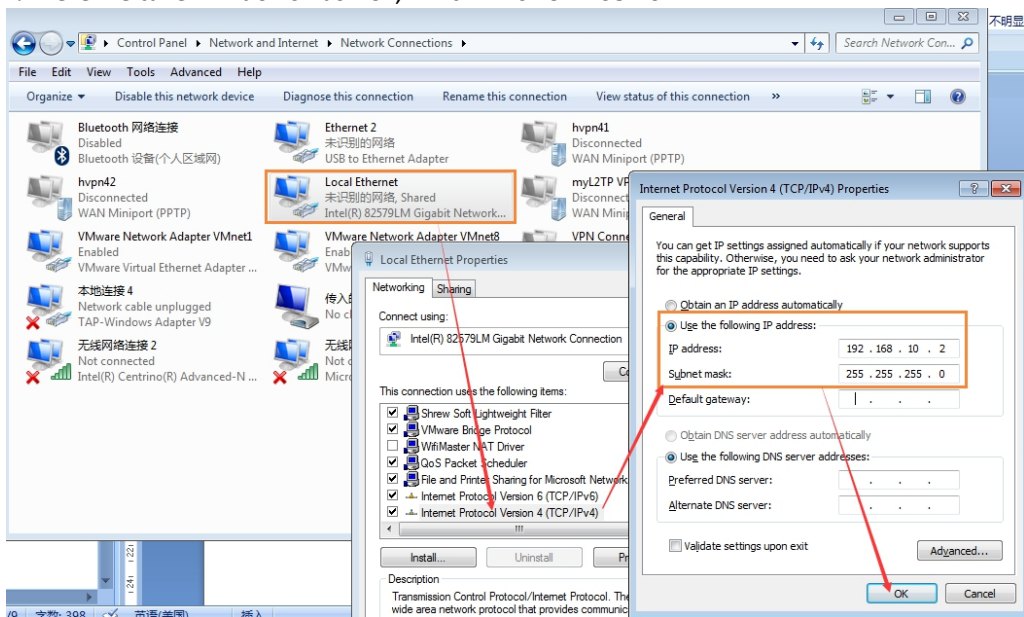
See the Hongdian Router as VPN client, and PC2 as VPN server, The routing's network shall be the subnet of the opposite end.

VPN server: Routing network is the subnet of the VPN client.

VPN client: Routing network is the subnet of the VPN server.

As we can see, the Server is no subnet in demo diagram, so we just need to add the Client's subnet in the Server.

1. Here we take Windows7 as PC2, which IP is 192.168.10.2



We can ping the Router's IP 192.168.10.1 via WAN as below.

