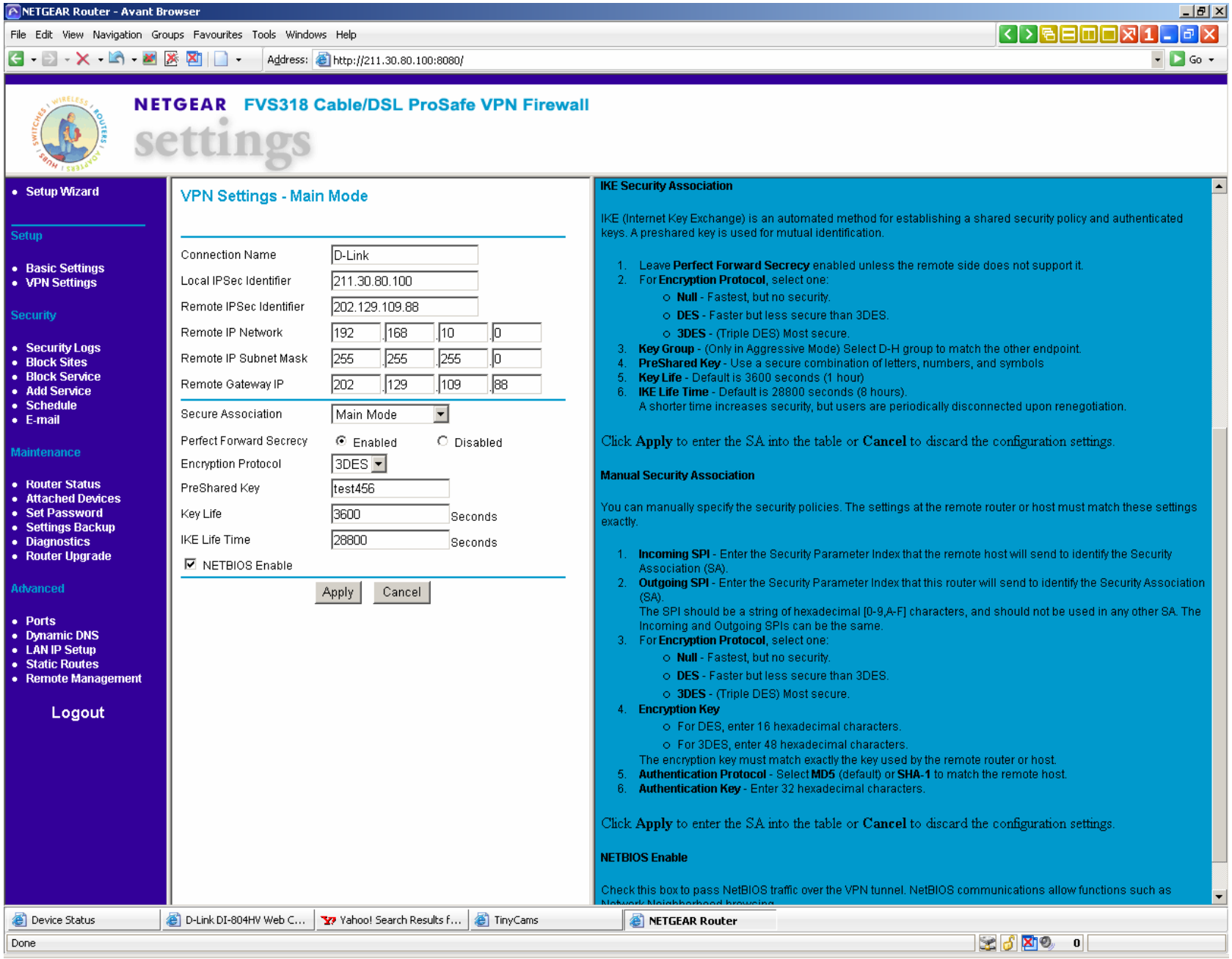
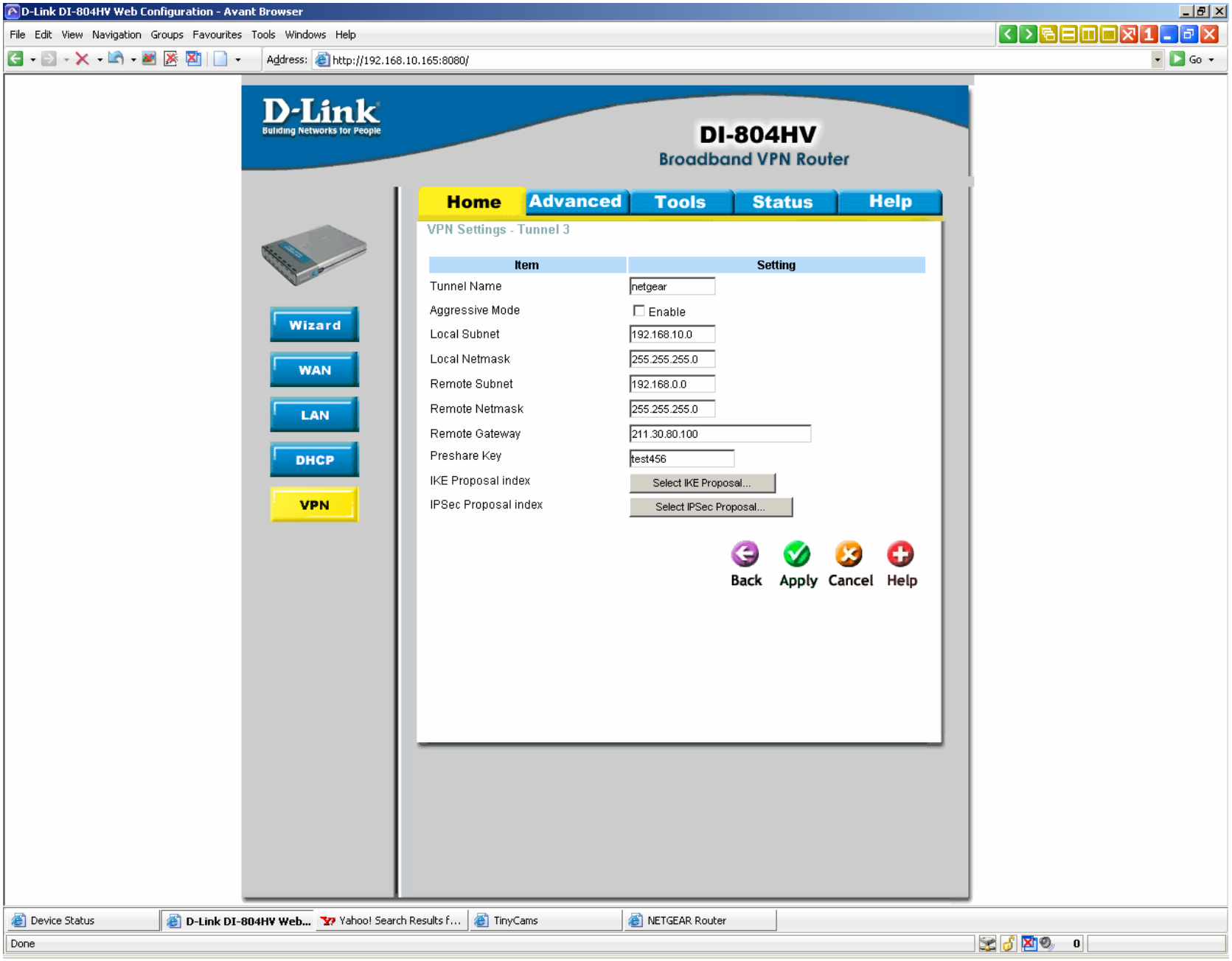
Configuring VPN between D-Link DI-804HV and Netgear FVS-318

