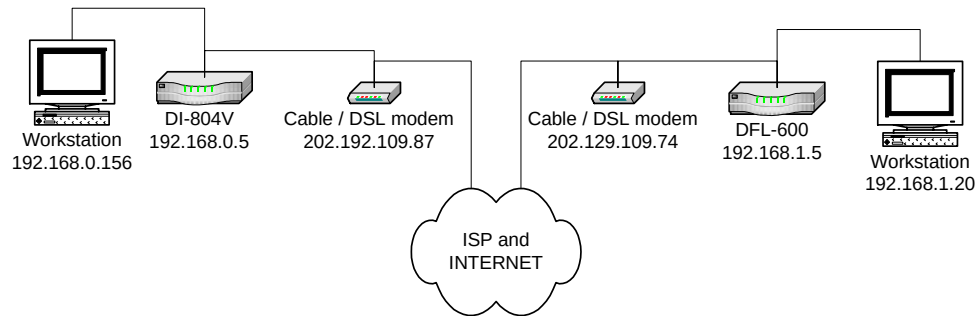


DI-804 VPN connection with another DI-804HV
(This example is using Static WAN IP addresses)
Date: 23 Oct 2003
Doc version: 1.1
Author: Neil Stent



DFL-600 (firmware 4.73)

LAN: 192.168.0.10 255.255.255.0

WAN: 202.129.129.87 255.255.255.224

WAN gateway: 202.129.109.65 255.255.255.224

PC: 192.168.0.156 225.255.255.0

PC gateway: 192.168.0.10 225.255.255.0

DI-804HV (firmware 1.30)

LAN: 192.168.1.5 255.255.255.0

WAN: 202.129.129.74 255.255.255.224

WAN gateway: 202.129.109.65 255.255.255.224

PC: 192.168.1.20 225.255.255.0

PC gateway: 192.168.1.5 225.255.255.0

Please note:

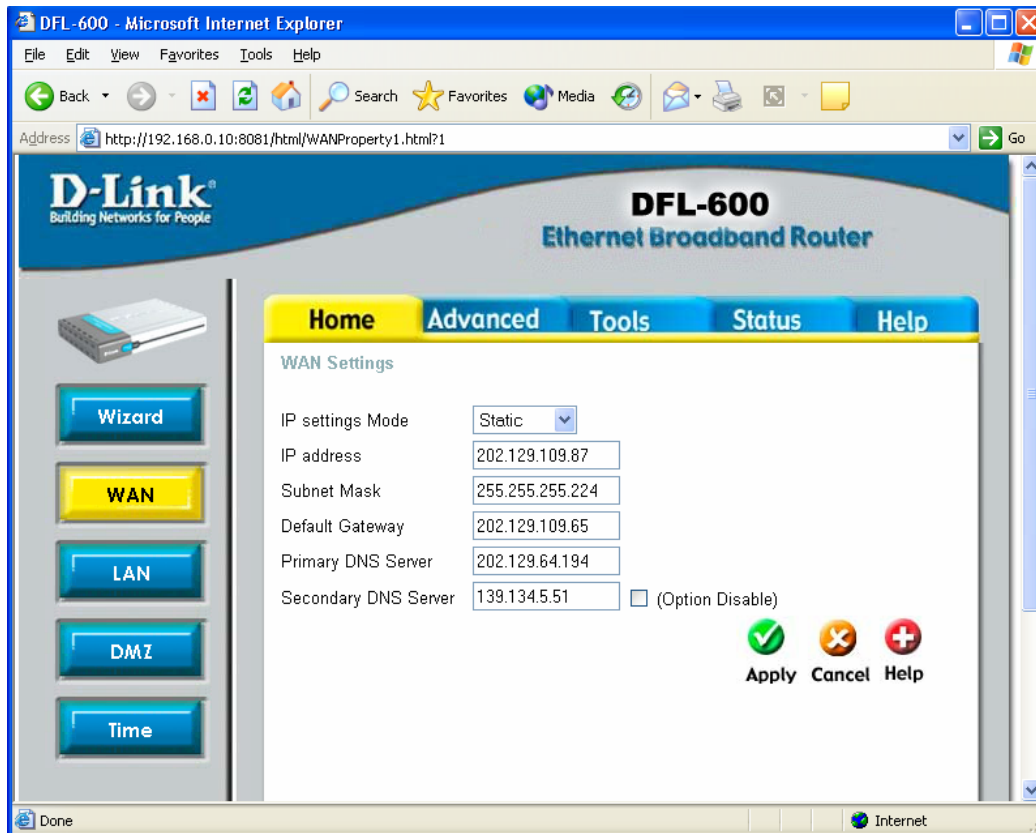
For any VPN you need to make sure that the LAN subnet on each location is different. As above you can see that the IP of the DFL-600 is 192.168.0.5 and the 804HV is 192.168.1.5. If you had a third location it should be 192.168.2.x etc... x being anything from 1 to 254.

