



Application Guide

Hongdian- OpenVPN- RouterOS



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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	2017.08.23	First Release

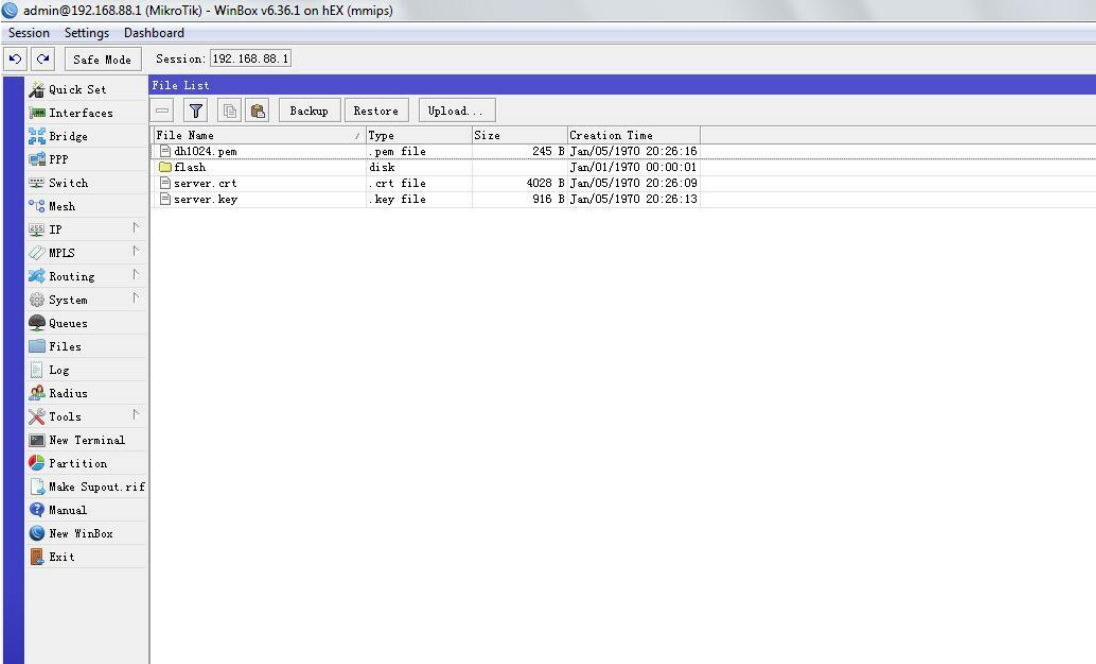
1 Overview

Hongdian Router supports OpenVPN. Here we take an example for guiding you to build up the IPsec connection between Hongdian Router and MikroTik RouterOS. Wherein, Hongdian Router works as OpenVPN client; ROS works as OpenVPN server.

2 Description

2.1 ROS Setting

1. File List: upload server.crt, server.key, dh1024.pem.



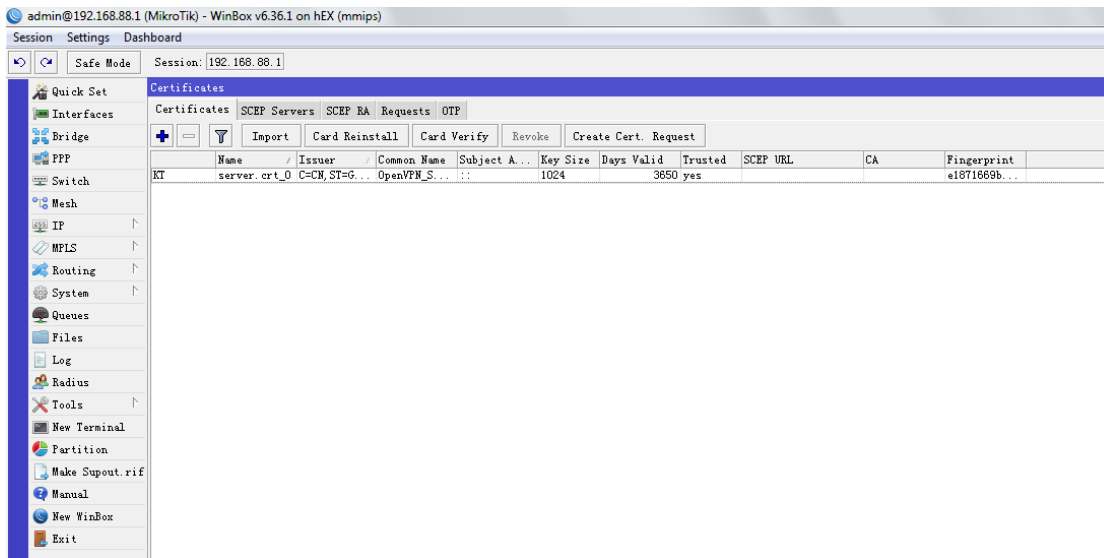
The screenshot shows the WinBox interface with the File List window open. The window displays a table of files in the flash directory:

File Name	Type	Size	Creation Time
dh1024.pem	.pem file	245 B	Jan/05/1970 20:26:16
flash	disk		Jan/01/1970 00:00:01
server.crt	.crt file	4028 B	Jan/05/1970 20:26:09
server.key	.key file	916 B	Jan/05/1970 20:26:13

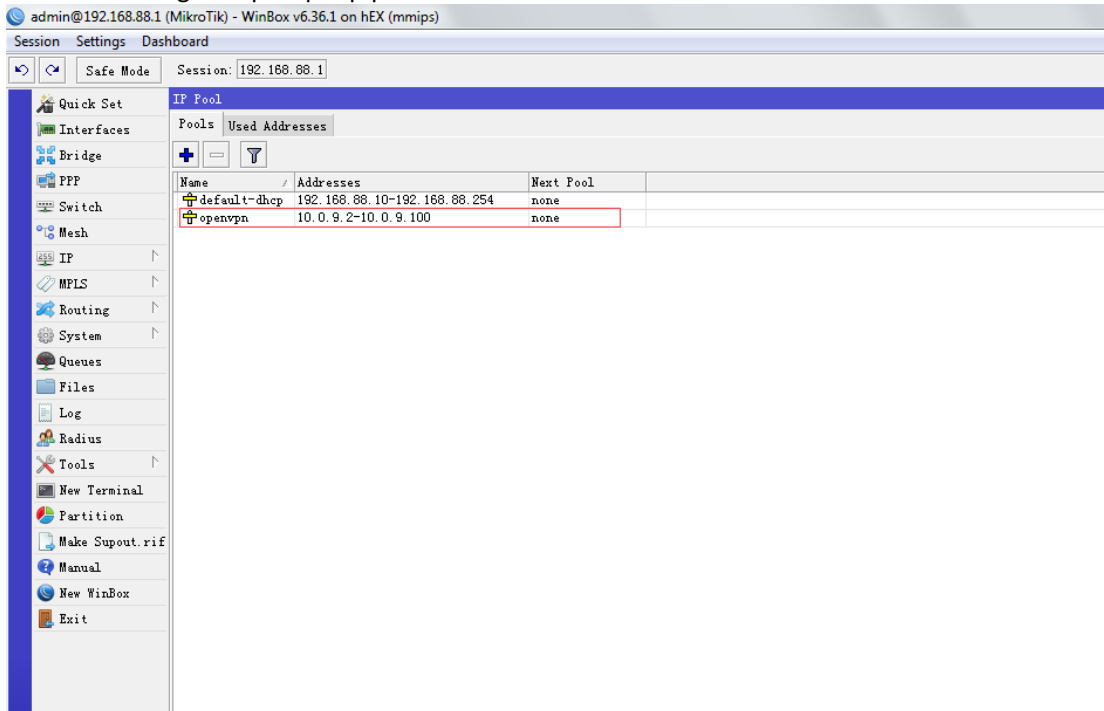
Below the screenshot, three icons representing the files are shown with their respective labels: server.crt, server.key, and dh1024.pem.