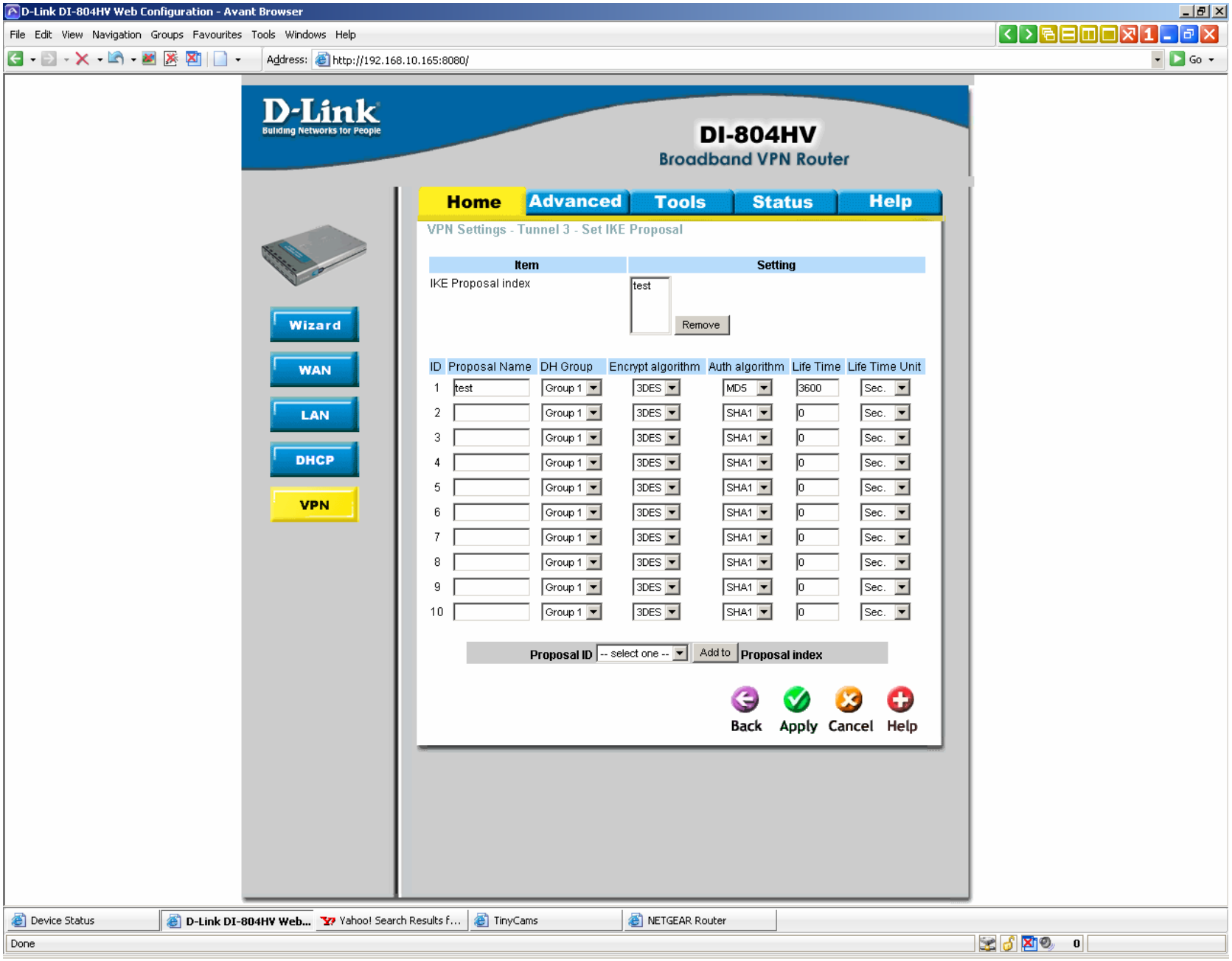
Network Setup:

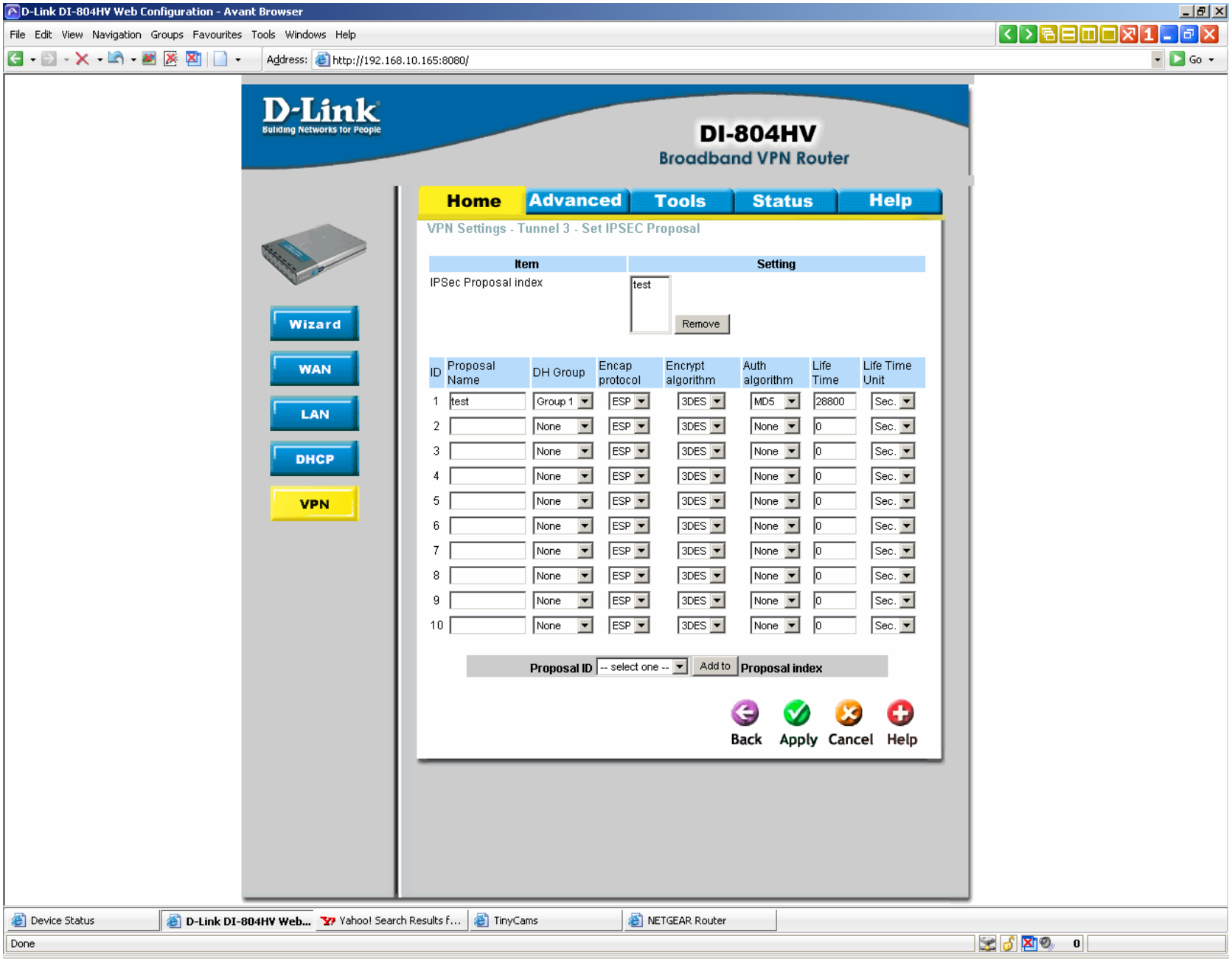
D-Link DI-804HV Settings
Firmware: 1.34b3
Connection Name: netgear
LAN IP: 192.168.10.165 255.255.255.0
WAN IP: 202.129.109.88
PreShared key: test567
Encryption protocol: 3DES
Authentication Algorithm: MD5
Perfect Forward Secrecy: Enabled
Secure Association: Main Mode
Key Life: 3600
IKE Life time: 28800
Aggressive Mode: Disabled
Netbios: Enabled