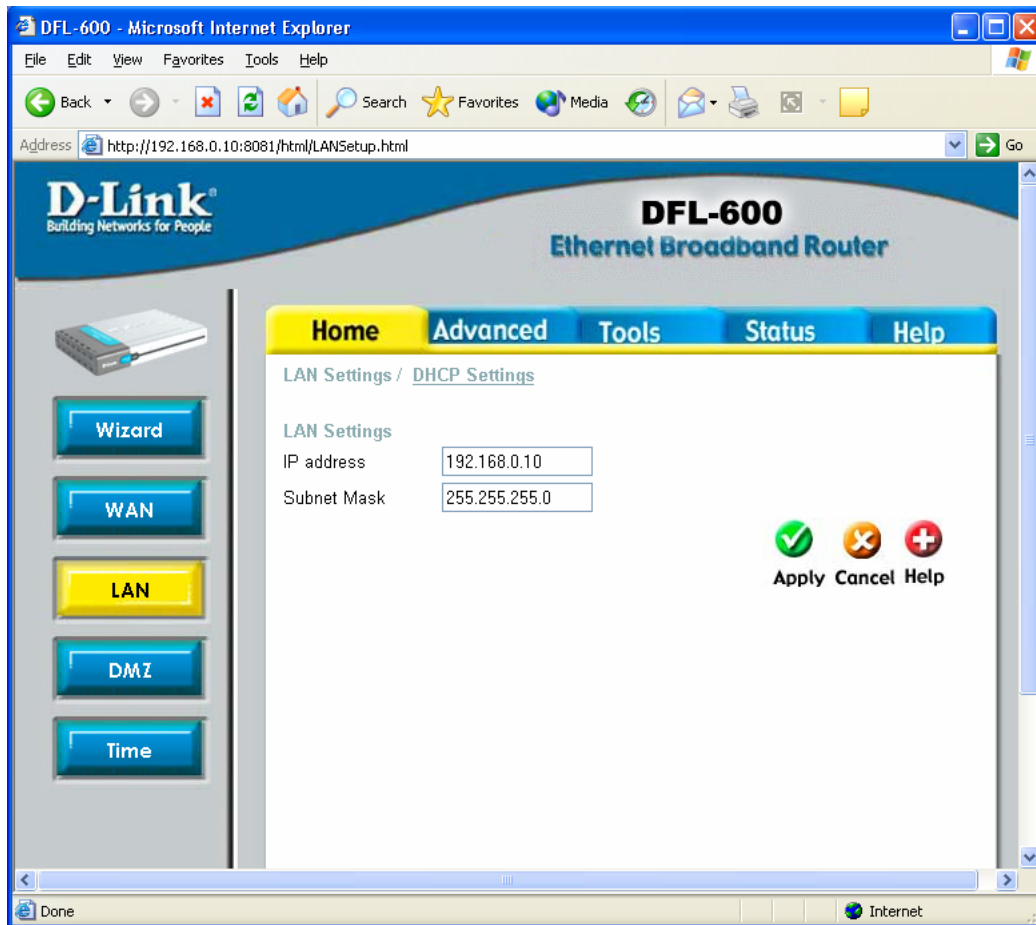
DFL-600 Settings:

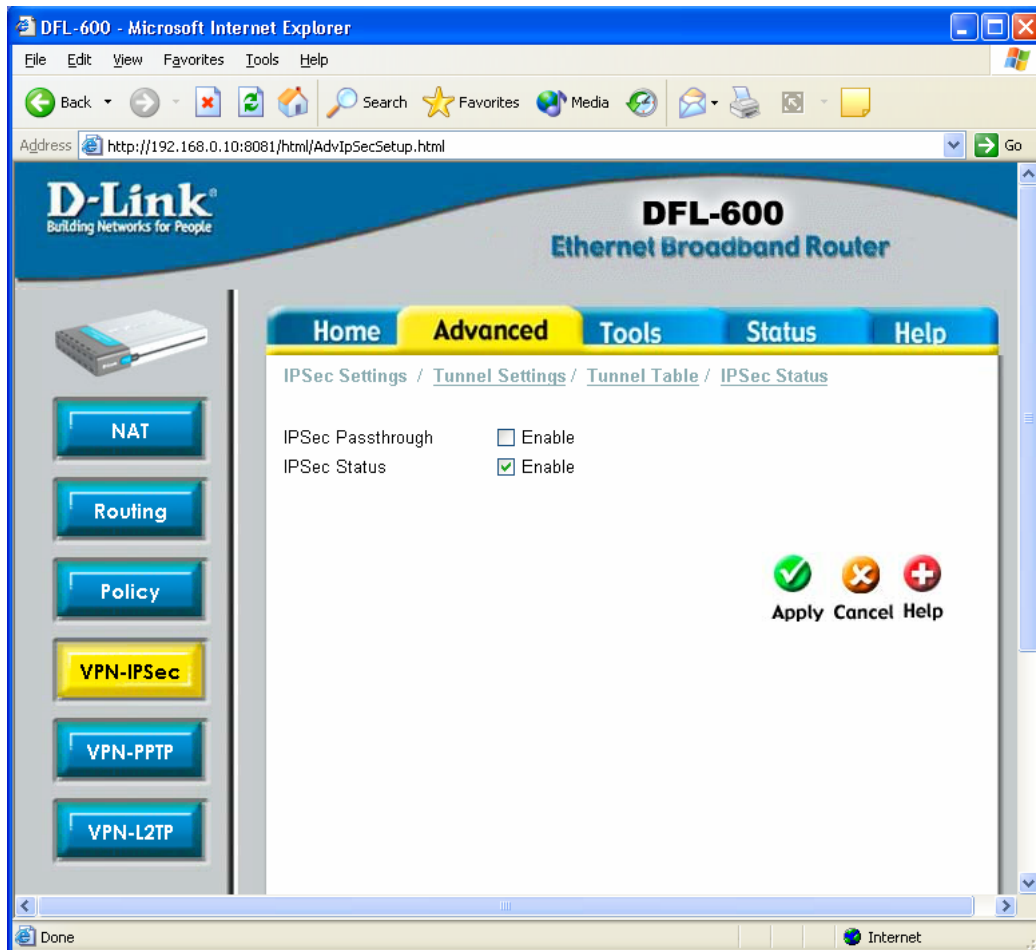
This is the page you need to go into to change the IP, once you have change it make sure your PC has the same subnet.

Remember to Access the unit with the default IP 192.168.0.1:8081

In the below the IP was changed.









NAT

Routing

Policy

VPN-IPSec

VPN-PPTP

VPN-L2TP

DDNS

Home

Advanced

Tools

Status

Help

[IPSec Settings](#) / [Tunnel Settings](#) / [Tunnel Table](#) / [IPSec Status](#)

Add/New Tunnel

Tunnel ID

Termination IP

Shared Key

Tunnel Type

Phase 1 Proposal

Mode ☒ Main ☐ Aggressive

DH Group

IKE Life Duration seconds

IKE Hash

IKE Encryption

Phase 2 Proposal

PFS Mode

IPSec Operation

IPSec Life Duration seconds

ESP Transform

ESP Auth

AH Transform

Target Host Range

Type

Starting Target Host

Subnet Mask



Apply Cancel Help

DFL-600 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address http://192.168.0.10:8081/html/AdvTunnelTable.html?0,0,0,0,0 Go



Building Networks for People

DFL-600

Ethernet Broadband Router



NAT

Routing

Policy

VPN-IPSec

VPN-PPTP

VPN-L2TP

Home Advanced Tools Status Help

IPSec Settings / Tunnel Settings / Tunnel Table / IPSec Status

Total No. of Entries: 1 / 16

Tunnel ID	Termination Address	View	Delete
test	202.129.109.74		

Done Internet

DFL-600 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address <http://192.168.0.10:8081/html/AdvTunnelStatus.html> Go



Building Networks for People



DFL-600
Ethernet Broadband Router

NAT

Routing

Policy

VPN-IPSec

VPN-PPTP

VPN-L2TP

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

[IPSec Settings](#) / [Tunnel Settings](#) / [Tunnel Table](#) / [IPSec Status](#)