The shown above is certificates made by Hongdian, only for test.

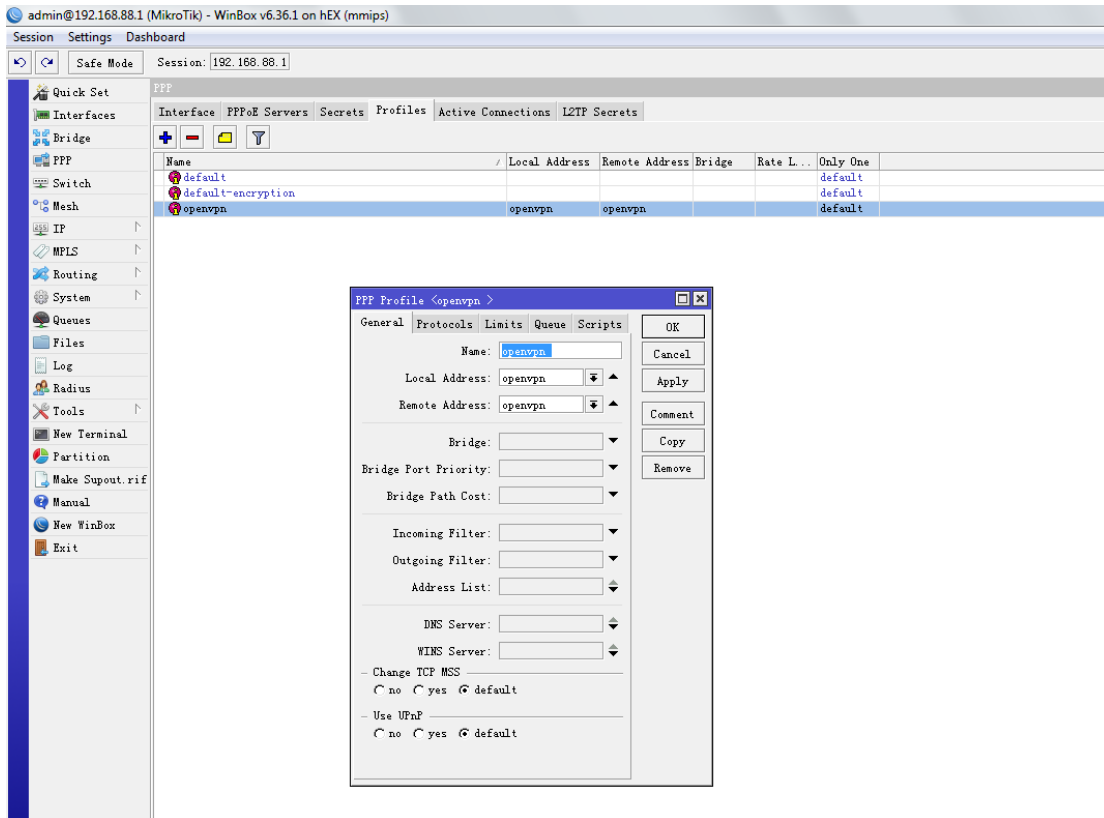
2. Certificates: select server.crt, server.key.



