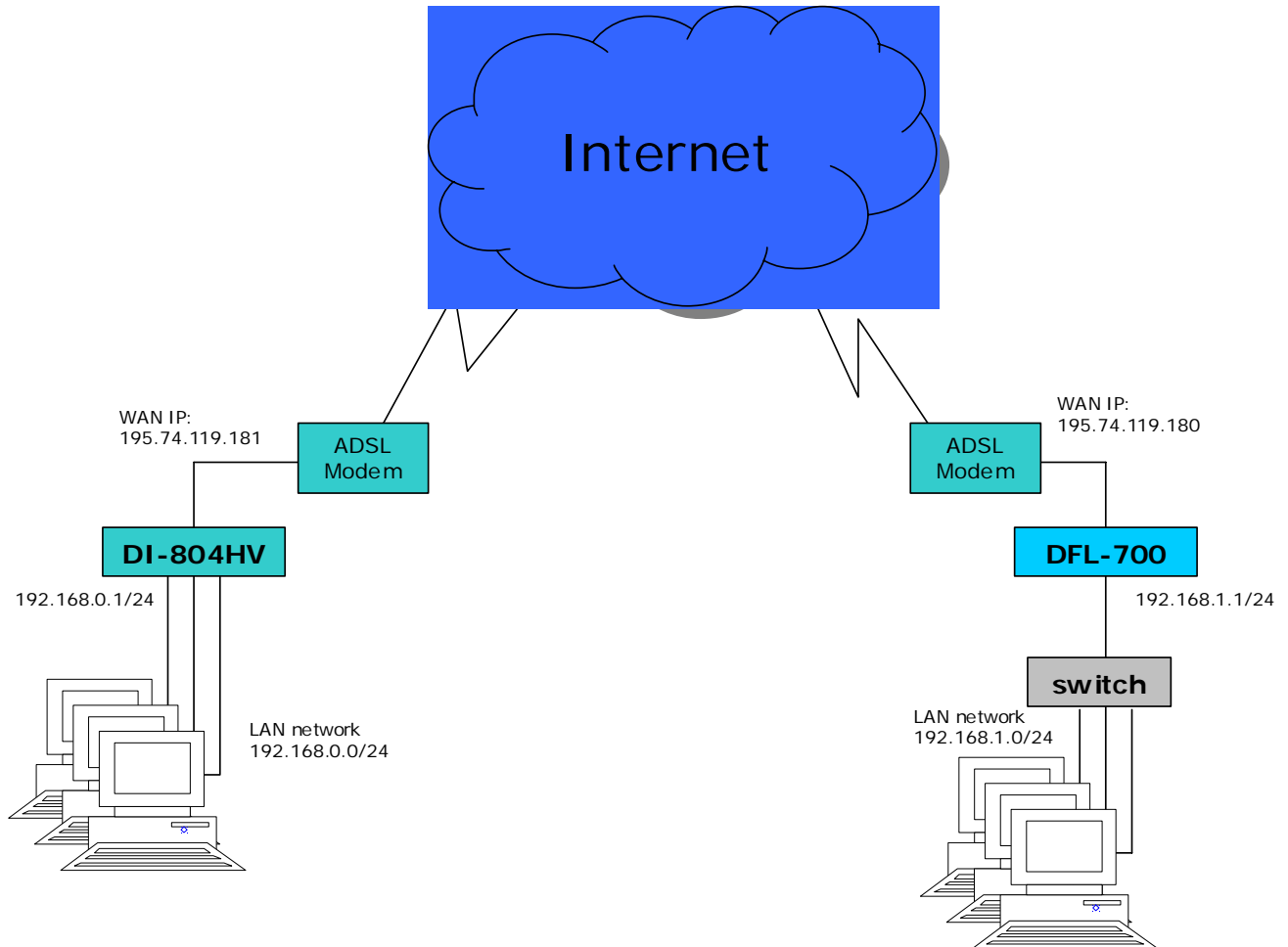


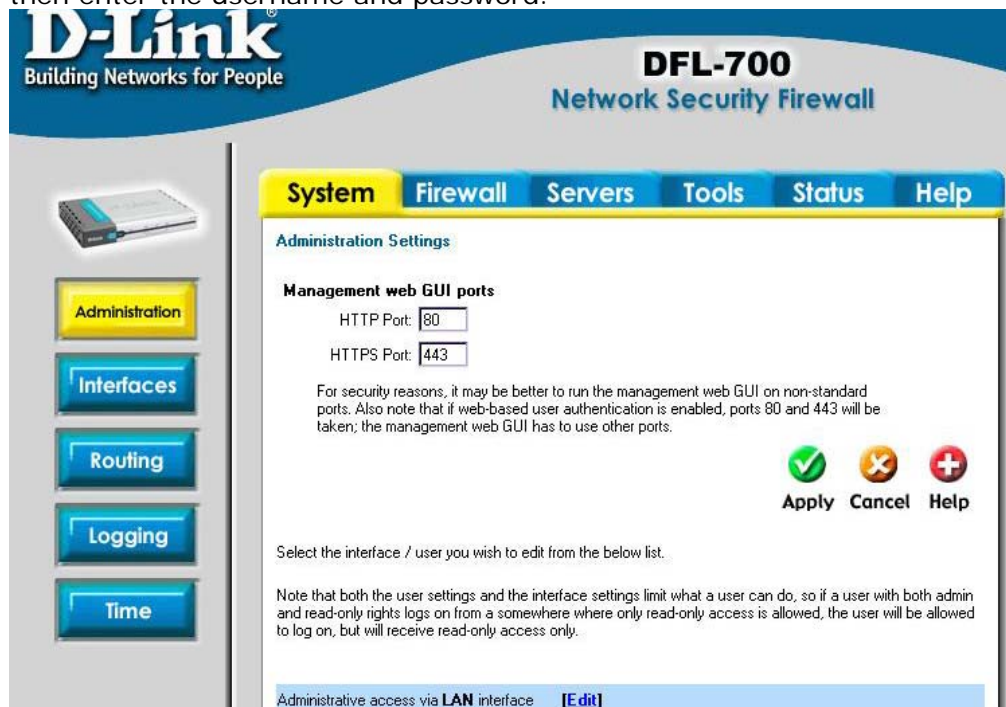
DFL-700 with DI-804HV IPsec VPN Configuration Guide

This configuration shows how to connect a DFL-700 to a DI-804HV with an IPsec tunnel. Please check the D-Link UK FTP Site at <ftp://ftp.dlink.co.uk> for updates on the firmware.

