D-Link And TheGreenBow Solution

DI-824VUP
Wireless VPN Router
Application Note

Version 1.00
(2009-4-24)

Revision History

Date	Rev.	Description	Editor
2009-4-24	1.0	**Interoperability Compliance Testing Negotiate mode for Phase1 and Phase2 using TheGreenBow VPN Client and D-Link product's Wireless VPN router DI-824VUP.**	John Yoong

1. Introduction

The objective of this document is to provide a guide describing how to configure the devices to achieve the same environment as show at the network topology.

Users of this document are expected to already possess basic knowledge of D-Link devices and TheGreenBow VPN program, and are familiar with how to perform basic configurations. Only important configurations, such as those pertaining to interfacing and integrating, will be described in this document.

For purpose of reference, configuration files for each device are available for download.

2. Audience

This document is intended for project engineers or end users that need to implement VPN router DI series and TheGreenBow software at the sites.

3. Objective

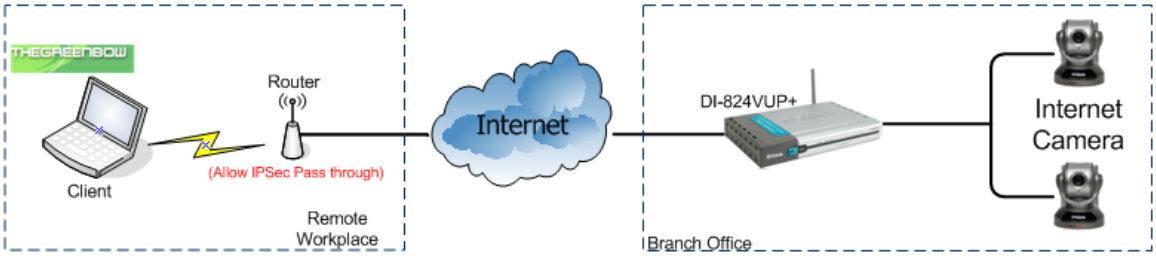
This topology consist the scenarios that integrates using TheGreenBow VPN program and D-Link Wireless VPN router DI-824VUP+ and demonstrate integrations and network solutions to OBUs, and in addition, to Partners and Customers from D-Link International.

4. List of Equipment and Software

The table below shows the devices information.

Device No.	Device Name	Device Model	Firmware
1	TheGreenBow VPN Client Software	-	4.6x
2	Wireless VPN Router	DI-824VUP+	1.06b21

5. Network Diagram



Note: DI-824VUP+ Router is set to allow IPSec pass through.

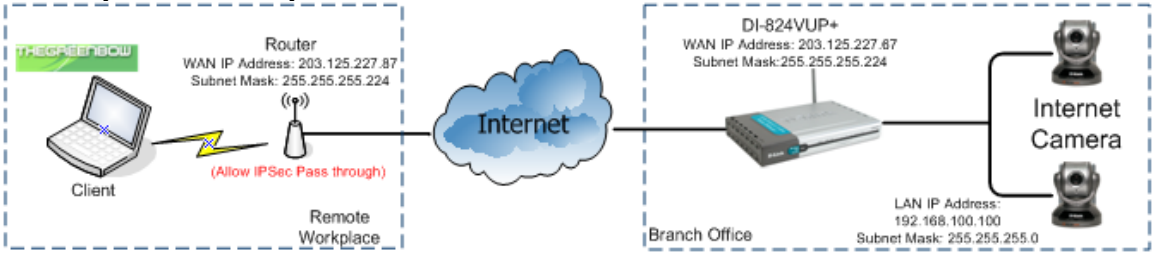
It is important to note that this application note is also applicable to the following VPN routers:

- **DI-804HV**
- **DI-808HV**
- **DI-824VUP**
- **DI-824VUP+**

6. Configurations

In this document, we will only describe the main configurations for this Scenario. The configurations setting for all the D-Link products will not be described here and for more detail about the product you can download their user guide.

6.1 TheGreenBow VPN client and D-Link wireless VPN router solutions (DI-824VUP+)



In this scenario the user can connect back to the Branch office cameras by using TheGreenBow VPN client tunneling to DI-824VUP+.