Total No. of Entries: 1 / 16

Tunnel ID	Status	Receive Bytes	Transmit Bytes
test	P2_ESTABLISHED	15120	31024

Done Internet

DFL-600 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://192.168.0.10:8081/html/StatusIPSecLog.html?1 Go



Building Networks for People



Device Info

NAT Info

Log

Traffic

DFL-600

Ethernet Broadband Router

Home Advanced Tools **Status** Help

[Log Status](#) / [Intrusion Log](#) / [Blocking Log](#) / [Session Log](#) / [Black List](#)

[IPSec Log](#) / [Sys Log](#)



Refresh Help

IPSec Log Table

Total No. of Entries: 0 / 60

index	Description
1	Start P1 negotiation with peer 202.129.109.74
2	MainMode Exchange Selected
3	MM init: sent [HDR][SA]
4	MM init: rcv [HDR][SA]
5	MM init: sent [HDR][KE][Ni]
6	MM init: rcv [HDR][KE][NR]
7	MM init: sent [HDR][IDi][HASH_I]
8	MM init: rcv [HDR][IDr][HASH_R]
9	Phase 1 negotiation succeeded with 202.129.109.74
10	Sent Notification INITIAL_CONTACT to 202.129.109.74

Page 1 2

Done Internet

DFL-600 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address http://192.168.0.10:8081/html/StatusIPSecLog.html?2 Go



Building Networks for People



Device Info

NAT Info

Log

Traffic

DFL-600

Ethernet Broadband Router

Home Advanced Tools **Status** Help

[Log Status](#) / [Intrusion Log](#) / [Blocking Log](#) / [Session Log](#) / [Black List](#)

[IPSec Log](#) / [Sys Log](#)



Refresh Help

IPSec Log Table

Total No. of Entries: 15 / 60

index	Description
11	Start P2 negotiation with peer 202.129.109.74
12	QM init: sent [HDR][HASH(1)][SA][Ni][KE][IDci,IDcr]
13	QM init:rcv [HDR][HASH(2)][SA][Nr][KE][IDci,IDcr]
14	QM init: sent [HDR][HASH(3)]
15	Phase 2 negotiation succeeded with 202.129.109.74

Page 1 2

Done Internet

DI-804HV VPN Connection settings:

D-Link DI-804HV Web Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://202.129.109.74/ Go

D-Link
Building Networks for People

DI-804HV
Broadband Hardware VPN Router

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

WAN Settings
Please select the appropriate option to connect to your ISP.

☐ Dynamic IP Address Choose this option to obtain an IP address automatically from your ISP. (For most Cable modem users)

☒ Static IP Address Choose this option to set static IP information provided to you by your ISP.

☐ PPP over Ethernet Choose this option if your ISP uses PPPoE. (For most DSL users)

☐ Dial-up Network To surf the Internet via PSTN/ISDN.

☐ Others PPTP and BigPond Cable.

Static IP Address

WAN IP Address

WAN Subnet Mask

WAN Gateway

Primary DNS

Secondary DNS

Auto-backup ☐ Enable

Apply **Cancel** **Help**

Unknown Zone (Mixed)



Make sure you have VPN enabled box ticked.
Type in any name for the Tunnel Name
Then click on the “more” button to the right of the ID “1”

D-Link DI-804HV Web Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media

Address http://202.129.109.74/ Go

D-Link
Building Networks for People

DI-804HV
Broadband Hardware VPN Router

Home Advanced Tools Status Help

VPN Settings

Item Setting

VPN ☒ Enable

NetBIOS broadcast ☐ Enable

Max. number of tunnels

ID	Tunnel Name	Method
1	test	IKE More
2		IKE More
3		IKE More
4		IKE More
5		IKE More

☒ ☐ ☐

Apply Cancel Help

Wizard

WAN

LAN

DHCP

VPN

Unknown Zone (Mixed)

Next enter in your Local information then the remote.

Make sure that you tell the 804HV the remotes Public IP under “remote gateway”.

For the Preshare Key this can be anything up to 31 in length.

Then click Apply, then click on “Select IKE...”

D-Link DI-804HV Web Configuration - Microsoft Internet Explorer

Address: http://202.129.109.74

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DI-804HV
Broadband Hardware VPN Router

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

VPN Settings - Tunnel 1

Item	Setting
Tunnel Name	test
Aggressive Mode	☐ Enable
Local Subnet	192.168.1.0
Local Netmask	255.255.255.0
Remote Subnet	192.168.0.0
Remote Netmask	255.255.255.0
Remote Gateway	202.129.109.87
Preshare Key	dlinktest
IKE Proposal Index	Select IKE Proposal...
IPSec Proposal Index	Select IPSec Proposal...