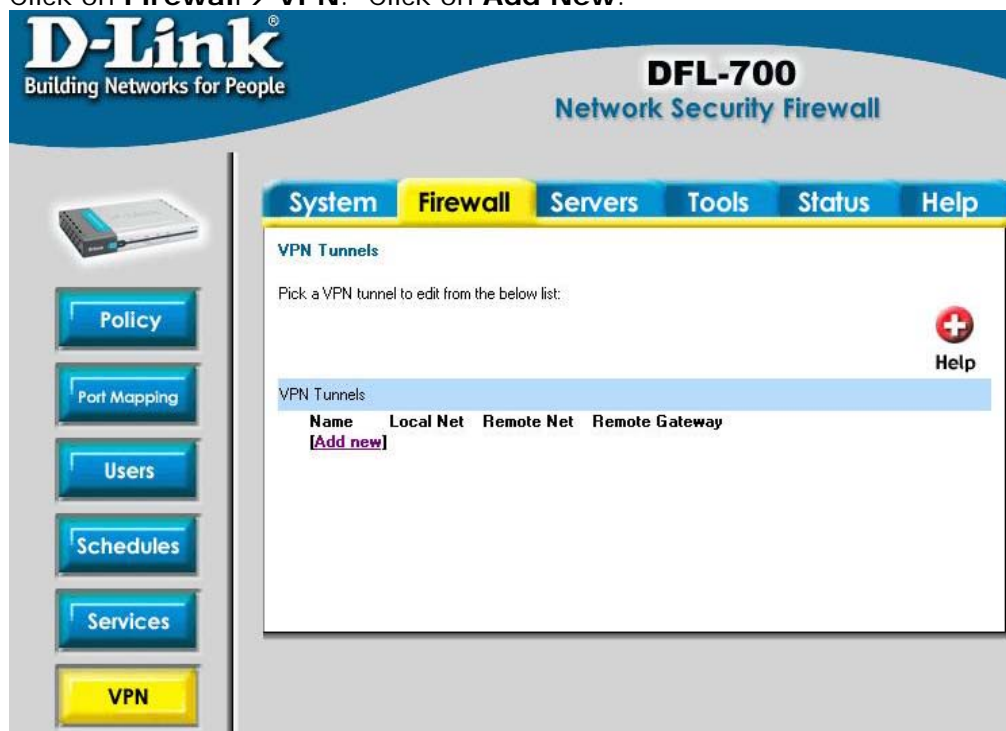


DFL-700 configuration

- 1) Log into the DFL-700 using its IP address (https://192.168.1.1 in this example) and then enter the username and password.



- 2) Click on **Firewall** → **VPN**. Click on **Add New**.



- 3) Enter the details for the Tunnel.

Name: DI-804HV
Local Net: 192.168.1.0/24
Authentication: PSK
Pre-shared key: dlinktest

LAN-to-LAN tunnel

Remote net: 192.168.0.0/24

Remote gateway: 195.74.119.181

The screenshot shows the 'VPN Tunnels' configuration page. The left sidebar contains buttons for Policy, Port Mapping, Users, Schedules, Services, **VPN**, Certificates, and Content Filtering. The main content area has tabs for System, Firewall, Servers, Tools, Status, and Help. Under the 'VPN Tunnels' section, there is a form to 'Add VPN tunnel'. The 'Name' field is 'DI-804HV' and the 'Local Net' is '192.168.1.0/24'. The 'Authentication' section has