All configurations are based on Wireless VPN Router DI-824VUP+ (F/W: **1.06b21**) and TheGreenBow VPN Client software (F/W: **4.60.0.0**)

The steps in this configuration are:

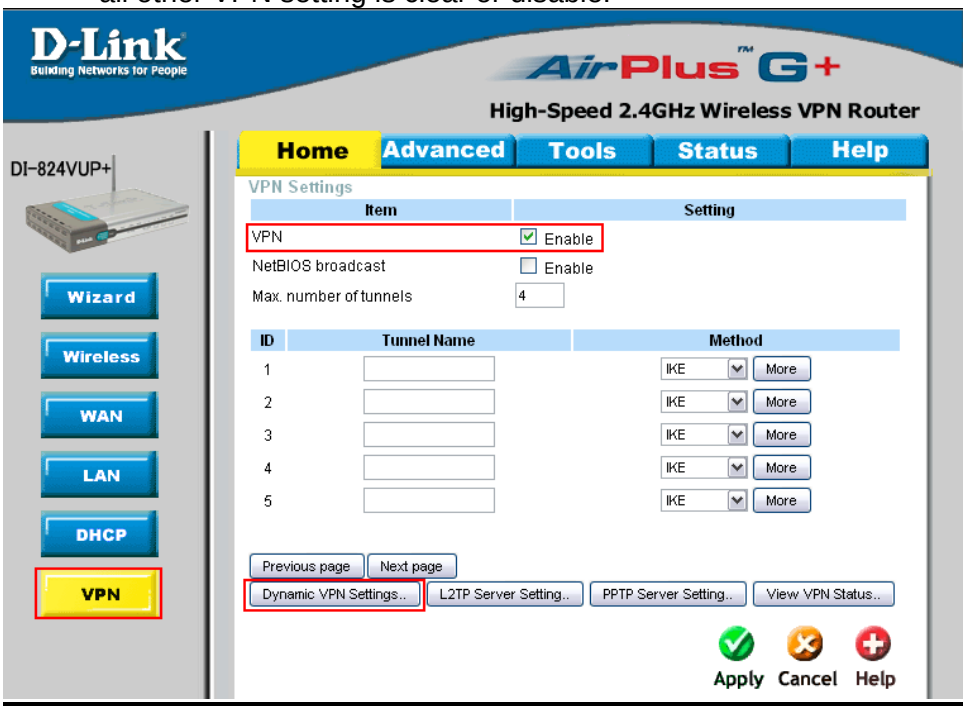
- **Setup DI-824VUP+ for VPN tunneling**
  - **Setup Dynamic VPN**
- **Setup TheGreenBow VPN client**

- **Setup Phase 1**
- **Setup Phase 2**

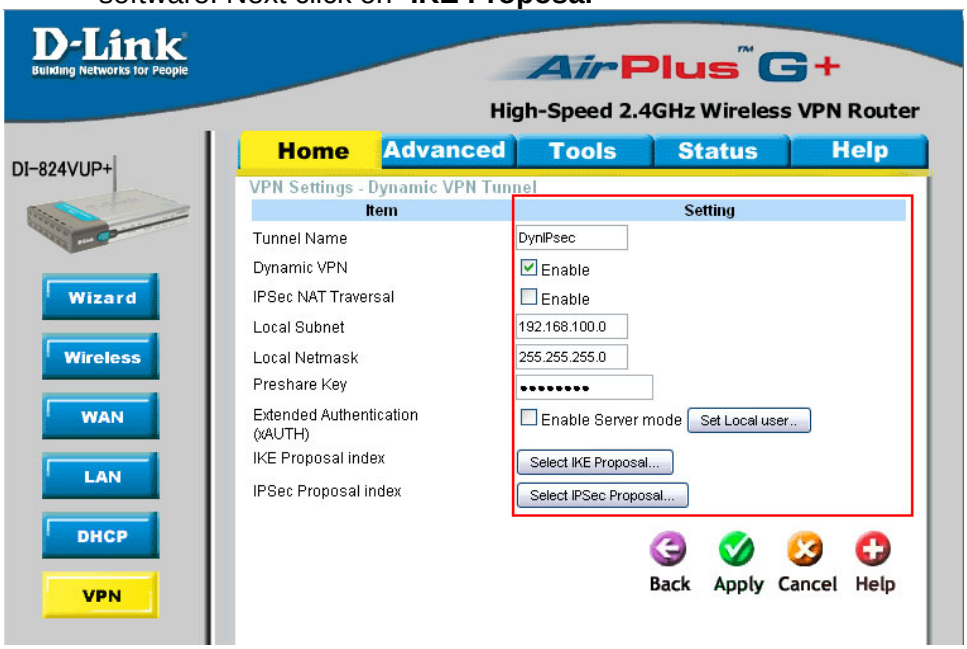
6.1.1) Setup DI-824VUP+ for VPN tunneling