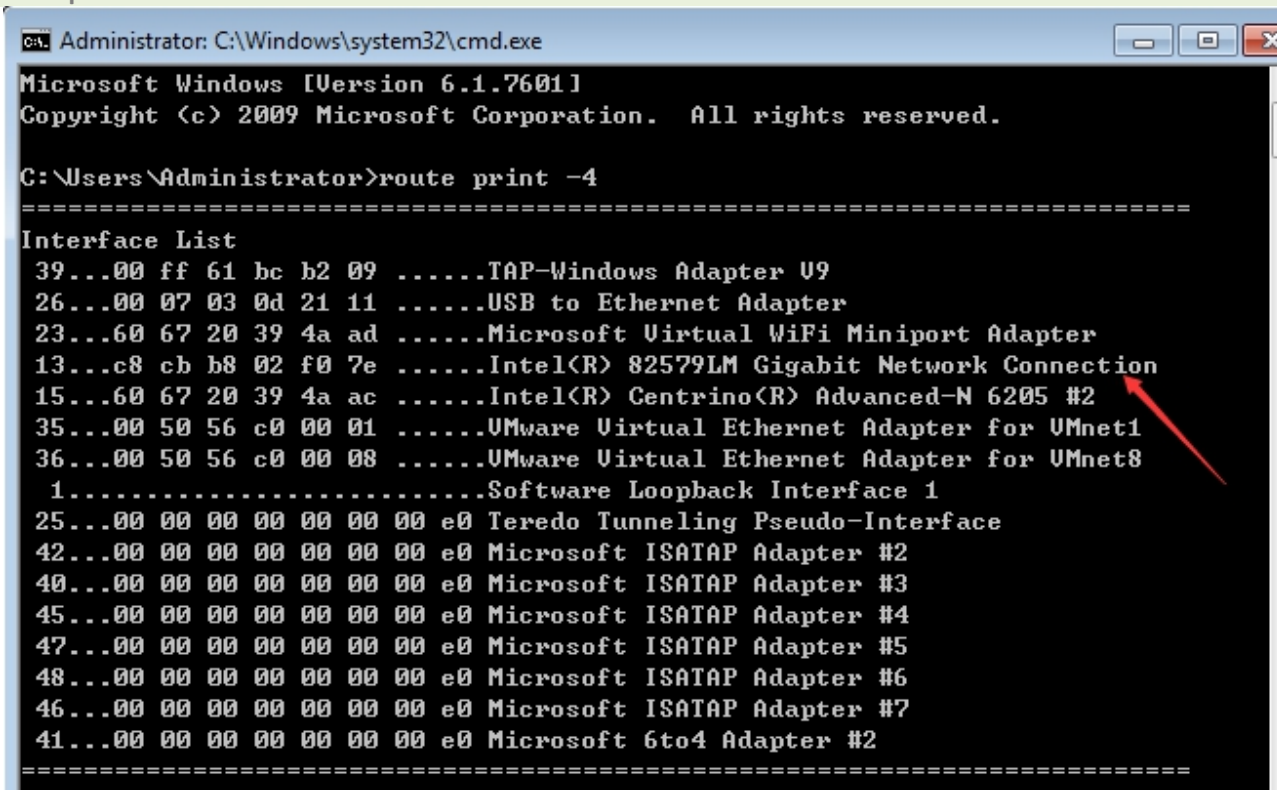
The image shows a web browser window displaying the router's status page. The address bar shows the URL 192.168.10.1/gui/status_wan.cgi. The page has a blue header and a sidebar on the left with navigation tabs: Status, Basic Information, LAN, WAN, WLAN, and Modem. The main content area shows the WAN status details:

WAN Status	Enable
Wan Type	static IP
IP	192.168.10.1
Mask	255.255.255.0
MAC	20:15:00:00:00:00

At the bottom right of the status area, there is a 'Refresh' button.

2. Open CMD and check your Ethernet Adapter's ID.

route print -4



```

Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

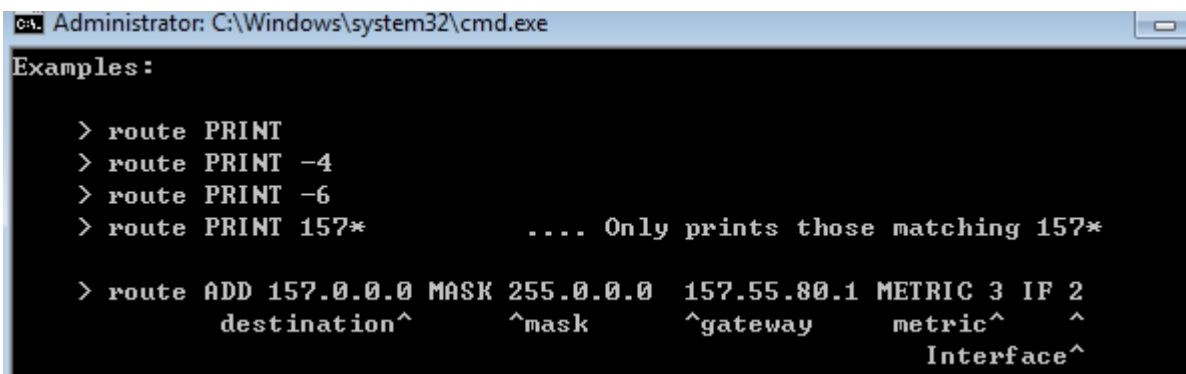
C:\Users\Administrator>route print -4
=====
Interface List
39...00 ff 61 bc b2 09 .....TAP-Windows Adapter U9
26...00 07 03 0d 21 11 .....USB to Ethernet Adapter
23...60 67 20 39 4a ad .....Microsoft Virtual WiFi Miniport Adapter
13...c8 cb b8 02 f0 7e .....Intel(R) 82579LM Gigabit Network Connection
15...60 67 20 39 4a ac .....Intel(R) Centrino(R) Advanced-N 6205 #2
35...00 50 56 c0 00 01 .....UMware Virtual Ethernet Adapter for VMnet1
36...00 50 56 c0 00 08 .....UMware Virtual Ethernet Adapter for VMnet8
1.....Software Loopback Interface 1
25...00 00 00 00 00 00 00 e0 Teredo Tunneling Pseudo-Interface
42...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #2
40...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #3
45...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #4
47...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #5
48...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #6
46...00 00 00 00 00 00 00 e0 Microsoft ISATAP Adapter #7
41...00 00 00 00 00 00 00 e0 Microsoft 6to4 Adapter #2
=====