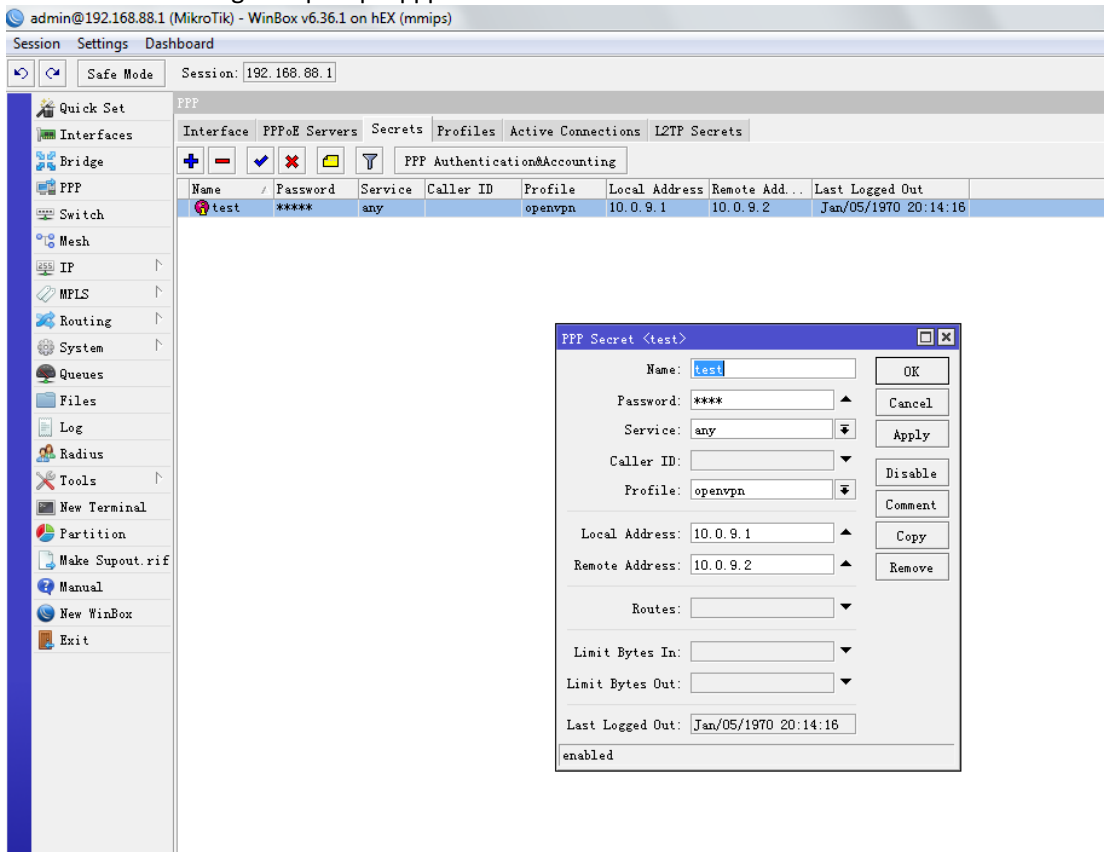
3. IP Pool: configure openvpn ip pool.



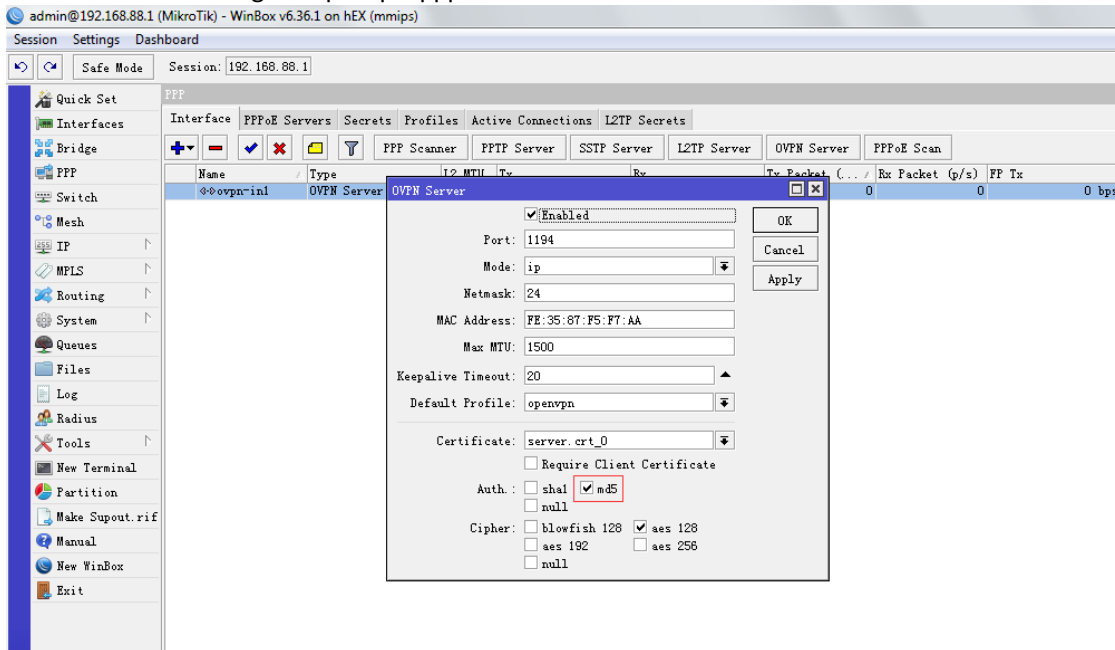
4. PPP Profiles: configure openvpn ppp profile.