6.1.1.1) Setup Dynamic VPN

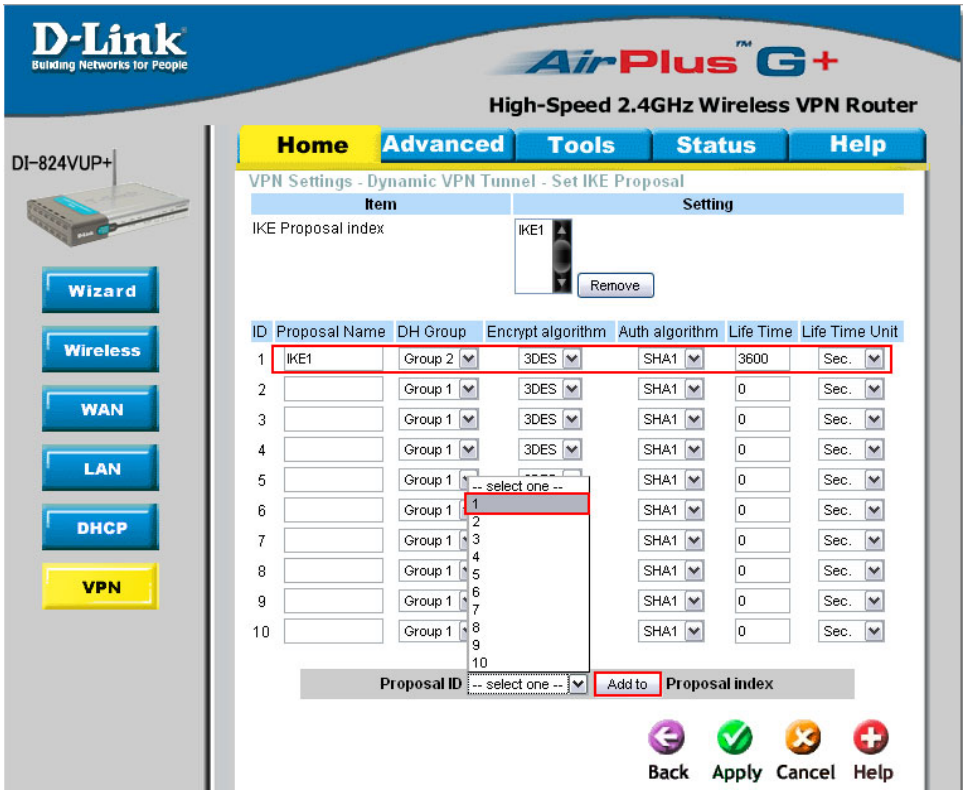
1) Click on the "**VPN**" and select the "**Dynamic VPN**", please ensure all other VPN setting is clear or disable.