two options: 'PSK - Pre-Shared Key' (selected) and 'Certificate-based'. The 'PSK' field is empty, and the 'Retype PSK' field is also empty. The 'Certificate-based' section has a 'Local Identity' dropdown set to 'Admin - CN=009008025D59', an empty 'Certificates' list, and an 'Identity List' dropdown set to '(no list)'. The 'Tunnel type' section has two options: 'Roaming Users - single-host VPN clients' and 'LAN-to-LAN tunnel' (selected). The 'LAN-to-LAN tunnel' section has a 'Remote Net' field set to '192.168.0.0/24' and a 'Remote Gateway' field set to '195.74.119.181'. Below these fields is a note: 'The gateway can be a numerical IP address, DNS name, or range of IP addresses for roaming / NATed gateways.' There is also a 'Proxy ARP' checkbox which is unchecked, with the label 'Publish remote network on all interfaces via Proxy ARP'.

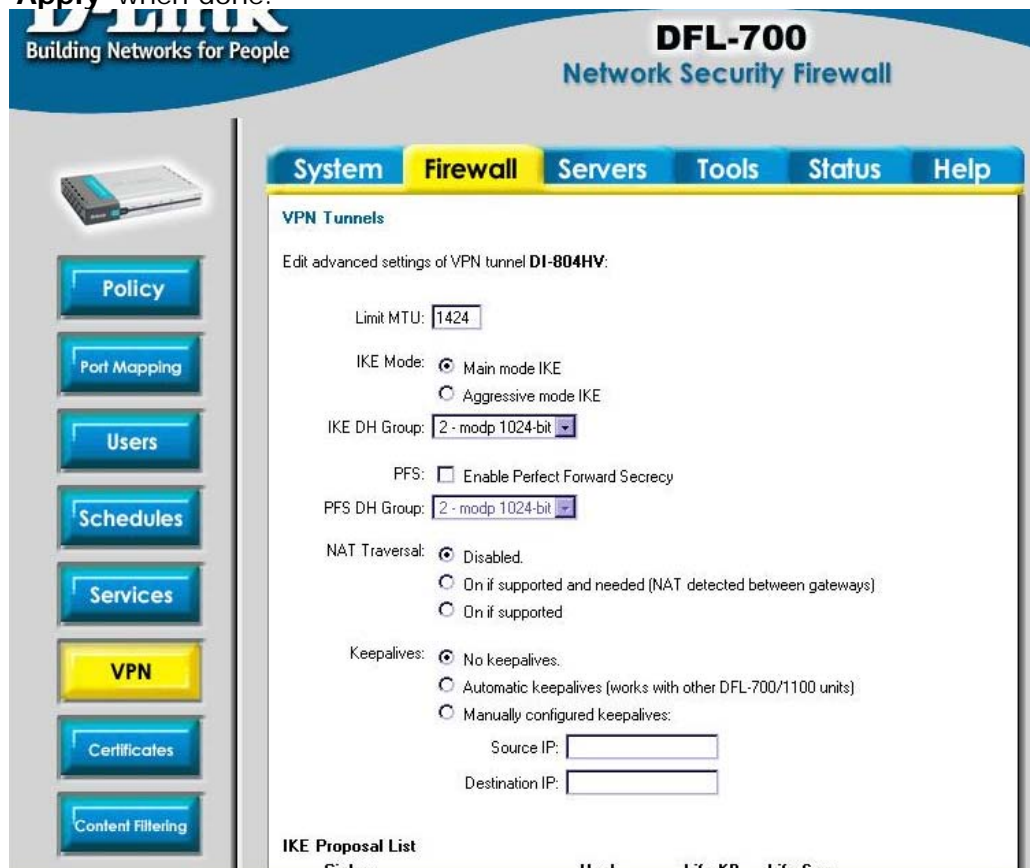
Click on **Apply** when done.