5. PPP Secrets: configure openvpn ppp secret.

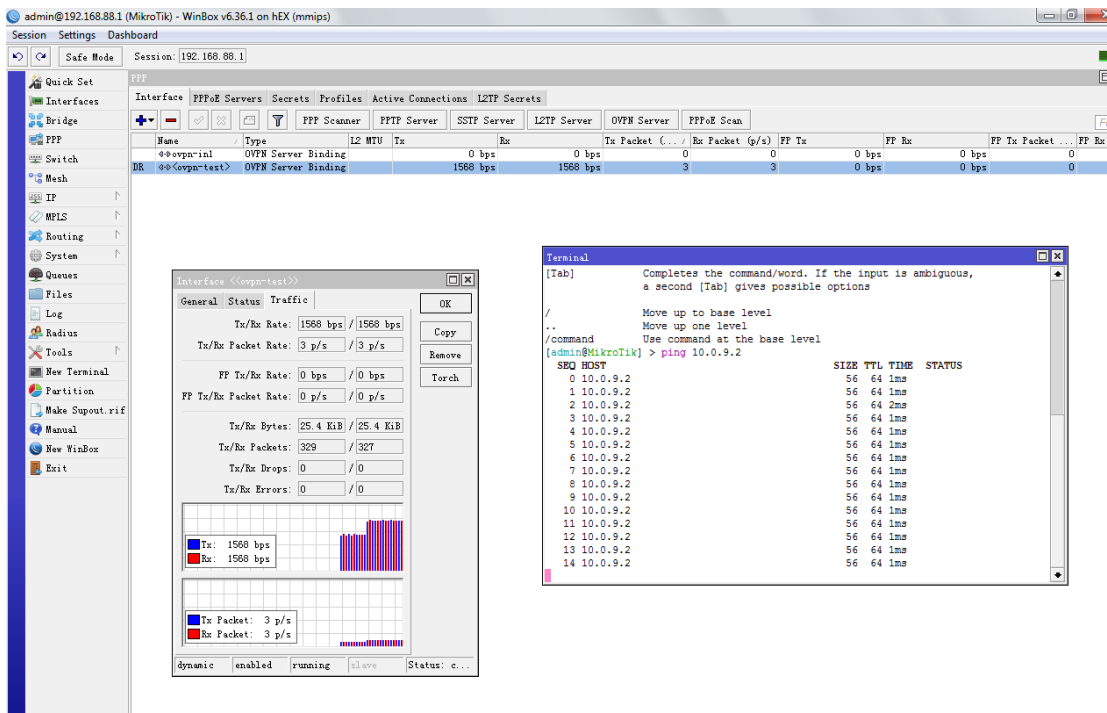


6. PPP Interface: configure openvpn ppp interface.



Please note Auth can not enable md5 and sha1 meantime, can enable either md5 or sha1.