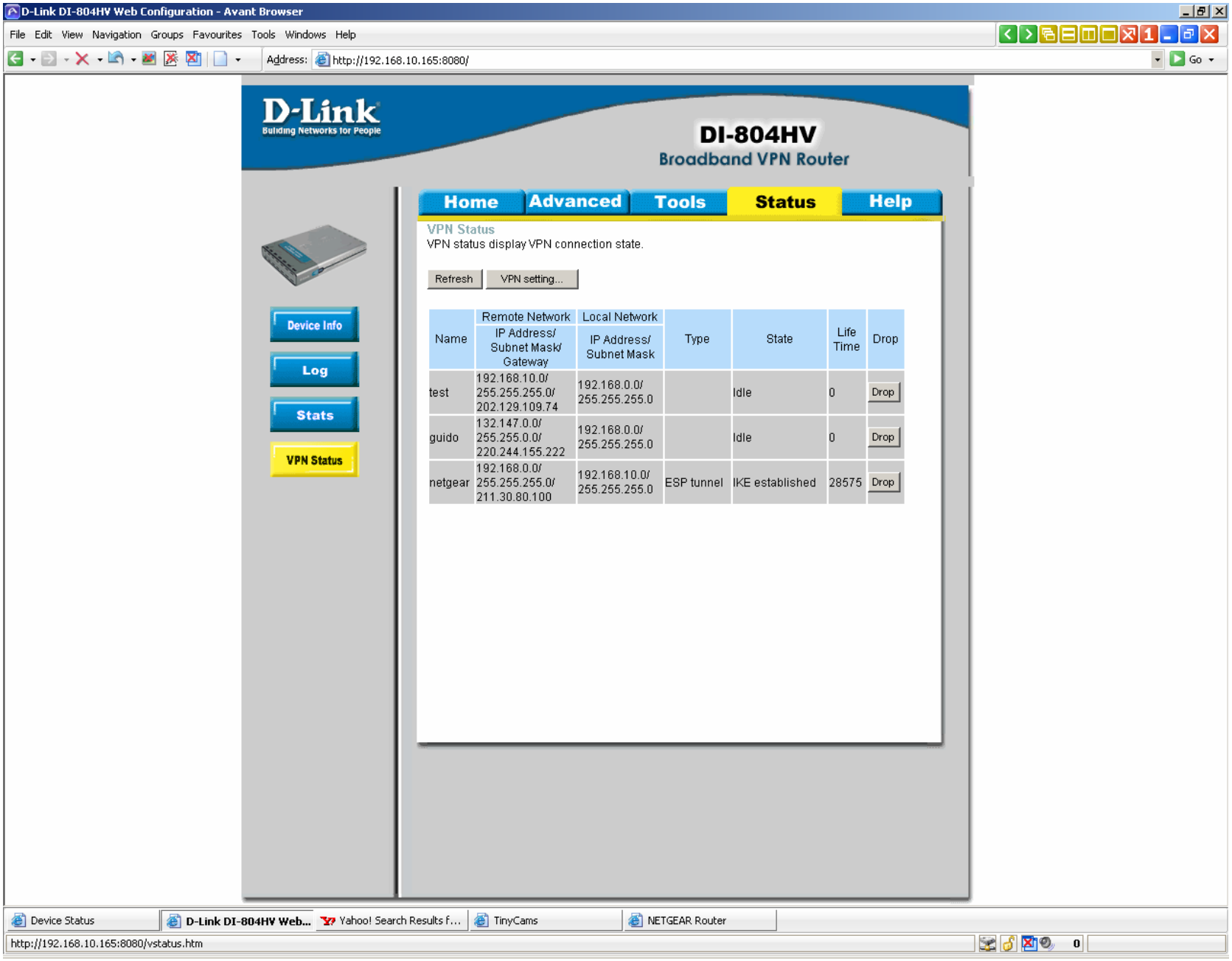
Netgear FVS-318 Settings
Firmware:
Connection Name: D-Link
LAN IP: 192.168.0.1 255.255.255.0
WAN IP: 211.30.80.100
Local IPSec Identifier: 211.30.80.100
Remote IPSec Identifier: 202.129.109.88
PreShared key: test567
Encryption protocol: 3DES
Authentication Algorithm: MD5
Perfect Forward Secrecy: Enabled
Secure Association: Main Mode
Key Life: 3600
IKE Life time: 28800
Aggressive Mode: Disabled
Netbios: Enabled