```

Interface ID is 13 for my Ethernet adapter:

Intel(R) 82579LM Gigabit Network Connection

3. Add static routing, that is, to add the Client's subnet.



```

Administrator: C:\Windows\system32\cmd.exe
Examples :

> route PRINT
> route PRINT -4
> route PRINT -6
> route PRINT 157*          .... Only prints those matching 157*

> route ADD 157.0.0.0 MASK 255.0.0.0 157.55.80.1 METRIC 3 IF 2
      destination^      ^mask      ^gateway      metric^      ^
                                   Interface^

```

After build up the VPN
 Router VPN IP: 10.0.0.3
 PC2 VPN IP: 10.0.0.1

Interface Name	p2
Status	connected
Protocol	pptp
Local IP Address	10.0.0.3
Remote IP	10.0.0.1

Refresh
Return

If just want to access 192.168.8.101 form 10.0.0.1,the routing is:
10.0.0.1->10.0.0.3->192.168.8.1->192.168.8.101

```
route add 192.168.8.0 mask 0.0.0.0 10.0.0.3 metric 3 if 77
route add 0.0.0.0 mask 0.0.0.0 10.0.0.3 metric 3 if 77
```

```
route add 192.168.8.101 mask 255.255.255.255 192.168.8.1 metric 3 if 13
route add 192.168.8.101 mask 255.255.255.255 192.168.10.2 metric 3 if 13
route add 192.168.8.0 mask 255.255.255.0 192.168.137.1 metric 3 if 23
ping 192.168.8.101 -S 192.168.137.1
route add 192.168.8.0 mask 0.0.0.0 192.168.137.76 metric 3 if 23
//OK
route add 192.0.0.0 mask 255.0.0.0 192.168.137.72 metric 3 if 23

route print -4
```

4. Visit Hongdian Router's web GUI, make sure router can ping the Windows's IP(such as 192.168.137.1), you can use Network Test to ping, as below.

192.168.8.1/gui/tools.cgi

Control Panel

Network Applications VPN Forward Security System Status

Local Log Remote Log Clock Account Network Test Files

Destination: 192.168.137.1 * Ping Trace

Result

5. After ping is OK, we can turn to set up the PPTP VPN.

Control Panel

Network Applications VPN Forward Security System Status

VPDN Tunnel IPsec OpenVPN

Tunnel secrets: Max length is 64 Save

Interface Name	Protocol	Server IP or Domain	Username	Operation				
p1	pptp	192.168.137.1	ztmian	Mod	Del	View	En	Dis

Add Refresh

6. Edit info, wherein , server info may be different with your PC.

192.168.8.1/gui/vpn_change.cgi?rule=p1

Connecting Machine ... Control Panel
Network Applications **VPN** Forward Security System Status

VPDN Tunnel IPSec OpenVPN

Enable it

VPDN Service

Basic Settings

Interface Name	<input type="text" value="p1"/>	* Max length is 8
Protocol	<input type="text" value="pptp"/>	
Server IP or Domain	<input type="text" value="192.168.137.1"/>	* Max length is 64
Username	<input type="text" value="ztmian"/>	Max length is 64
Password	<input type="password" value="*****"/>	Max length is 64
Advanced Settings	<input type="button" value="Hide"/>	