7. ROS Test



2.2 Hongdian Router Setting

1. Upload client ca.crt into Hongdian Router.

The screenshot shows the 'System' tab in the router's web interface. Under the 'Files' sub-tab, the 'Firmware Setting' section has a '选择文件' (Select File) button and the text '未选择任何文件' (No file selected). A red arrow points from the text 'Upload ca.crt' to the 'Upgrade' button. Other sections include 'Backup setting' with 'Import', 'Export', and 'Key' buttons, and 'Patch Operation' with a table:

Patch Name	Patch Version	Operation
ca.crt	---	Del

Additional buttons include 'Reboot' and 'Refresh'. On the right, there is a 'Note' section with instructions on upgrading and a warning about power loss. Below that is a 'Backup Settings' section explaining the backup process. At the bottom left, there is a small icon of a certificate file labeled 'ca.crt'.

The shown above is certificates made by Hongdian, only for test.

2. Configure OpenVPN client, the shown below is test template.

The screenshot shows the 'VPN' tab in the router's web interface, specifically the 'OpenVPN' sub-tab. The 'OPENVPN Service' is set to 'Enable'. The 'Basic Settings' section contains the following configuration:

- Status: connect
- Work Mode: client
- Dev: tun
- Protocol: tcp
- Destination IP or Domain: 192.168.88.1 (Max length is 32)
- Port: 1194 (Max length is 5)
- Compress: Disable
- nobind: Disable
- Authentication: auth
- Encrypt: MD5
- Username: test (Max length is 32)
- Password: test (Max length is 32)
- Ca: /mnt/update/ca.crt (Max length is 32)
- Tls: (Max length is 32)
- Keepalive: (Max length is 32)
- Cipher: AES-128-CBC

Buttons for 'Save' and 'Refresh' are at the bottom. On the right, there is an 'Advice' section with a 'Work Mode' note and a 'dev' note regarding network interface types.

Build time: 170412-160710
Time: Thu Apr 13 14:28:14 2017

Connecting Machine ... Control Panel

Network Applications VPN Forward Security System **Status**

Basic System Information LAN WAN WLAN WLAN_5G Modem Routing Table

[Help](#)

Static Route

Network	Subnet Mask	Gateway	Interface	Metric
0.0.0.0	0.0.0.0	0.0.0.0	eth0	1
10.0.9.0	255.255.255.0	0.0.0.0	tun0	0
192.168.8.0	255.255.255.0	0.0.0.0	br0	0
192.168.88.0	255.255.255.0	0.0.0.0	eth0	0

Policy Route

Network	Subnet Mask	Gateway	Interface	Priority
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[Refresh](#)

Display:
This page displays system's current routing table. There will be one default route status displayed when the link backup function is enabled. See Network configuration; Link Backup.

```

root@router:~# ifconfig tun0
tun0    Link encap:UNSPEC  HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
        inet addr:10.0.9.2  P-t-P:10.0.9.2  Mask:255.255.255.0
        UP POINTOPOINT RUNNING NOARP MULTICAST  MTU:1500  Metric:1
        RX packets:0 errors:0 dropped:0 overruns:0 frame:0
        TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:100
        RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

root@router:~# ping 10.0.9.1
PING 10.0.9.1 (10.0.9.1): 56 data bytes
64 bytes from 10.0.9.1: seq=0 ttl=64 time=1.963 ms
64 bytes from 10.0.9.1: seq=1 ttl=64 time=1.735 ms
64 bytes from 10.0.9.1: seq=2 ttl=64 time=1.573 ms
64 bytes from 10.0.9.1: seq=3 ttl=64 time=1.684 ms
64 bytes from 10.0.9.1: seq=4 ttl=64 time=1.779 ms
64 bytes from 10.0.9.1: seq=5 ttl=64 time=1.676 ms
64 bytes from 10.0.9.1: seq=6 ttl=64 time=1.585 ms
64 bytes from 10.0.9.1: seq=7 ttl=64 time=1.593 ms
^C

```




Create smart things



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