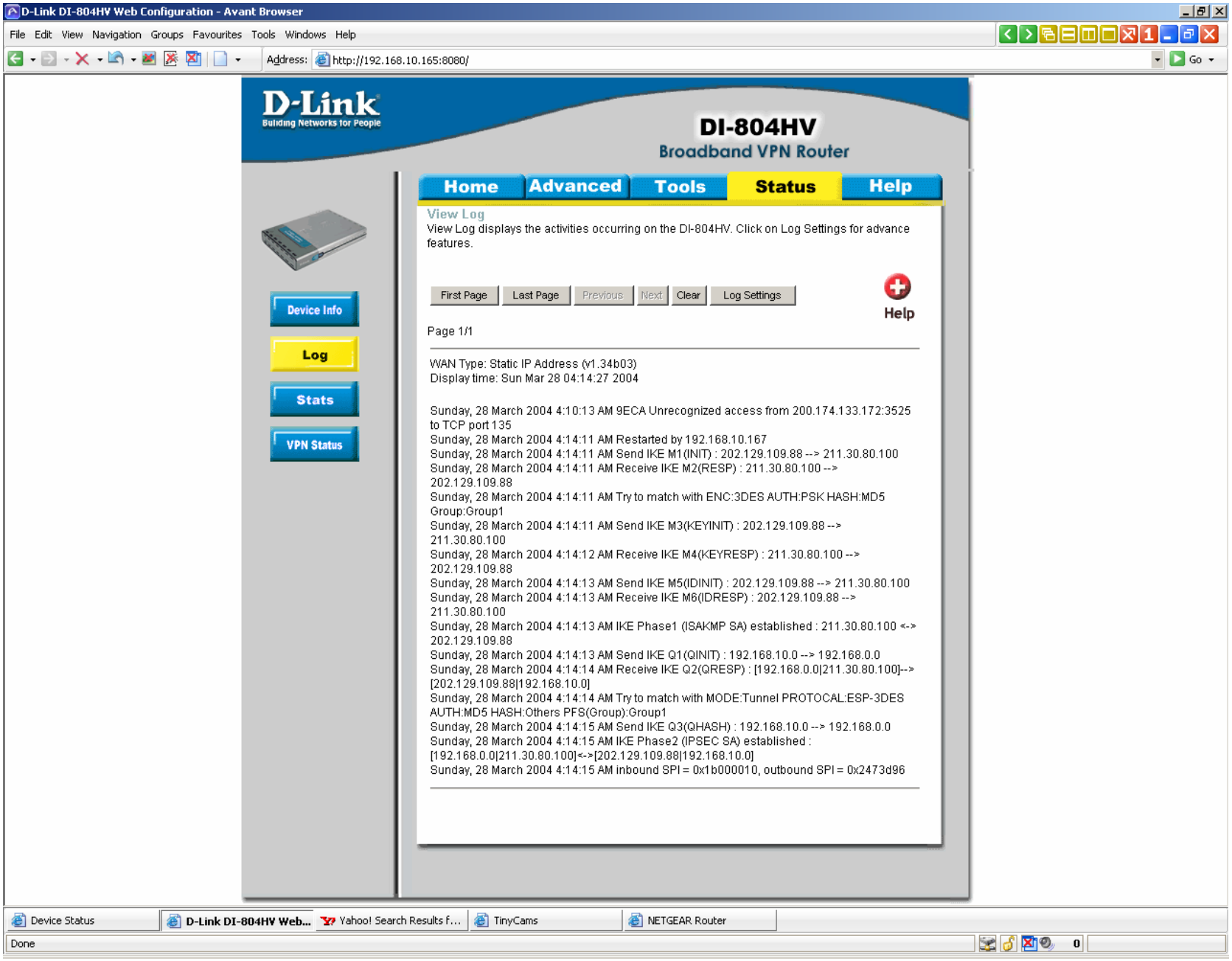

NETGEAR Router - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://211.30.80.100:8080/
Go
NETGEAR FVS318 Cable/DSL ProSafe VPN Firewall
settings
Setup Wizard
Setup
Basic Settings
VPN Settings
Security
Security Logs
Block Sites
Block Service
Add Service
Schedule
E-mail
Maintenance
Router Status
Attached Devices
Set Password
Settings Backup
Diagnostics
Router Upgrade
Advanced
Ports
Dynamic DNS
LAN IP Setup
Static Routes
Remote Management
Logout
VPN Settings - Main Mode
Connection Name D-Link
Local IPSec Identifier 211.30.80.100
Remote IPSec Identifier 202.129.109.88
Remote IP Network 192 168 10 0
Remote IP Subnet Mask 255 255 255 0
Remote Gateway IP 202 129 109 88
Secure Association Main Mode
Perfect Forward Secrecy Enabled Disabled
Encryption Protocol 3DES
PreShared Key test456
Key Life 3600 Seconds
IKE Life Time 28800 Seconds
NETBIOS Enable
Apply Cancel
IKE Security Association
IKE (Internet Key Exchange) is an automated method for establishing a shared security policy and authenticated keys. A preshared key is used for mutual identification.
1. Leave Perfect Forward Secrecy enabled unless the remote side does not support it.
2. For Encryption Protocol, select one:
Null - Fastest, but no security.
DES - Faster but less secure than 3DES.
3DES - (Triple DES) Most secure.
3. Key Group - (Only in Aggressive Mode) Select D-H group to match the other endpoint.
4. PreShared Key - Use a secure combination of letters, numbers, and symbols
5. Key Life - Default is 3600 seconds (1 hour)
6. IKE Life Time - Default is 28800 seconds (8 hours).
A shorter time increases security, but users are periodically disconnected upon renegotiation.
Click Apply to enter the SA into the table or Cancel to discard the configuration settings.
Manual Security Association
You can manually specify the security policies. The settings at the remote router or host must match these settings exactly.
1. Incoming SPI - Enter the Security Parameter Index that the remote host will send to identify the Security Association (SA).
2. Outgoing SPI - Enter the Security Parameter Index that this router will send to identify the Security Association (SA).
The SPI should be a string of hexadecimal [0-9,A-F] characters, and should not be used in any other SA. The Incoming and Outgoing SPIs can be the same.
3. For Encryption Protocol, select one:
Null - Fastest, but no security.
DES - Faster but less secure than 3DES.
3DES - (Triple DES) Most secure.
4. Encryption Key
For DES, enter 16 hexadecimal characters.
For 3DES, enter 48 hexadecimal characters.
The encryption key must match exactly the key used by the remote router or host.
5. Authentication Protocol - Select MD5 (default) or SHA-1 to match the remote host.
6. Authentication Key - Enter 32 hexadecimal characters.
Click Apply to enter the SA into the table or Cancel to discard the configuration settings.
NETBIOS Enable
Check this box to pass NetBIOS traffic over the VPN tunnel. NetBIOS communications allow functions such as
Device Status
D-Link DI-804HV Web C...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
Done