- 4) Click on **Edit** on the newly created **DI-804V** profile

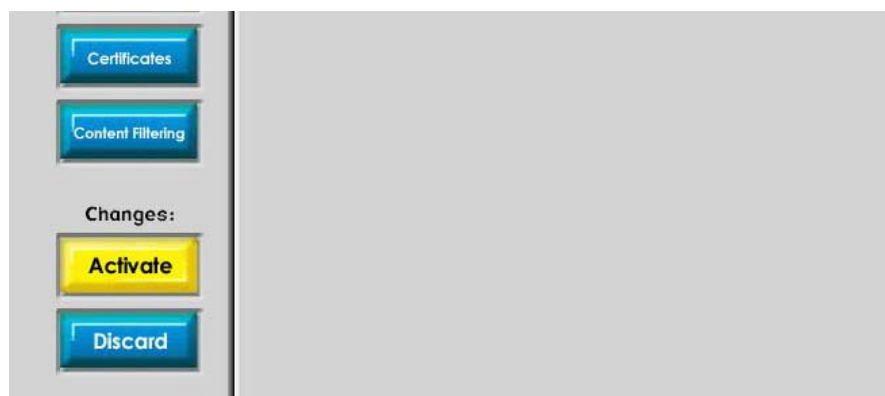
The screenshot shows the 'VPN Tunnels' configuration page after the tunnel has been added. The left sidebar and top navigation tabs are the same. The main content area shows a message 'VPN tunnel DI-804HV added' and a prompt 'Pick a VPN tunnel to edit from the below list:'. Below this is a table listing the VPN tunnels. The table has columns for Name, Local Net, Remote Net, and Remote Gateway. The first row shows the newly added tunnel 'DI-804HV' with Local Net '192.168.1.0/24', Remote Net '192.168.0.0/24', and Remote Gateway '195.74.119.181'. There is an '[Add new]' link below the table and an '[Edit]' link next to the tunnel name. A red '+' icon and a 'Help' link are also visible in the top right corner of the main content area.

Name	Local Net	Remote Net	Remote Gateway
DI-804HV	192.168.1.0/24	192.168.0.0/24	195.74.119.181

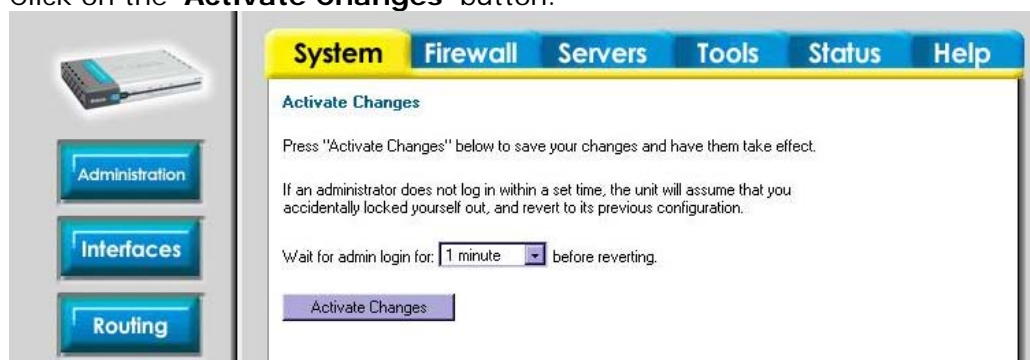
- 5) Click on **Advanced**. Set IKE mode to 'Main Mode' (default), IKE DH Group '2 – modp 1024-bit' (default). Leave PFS unchecked. Set NAT traversal to 'Disabled'. Click on **'Apply'** when done.