Back Apply Cancel Help

No change!

For the test here we used DES, DES is a lower Encryption the 3DES.
If you have a slow internet connection you may want to use this as it can increase the data transfer through the VPN.

Down the bottom of the page click on the drop down for Proposal ID and click on 1, then click on “add to”. At the top of the page you should see the IKE proposal index now has ID 1 in there.

After the setup click on Apply, don’t click on restart yet.
Next click on Back then click on “select IPSEC...”

D-Link DI-804HV Web Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://202.129.109.74 Go

D-Link
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DI-804HV
Broadband Hardware VPN Router

Home Advanced Tools Status Help

VPN Settings - Tunnel 1 - Set IKE Proposal

Item Setting

IKE Proposal Index

test Remove

ID	Proposal Name	DH Group	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	test	Group 1	DES	MD5	3600	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

Unknown Zone (Mixed)

You should now see this page.

Do the same setup as on the last page.

After the setup click on Apply, then click on reboot and hit OK.

The unit will save the setting then restart the DI-804HV.

D-Link DI-804HV Web Configuration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://202.129.109.74 Go

D-Link
Building Networks for People

DI-804HV
Broadband Hardware VPN Router

Home Advanced Tools Status Help

VPN Settings - Tunnel 1 - Set IPSEC Proposal

Item Setting

IPSec Proposal index

test Remove

ID	Proposal Name	DH Group	Encap protocol	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	test	Group 1	ESP	DES	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

Done Unknown Zone (Mixed)

Once this is all done go into dos, Start > Run, type in command then hit enter.

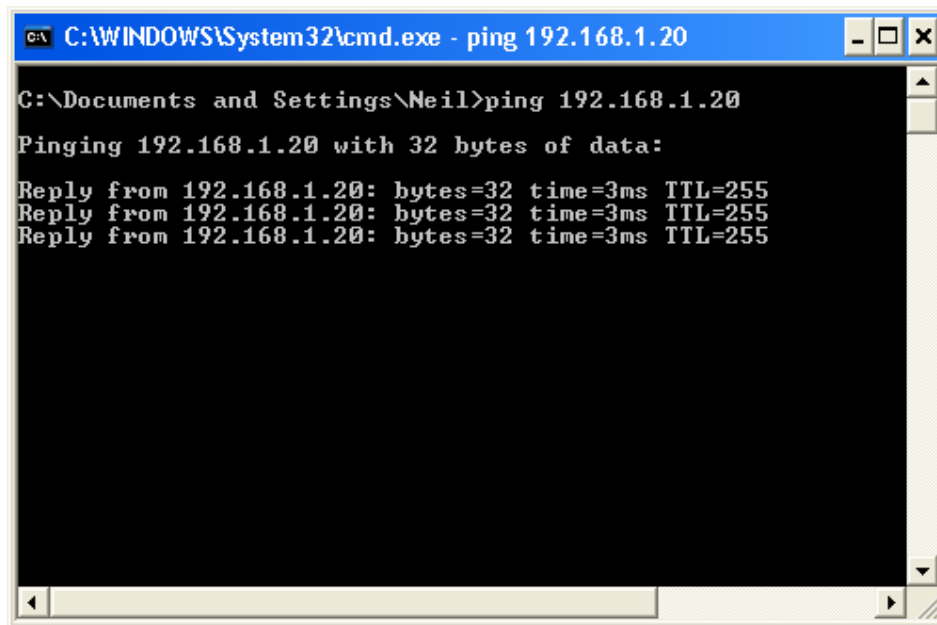
Depending on what location you are on will depend on what you type in.
If you are located on the 192.168.0.x side type in the red part:

Ping 192.168.1.5 (this is the IP of the remote unit)

Or if your location is 192.168.1.x type in the red part:

Ping 192.168.0.10 (this is the IP of the remote unit)

You should see something like the below.



```
C:\WINDOWS\System32\cmd.exe - ping 192.168.1.20

C:\Documents and Settings\Neil>ping 192.168.1.20

Pinging 192.168.1.20 with 32 bytes of data:

Reply from 192.168.1.20: bytes=32 time=3ms TTL=255
Reply from 192.168.1.20: bytes=32 time=3ms TTL=255
Reply from 192.168.1.20: bytes=32 time=3ms TTL=255
```

~ End of Document ~