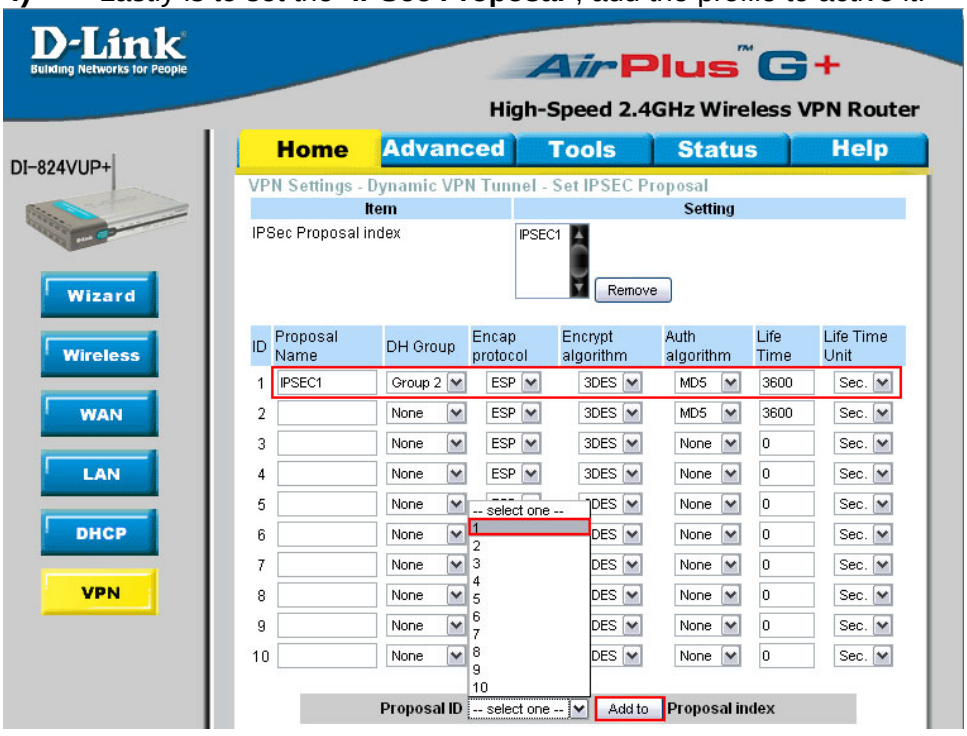
2) Fill in the details as show below and for the "**Preshare key**" must be the same as the preshare key set in Thegreenbow VPN Client software. Next click on "**IKE Proposal**"



3) Fill in the setting and select the "**Encrypt**" and "**Auth**" algorithm and lastly, add the profile to the setting to active it.



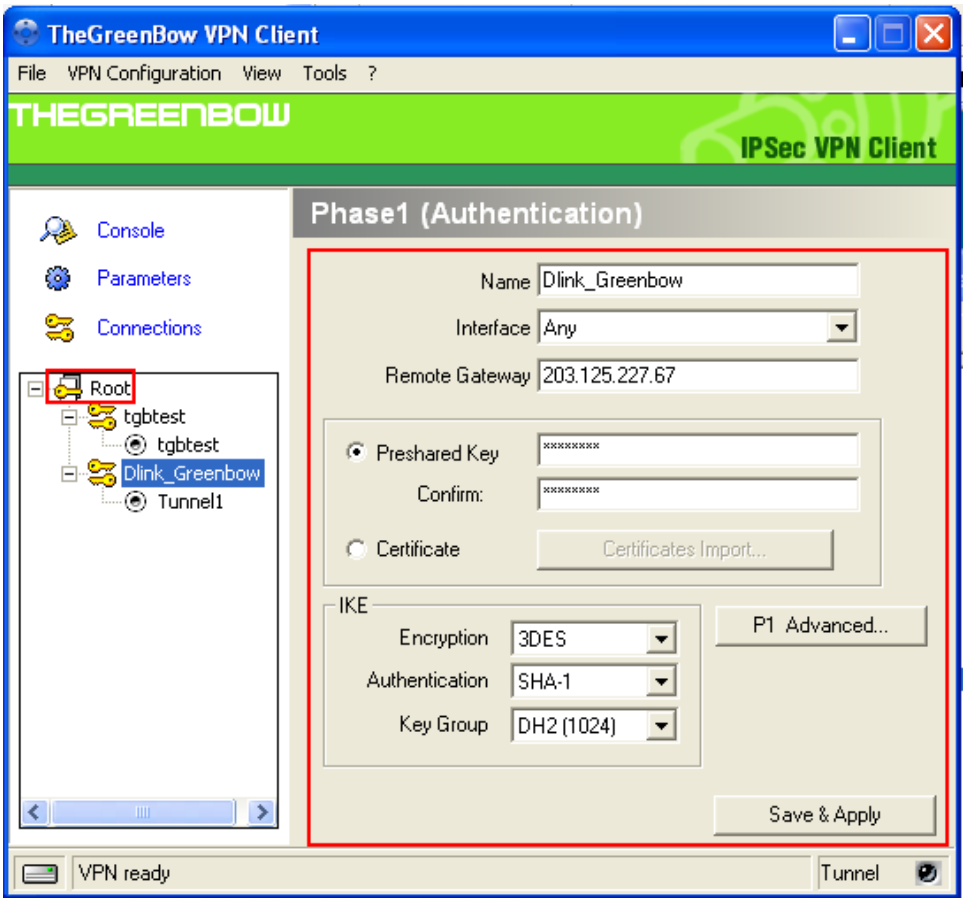
4) Lastly is to set the "**IPSec Proposal**", add the profile to active it.