- 6) Click on **'Activate'** on the bottom left hand corner of the screen.

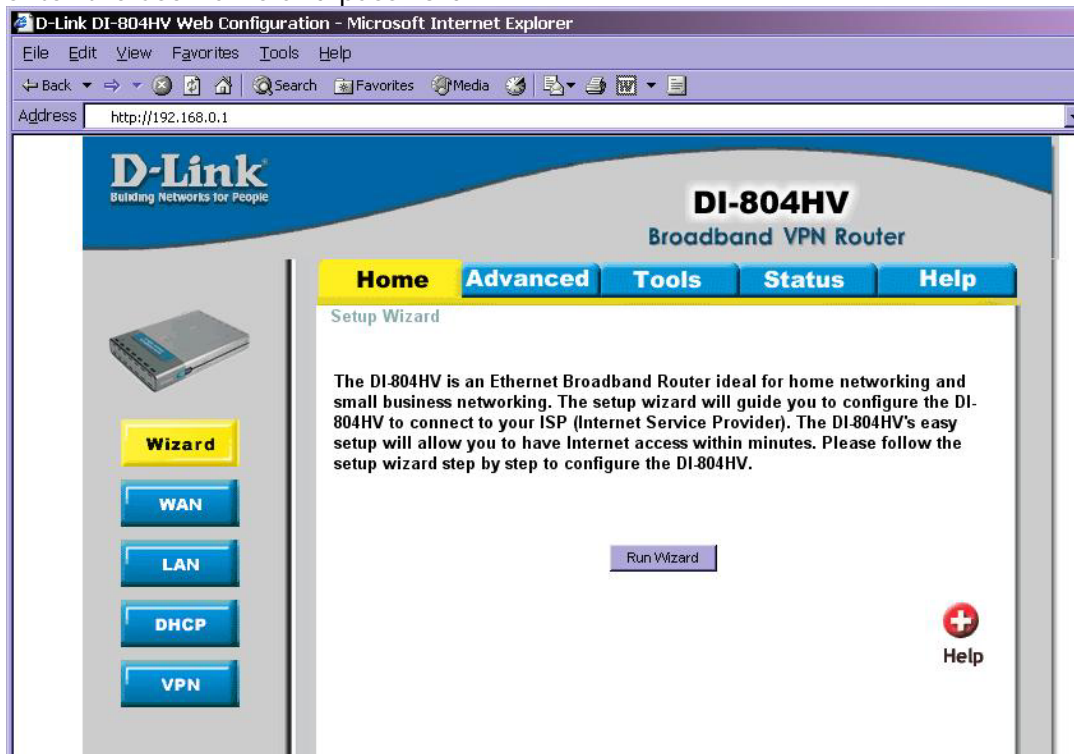


- 7) Click on the **'Activate Changes'** button.