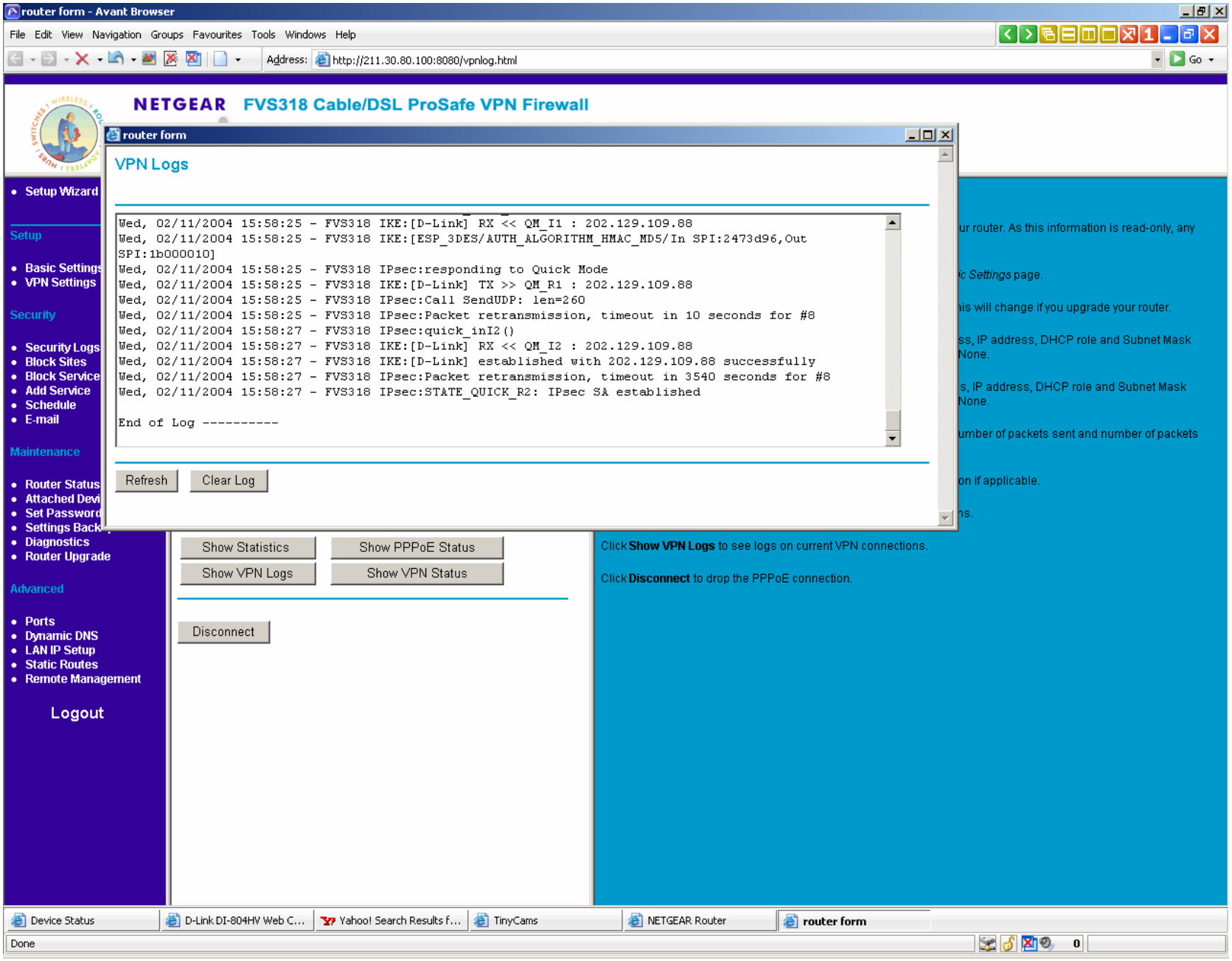

D-Link DI-804HV Web Configuration - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://192.168.10.165:8080/
Go
D-Link
Building Networks for People
DI-804HV
Broadband VPN Router
Home
Advanced
Tools
Status
Help
Wizard
WAN
LAN
DHCP
VPN
VPN Settings - Tunnel 3
Item
Setting
Tunnel Name
netgear
Aggressive Mode
Enable
Local Subnet
192.168.10.0
Local Netmask
255.255.255.0
Remote Subnet
192.168.0.0
Remote Netmask
255.255.255.0
Remote Gateway
211.30.80.100
Preshare Key
test456
IKE Proposal index
Select IKE Proposal...
IPSec Proposal index
Select IPSec Proposal...
Back
Apply
Cancel
Help
Device Status
D-Link DI-804HV Web...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
Done

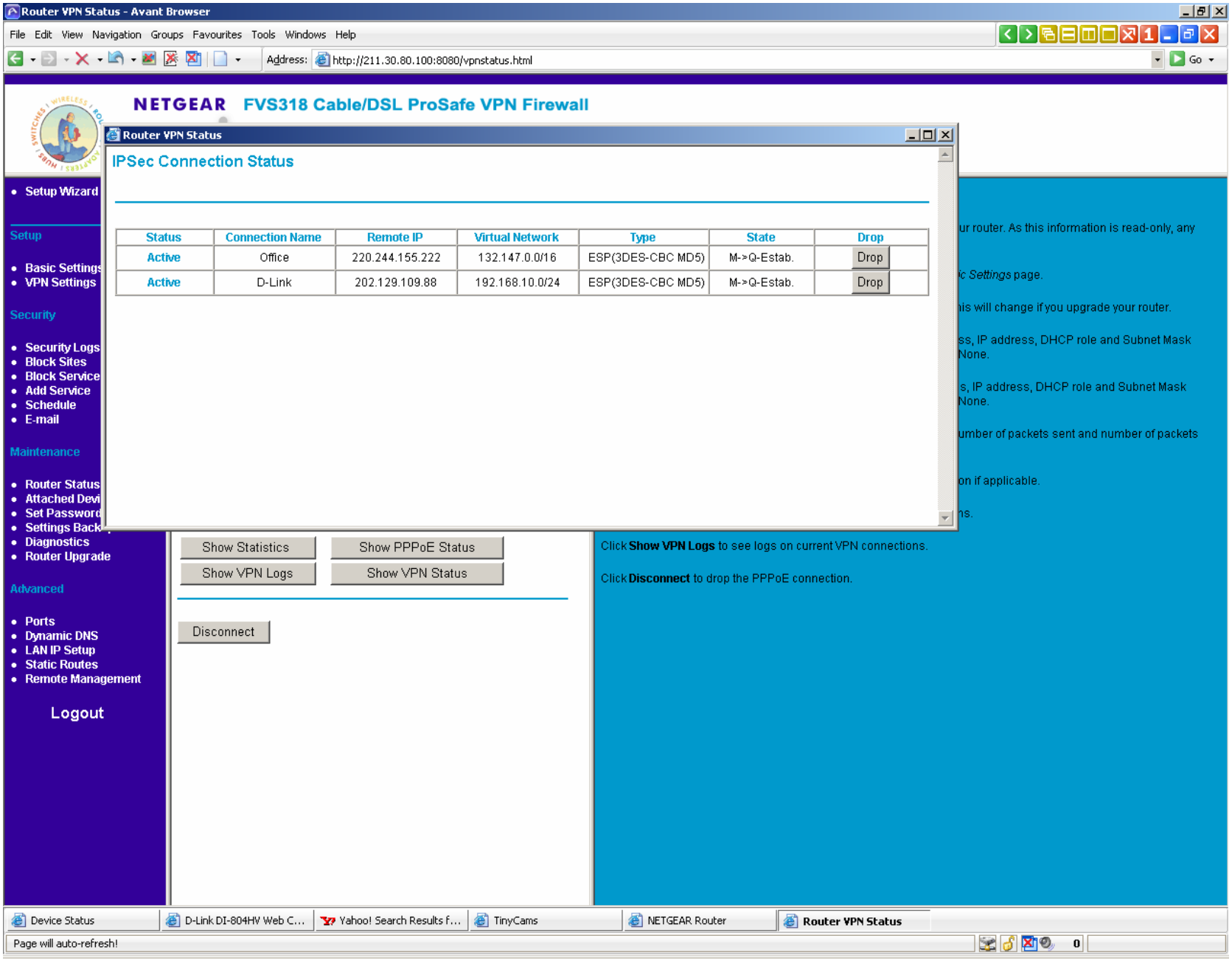

D-Link DI-804HV Web Configuration - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://192.168.10.165:8080/
Go
D-Link
Building Networks for People
DI-804HV
Broadband VPN Router
Home
Advanced
Tools
Status
Help
Wizard
WAN
LAN
DHCP
VPN
VPN Settings - Tunnel 3 - 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 3DES 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
Device Status
D-Link DI-804HV Web...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
Done