6.1.2) Setup TheGreenBow VPN Client software

6.1.2.1) Setup Phase 1

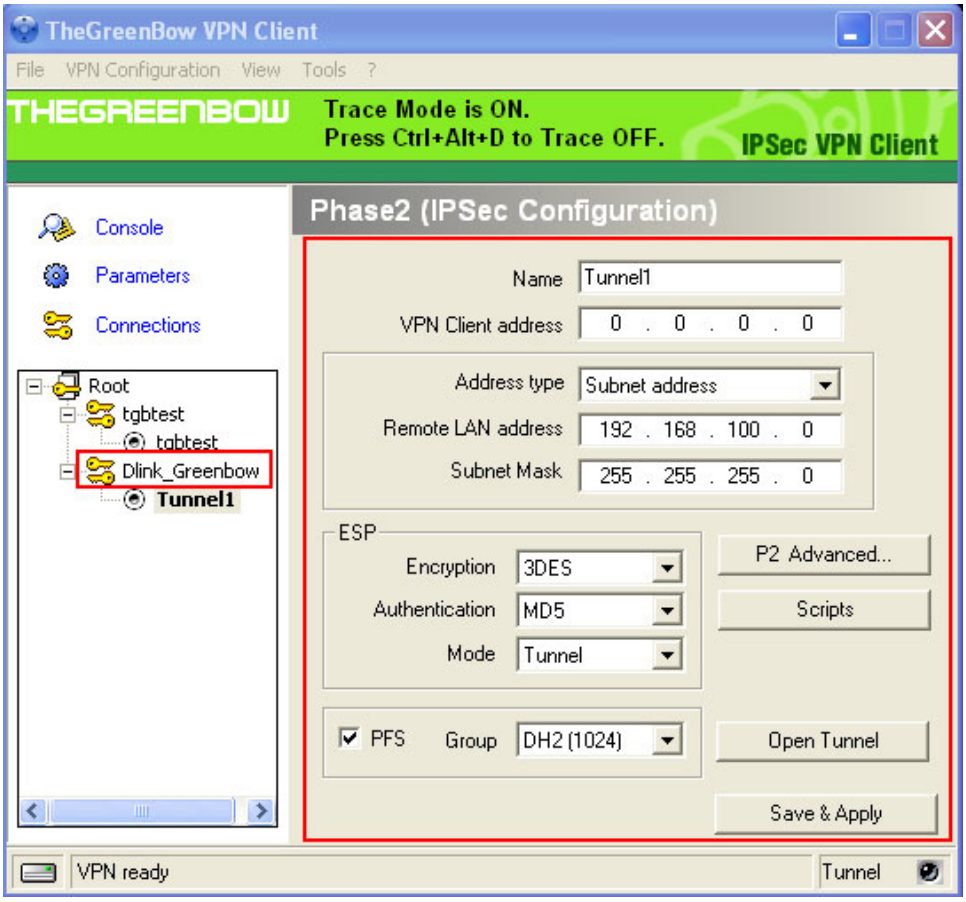
1) Right click on the "**Root**" to add a new "**Phase1**", next fill in the IP address for this VPN Client and Remote gateway IP follow by Preshared Key and IKE setting.



Note: the Preshared Key and IKE must be the same setting set in the Wireless VPN router DI-824VUP+.

6.1.2.2) Setup Phase 2

1) Right click on the "**Phase1**" to add a new "**Phase2**", next fill in the VPN Client address for this VPN Client and Remote gateway IP follow by ESP setting.