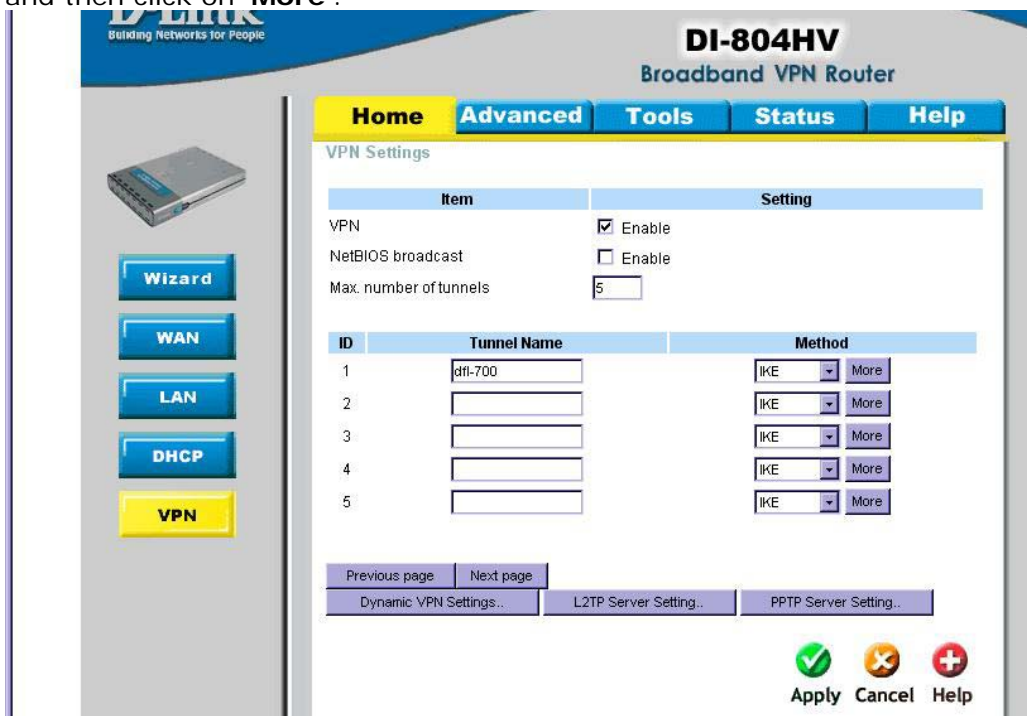


DI-804HV configuration

- 1) Log on to the DI-804V using its IP address (<http://192.168.0.1> in this example) and enter the username and password.



- 2) Click on 'VPN' on the left hand side. Under VPN Settings, check the enable box for VPN. Set the Max. number of tunnels to 5 for example. In ID 1, enter the Tunnel Name, 'dfl-700'. Click on 'Apply' then 'Continue'. In ID 1, set the method to 'IKE' and then click on 'More'.

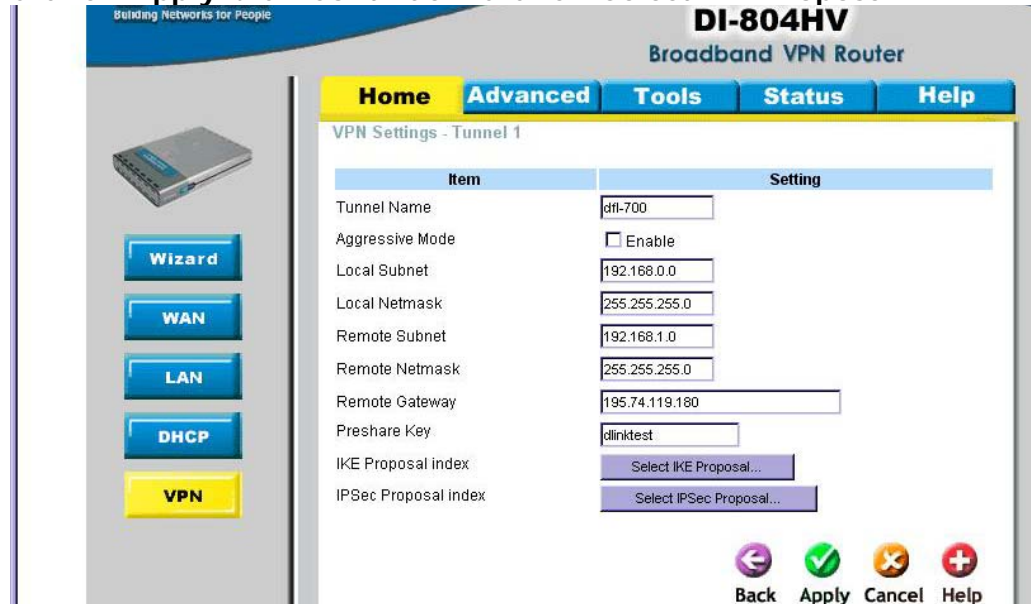


- 3) Enter the details for the tunnel.

Local Subnet : 192.168.0.0

Local netmask: 255.255.255.0
 Remote Subnet: 192.168.1.0
 Remote netmask: 255.255.255.0
 Remote Gateway: 195.74.119.180
 Preshare key: dlinktest

Click on '**Apply**' then '**Continue**'. Click on '**Select IKE Proposal**'.