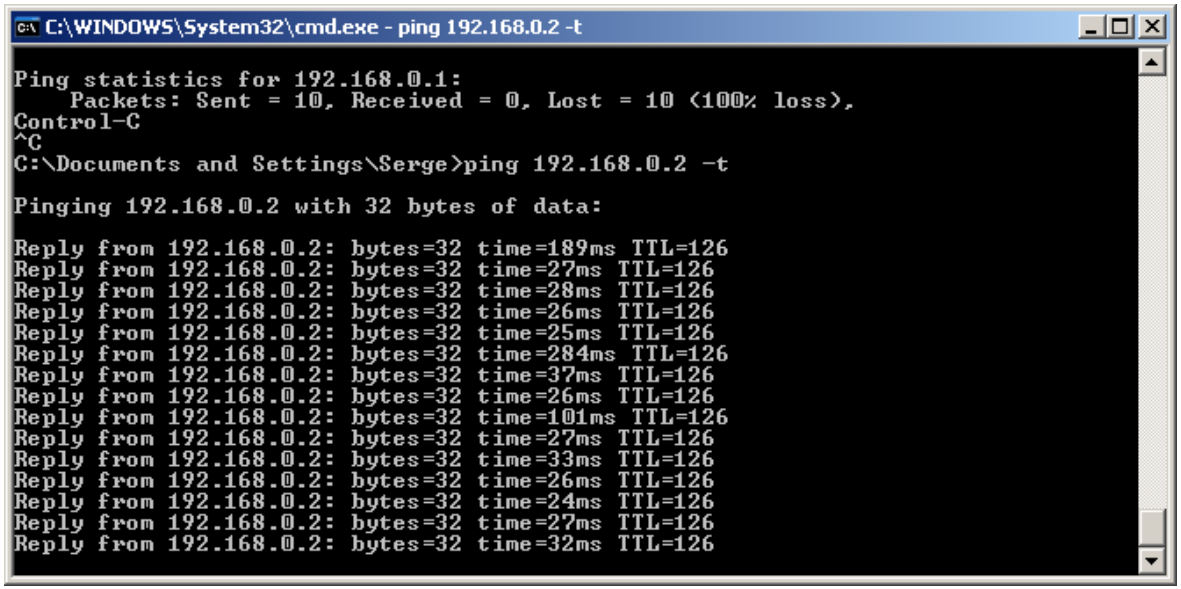

D-Link DI-804HV Web Configuration - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://192.168.10.165:8080/
Go
D-Link
Building Networks for People
DI-804HV
Broadband VPN Router
Home
Advanced
Tools
Status
Help
Wizard
WAN
LAN
DHCP
VPN
VPN Settings - Tunnel 3 - 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 3DES MD5 28800 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
Device Status
D-Link DI-804HV Web...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
Done


D-Link DI-804HV Web Configuration - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://192.168.10.165:8080/
Go
D-Link
Building Networks for People
DI-804HV
Broadband VPN Router
Home
Advanced
Tools
Status
Help
Device Info
Log
Stats
VPN Status
VPN Status
VPN status display VPN connection state.
Refresh
VPN setting...
Name
Remote Network
IP Address/ Subnet Mask/ Gateway
Local Network
IP Address/ Subnet Mask
Type
State
Life Time
Drop
test
192.168.10.0/ 255.255.255.0/ 202.129.109.74
192.168.0.0/ 255.255.255.0
Idle
0
Drop
guido
132.147.0.0/ 255.255.0.0/ 220.244.155.222
192.168.0.0/ 255.255.255.0
Idle
0
Drop
netgear
192.168.0.0/ 255.255.255.0/ 211.30.80.100
192.168.10.0/ 255.255.255.0
ESP tunnel
IKE established
28575
Drop
Device Status
D-Link DI-804HV Web...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
http://192.168.10.165:8080/vstatus.htm


D-Link DI-804HV Web Configuration - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://192.168.10.165:8080/
Go
D-Link
Building Networks for People
DI-804HV
Broadband VPN Router
Home
Advanced
Tools
Status
Help
Device Info
Log
Stats
VPN Status
View Log
View Log displays the activities occurring on the DI-804HV. Click on Log Settings for advance features.
First Page
Last Page
Previous
Next
Clear
Log Settings
Help
Page 1/1
WAN Type: Static IP Address (v1.34b03)
Display time: Sun Mar 28 04:14:27 2004
Sunday, 28 March 2004 4:10:13 AM 9ECA Unrecognized access from 200.174.133.172:3525 to TCP port 135
Sunday, 28 March 2004 4:14:11 AM Restarted by 192.168.10.167
Sunday, 28 March 2004 4:14:11 AM Send IKE M1(INIT) : 202.129.109.88 --> 211.30.80.100
Sunday, 28 March 2004 4:14:11 AM Receive IKE M2(RESP) : 211.30.80.100 --> 202.129.109.88
Sunday, 28 March 2004 4:14:11 AM Try to match with ENC:3DES AUTH:PSK HASH:MD5 Group:Group1
Sunday, 28 March 2004 4:14:11 AM Send IKE M3(KEYINIT) : 202.129.109.88 --> 211.30.80.100
Sunday, 28 March 2004 4:14:12 AM Receive IKE M4(KEYRESP) : 211.30.80.100 --> 202.129.109.88
Sunday, 28 March 2004 4:14:13 AM Send IKE M5(IDINIT) : 202.129.109.88 --> 211.30.80.100
Sunday, 28 March 2004 4:14:13 AM Receive IKE M6(IDRESP) : 202.129.109.88 --> 211.30.80.100
Sunday, 28 March 2004 4:14:13 AM IKE Phase1 (ISAKMP SA) established : 211.30.80.100 <-> 202.129.109.88
Sunday, 28 March 2004 4:14:13 AM Send IKE Q1(QINIT) : 192.168.10.0 --> 192.168.0.0
Sunday, 28 March 2004 4:14:14 AM Receive IKE Q2(QRESP) : [192.168.0.0|211.30.80.100]--> [202.129.109.88|192.168.10.0]
Sunday, 28 March 2004 4:14:14 AM Try to match with MODE:Tunnel PROTOCAL:ESP-3DES AUTH:MD5 HASH:Others PFS(Group):Group1
Sunday, 28 March 2004 4:14:15 AM Send IKE Q3(QHASH) : 192.168.10.0 --> 192.168.0.0
Sunday, 28 March 2004 4:14:15 AM IKE Phase2 (IPSEC SA) established : [192.168.0.0|211.30.80.100]<->[202.129.109.88|192.168.10.0]
Sunday, 28 March 2004 4:14:15 AM inbound SPI = 0x1b000010, outbound SPI = 0x2473d96
Device Status
D-Link DI-804HV Web...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
Done