Server info

Authentication

CHAP	<input checked="" type="radio"/> Negotiation <input type="radio"/> Disable
PAP	<input checked="" type="radio"/> Negotiation <input type="radio"/> Disable
MS-CHAP	<input checked="" type="radio"/> Negotiation <input type="radio"/> Disable
MS2-CHAP	<input checked="" type="radio"/> Negotiation <input type="radio"/> Disable
EAP	<input checked="" type="radio"/> Negotiation <input type="radio"/> Disable

Check

Compress

[Help](#)

Interfa
This is
each VI

If a new
interfac
the ent
then th
overwri

User N
The use
for veri
interfac

192.168.8.1/gui/vpn_change.cgi?rule=p1

Compress

- Compression Control Protocol Require Disable
- Address/Control Compression Require Disable
- Protocol Field Compression Require Disable
- VJ TCP/IP Header Compress Require Disable
- Connection-ID Compression Require Disable

Check

More

- Debug Enable Disable
- Peer's DNS Enable Disable
- LCP Interval 1-512 s
- LCP Retry 1-512 times
- MTU 128-16384 B
- MRU 128-16384 B
- Local IP eg. 192.168.8.1
- Remote IP eg. 192.168.8.254

Professional

Input

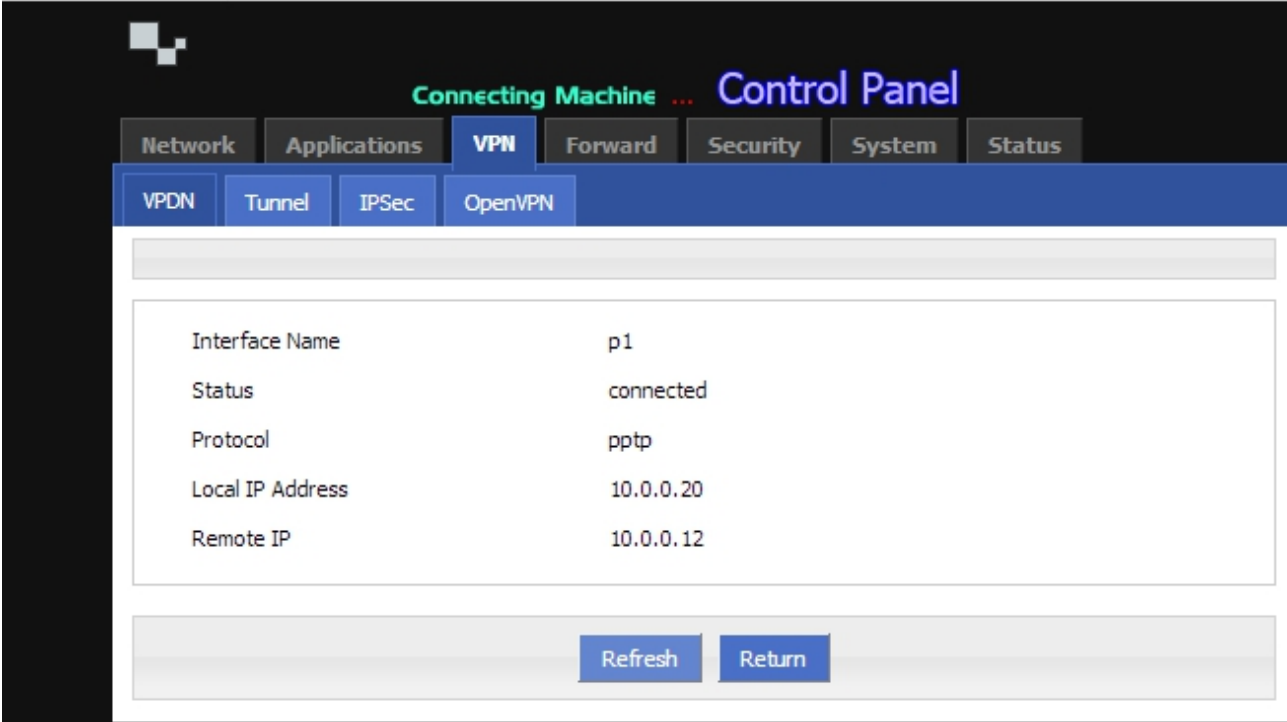
nomppe: Disable Microsoft Point to Point Encryption.
mppe required: Enable Stateful Microsoft Point to Point Encryption.
mppe stateless: Enable Stateless Microsoft Point to Point Encryption.
nodeflate: Disable Deflate

mppe required
mppe stateless

Save it and wait.(Make sure the PPTP server is available, and can be connected.)