DI-804HV
Broadband VPN Router

Home **Advanced** **Tools** **Status** **Help**

VPN Settings - Tunnel 1

Item	Setting
Tunnel Name	dfl-700
Aggressive Mode	<input type="checkbox"/> Enable
Local Subnet	192.168.0.0
Local Netmask	255.255.255.0
Remote Subnet	192.168.1.0
Remote Netmask	255.255.255.0
Remote Gateway	195.74.119.180
Preshare Key	dlinktest
IKE Proposal index	Select IKE Proposal...
IPSec Proposal index	Select IPSec Proposal...

Back Apply Cancel Help

- 4) In the Set IKE Proposal screen, set ID 1 to the following settings

Proposal Name: 3des-md5
 DH-Group: Group2
 Encrypt algorithm: 3DES
 Auth algorithm: MD5
 Lifetime: 28800
 Life Time Unit: Sec.

In 'Proposal ID', select 1 then click on '**Add to**'. Click on '**Apply**' then '**Continue**'.

DI-804HV
Broadband VPN Router

Home **Advanced** **Tools** **Status** **Help**

VPN Settings - Tunnel 1 - Set IKE Proposal

Item	Setting
IKE Proposal index	3des-md5 Remove

ID	Proposal Name	DH Group	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	3des-md5	Group 2	3DES	MD5	28800	Sec.
2		Group 1	3DES	SHA1	0	Sec.
3		Group 1	3DES	SHA1	0	Sec.
4		Group 1	3DES	SHA1	0	Sec.
5		Group 1	3DES	SHA1	0	Sec.
6		Group 1	3DES	SHA1	0	Sec.
7		Group 1	3DES	SHA1	0	Sec.
8		Group 1	3DES	SHA1	0	Sec.
9		Group 1	3DES	SHA1	0	Sec.
10		Group 1	3DES	SHA1	0	Sec.

Proposal ID: -- select one -- Add to Proposal index

Back Apply Cancel Help

- 5) Click on '**Back**'. Click on '**Select IPsec Proposal**'.

Proposal Name: 3des-md5
 DH-Group: None
 Encap protocol: ESP
 Encrypt algorithm: 3DES
 Auth algorithm: MD5
 Lifetime: 3600
 Life Time Unit: Sec.

In 'Proposal ID', select 1 then click on '**Add to**'. Click on '**Apply**' then '**Continue**'.

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Broadband VPN Router

Home Advanced Tools Status Help

VPN Settings - Tunnel 1 - Set IPSEC Proposal

Item	Setting
IPSec Proposal index	3des-md5 Remove

ID	Proposal Name	DH Group	Encap protocol	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	3des-md5	None	ESP	3DES	MD5	3600	Sec.
2		None	ESP	3DES	None	0	Sec.
3		None	ESP	3DES	None	0	Sec.
4		None	ESP	3DES	None	0	Sec.
5		None	ESP	3DES	None	0	Sec.
6		None	ESP	3DES	None	0	Sec.
7		None	ESP	3DES	None	0	Sec.
8		None	ESP	3DES	None	0	Sec.
9		None	ESP	3DES	None	0	Sec.
10		None	ESP	3DES	None	0	Sec.

Proposal ID -- select one -- Add to Proposal index

Back Apply Cancel Help

Testing the connection

From the DFL-700 side, you can initiate a ping to a machine on the LAN side of the DI-804HV (i.e. 192.168.0.10). The tunnel should then be generated and then you should get a response as shown below.

```

Command Prompt - ping 192.168.0.10 -t
Reply from 192.168.0.10: bytes=32 time=35ms TTL=128
Reply from 192.168.0.10: bytes=32 time=36ms TTL=128
Reply from 192.168.0.10: bytes=32 time=35ms TTL=128
Reply from 192.168.0.10: bytes=32 time=37ms TTL=128
Reply from 192.168.0.10: bytes=32 time=33ms TTL=128
Reply from 192.168.0.10: bytes=32 time=37ms TTL=128
Reply from 192.168.0.10: bytes=32 time=36ms TTL=128
Reply from 192.168.0.10: bytes=32 time=36ms TTL=128

```