router form - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://211.30.80.100:8080/vpnlog.html
NETGEAR FVS318 Cable/DSL ProSafe VPN Firewall
router form
VPN Logs
Wed, 02/11/2004 15:58:25 - FVS318 IKE:[D-Link] RX << QM_I1 : 202.129.109.88
Wed, 02/11/2004 15:58:25 - FVS318 IKE:[ESP_3DES/AUTH_ALGORITHM_HMAC_MD5/In SPI:2473d96,Out SPI:1b000010]
Wed, 02/11/2004 15:58:25 - FVS318 IPsec:responding to Quick Mode
Wed, 02/11/2004 15:58:25 - FVS318 IKE:[D-Link] TX >> QM_R1 : 202.129.109.88
Wed, 02/11/2004 15:58:25 - FVS318 IPsec:Call SendUDP: len=260
Wed, 02/11/2004 15:58:25 - FVS318 IPsec:Packet retransmission, timeout in 10 seconds for #8
Wed, 02/11/2004 15:58:27 - FVS318 IPsec:quick_inI2()
Wed, 02/11/2004 15:58:27 - FVS318 IKE:[D-Link] RX << QM_I2 : 202.129.109.88
Wed, 02/11/2004 15:58:27 - FVS318 IKE:[D-Link] established with 202.129.109.88 successfully
Wed, 02/11/2004 15:58:27 - FVS318 IPsec:Packet retransmission, timeout in 3540 seconds for #8
Wed, 02/11/2004 15:58:27 - FVS318 IPsec:STATE_QUICK_R2: IPsec SA established
End of Log ----------
Refresh
Clear Log
Setup Wizard
Setup
Basic Settings
VPN Settings
Security
Security Logs
Block Sites
Block Service
Add Service
Schedule
E-mail
Maintenance
Router Status
Attached Devi
Set Password
Settings Back
Diagnostics
Router Upgrade
Advanced
Ports
Dynamic DNS
LAN IP Setup
Static Routes
Remote Management
Logout
Show Statistics
Show PPPoE Status
Show VPN Logs
Show VPN Status
Disconnect
Click Show VPN Logs to see logs on current VPN connections.
Click Disconnect to drop the PPPoE connection.
Device Status
D-Link DI-804HV Web C...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
router form
Done


Router VPN Status - Avant Browser
File Edit View Navigation Groups Favourites Tools Windows Help
Address: http://211.30.80.100:8080/vpnstatus.html
Go
NETGEAR FVS318 Cable/DSL ProSafe VPN Firewall
Router VPN Status
IPSec Connection Status
Status | Connection Name | Remote IP | Virtual Network | Type | State | Drop
Active | Office | 220.244.155.222 | 132.147.0.0/16 | ESP(3DES-CBC MD5) | M->Q-Estab. | Drop
Active | D-Link | 202.129.109.88 | 192.168.10.0/24 | ESP(3DES-CBC MD5) | M->Q-Estab. | Drop
Setup Wizard
Setup
Basic Settings
VPN Settings
Security
Security Logs
Block Sites
Block Service
Add Service
Schedule
E-mail
Maintenance
Router Status
Attached Devi
Set Password
Settings Back
Diagnostics
Router Upgrade
Advanced
Ports
Dynamic DNS
LAN IP Setup
Static Routes
Remote Management
Logout
Show Statistics
Show PPPoE Status
Show VPN Logs
Show VPN Status
Disconnect
Click Show VPN Logs to see logs on current VPN connections.
Click Disconnect to drop the PPPoE connection.
Device Status
D-Link DI-804HV Web C...
Yahoo! Search Results f...
TinyCams
NETGEAR Router
Router VPN Status
Page will auto-refresh!


C:\WINDOWS\System32\cmd.exe - ping 192.168.0.2 -t
Ping statistics for 192.168.0.1:
Packets: Sent = 10, Received = 0, Lost = 10 (100% loss),
Control-C
^C
C:\Documents and Settings\Serge>ping 192.168.0.2 -t
Pinging 192.168.0.2 with 32 bytes of data:
Reply from 192.168.0.2: bytes=32 time=189ms TTL=126
Reply from 192.168.0.2: bytes=32 time=27ms TTL=126
Reply from 192.168.0.2: bytes=32 time=28ms TTL=126
Reply from 192.168.0.2: bytes=32 time=26ms TTL=126
Reply from 192.168.0.2: bytes=32 time=25ms TTL=126
Reply from 192.168.0.2: bytes=32 time=284ms TTL=126
Reply from 192.168.0.2: bytes=32 time=37ms TTL=126
Reply from 192.168.0.2: bytes=32 time=26ms TTL=126
Reply from 192.168.0.2: bytes=32 time=101ms TTL=126
Reply from 192.168.0.2: bytes=32 time=27ms TTL=126
Reply from 192.168.0.2: bytes=32 time=33ms TTL=126
Reply from 192.168.0.2: bytes=32 time=26ms TTL=126
Reply from 192.168.0.2: bytes=32 time=24ms TTL=126
Reply from 192.168.0.2: bytes=32 time=27ms TTL=126
Reply from 192.168.0.2: bytes=32 time=32ms TTL=126