The screenshot shows a web-based VPN configuration interface. At the top, there are navigation tabs: Network, Applications, VPN (selected), Forward, Security, System, and Status. Below these are sub-tabs: VPDN, Tunnel, IPsec, and OpenVPN. The main content area shows a 'Tunnel secrets' field with a 'Save' button. Below that is a table with columns: Interface Name, Protocol, Server IP or Domain, Username, and Operation. The table contains one entry for interface 'p1' with protocol 'pptp', server IP '192.168.137.1', and username 'ztmian'. The 'Operation' column for this entry has buttons for 'Mod', 'Del', 'View', 'En', and 'Dis'. A red arrow points to the 'View' button.

Interface Name	Protocol	Server IP or Domain	Username	Operation
p1	pptp	192.168.137.1	ztmian	Mod Del View En Dis



192.168.8.1/gui/vpn_view.cgi?rule=p1

Connecting Machine ... Control Panel

Network Applications **VPN** Forward Security System Status

VPDN Tunnel IPSec OpenVPN

Interface Name	p1
Status	connected
Protocol	pptp
Local IP Address	10.0.0.20
Remote IP	10.0.0.12

Refresh Return

7. You can also view the log, if connect fail, you can export the message.txt log and send to us.

j.cgi

Build Time: Sat

Connecting Machine ... Control Panel

[Network](#)
[Applications](#)
[VPN](#)
[Forward](#)
[Security](#)
[System](#)
[Status](#)

[Local Log](#)
[Remote Log](#)
[Clock](#)
[Account](#)
[Network Test](#)
[Files](#)

[Help](#)

Local Log [View](#) [Clear](#) [Export](#)

Note:
Select the type of view. Then click the content of log will log display table.

Log Display Table

```

Jan 20 01:50:39 20:15:01:01:00:00 daemon.info modem[6472]: change_modem_parameter(interface
modem 0){modem.c->1453}
Jan 20 01:50:39 20:15:01:01:00:00 daemon.info modem[6472]: simcard(1),status.simcard(1){modem.c-
>1471}
Jan 20 01:50:39 20:15:01:01:00:00 daemon.info modem[6472]: killall modem{modem.c->4877}
Jan 20 01:50:39 20:15:01:01:00:00 daemon.warn modem[6472]: change interface modem to ECwwan0
error(-1){base_operate.c->3530}(errno=19)
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6755]: default network mode{ppp_transfor.c-
>297}
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6755]: Modem dail fail reset system interval :
1440min{ppp_transfor.c->1124}
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6755]: modem_auth_type_config:
[pap+chap]=3{modem.c->6100}
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6755]: modem_pin_config:[]{modem.c-
>6103}
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6755]: find the modem(Quectel-EC25:16)
{modemcheck.c->203}
Jan 20 01:50:40 20:15:01:01:00:00 daemon.warn modem[6755]: change interface modem to ECwwan0
error(-1){base_operate.c->3530}(errno=19)
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6755]: Release AT control port OK!(fd:6)
{modem.c->4665}
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6472]: pppd(6755) terminate(0){modem.c-
>4496}
Jan 20 01:50:40 20:15:01:01:00:00 daemon.info modem[6472]: g_dial_failed_counter++{modem.c-
>4498}


```





Create smart things



Contact us

 F14 - F16, Tower A, Building 14, No.12, Ganli 6th Road, Longgang District, Shenzhen 518112, China.

 +86-755-88864288-5

 +86-755-83404677

 hongdianchina

 www.hongdian.com

 sales@hongdian.com

 Hongdian_China