Note: the ESP Encryption and Authentication setting must be the same in the Wireless VPN router DI-824VUP+ IKE and IPSec setting.

7. Interoperability Compliance Testing

7.1) General Test Approach

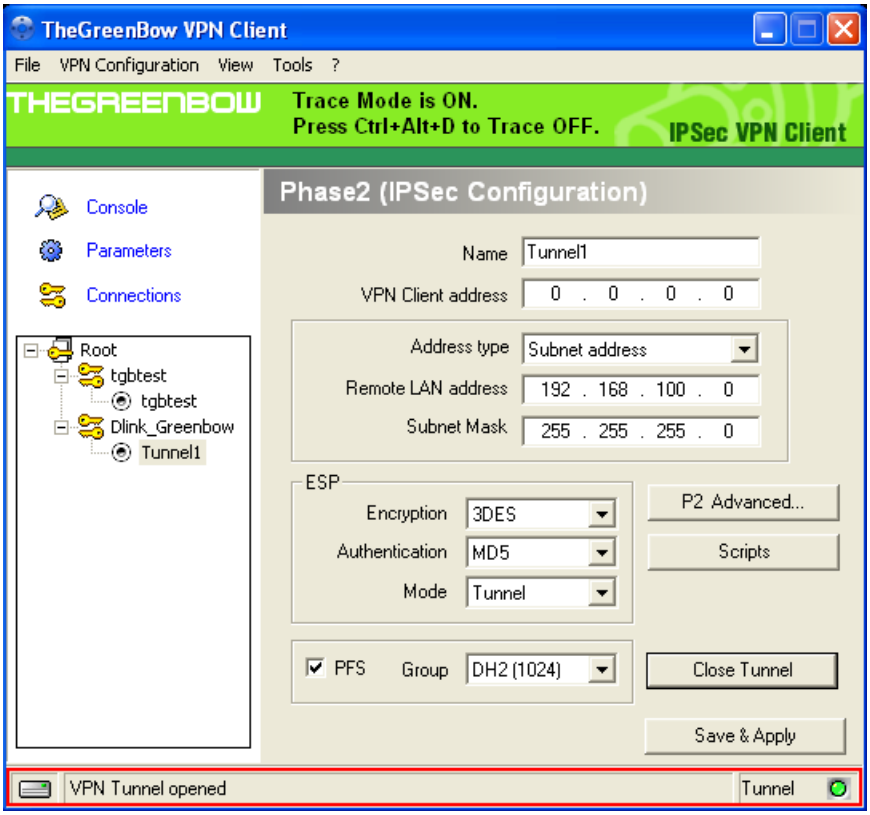
a. Open the VPN tunnel using different Negotiate Mode in Phase 1 and Phase 2:

Series Negotiate Mode	
Phase 1	Phase 2
AES-SHA	AES-SHA
AES-MD5	AES-SHA
3DES-MD5	AES-SHA
3DES-SHA	AES-SHA
DES-MD5	AES-SHA
DES-SHA	AES-SHA
AES-SHA	AES-MD5
AES-MD5	AES-MD5
3DES-MD5	AES-MD5
3DES-SHA	AES-MD5
DES-MD5	AES-MD5
DES-SHA	AES-MD5
AES-SHA	3DES-SHA
AES-MD5	3DES-SHA
3DES-MD5	3DES-SHA
3DES-SHA	3DES-SHA
DES-MD5	3DES-SHA
DES-SHA	3DES-SHA
AES-SHA	3DES-MD5
AES-MD5	3DES-MD5
3DES-MD5	3DES-MD5
3DES-SHA	3DES-MD5
DES-MD5	3DES-MD5
DES-SHA	3DES-MD5
AES-SHA	DES-SHA
AES-MD5	DES-SHA
3DES-MD5	DES-SHA
3DES-SHA	DES-SHA
DES-MD5	DES-SHA
DES-SHA	DES-SHA
AES-SHA	DES-MD5
AES-MD5	DES-MD5
3DES-MD5	DES-MD5

Series Negotiate Mode	
Phase 1	Phase 2
3DES-SHA	DES-MD5
DES-MD5	DES-MD5
DES-SHA	DES-MD5

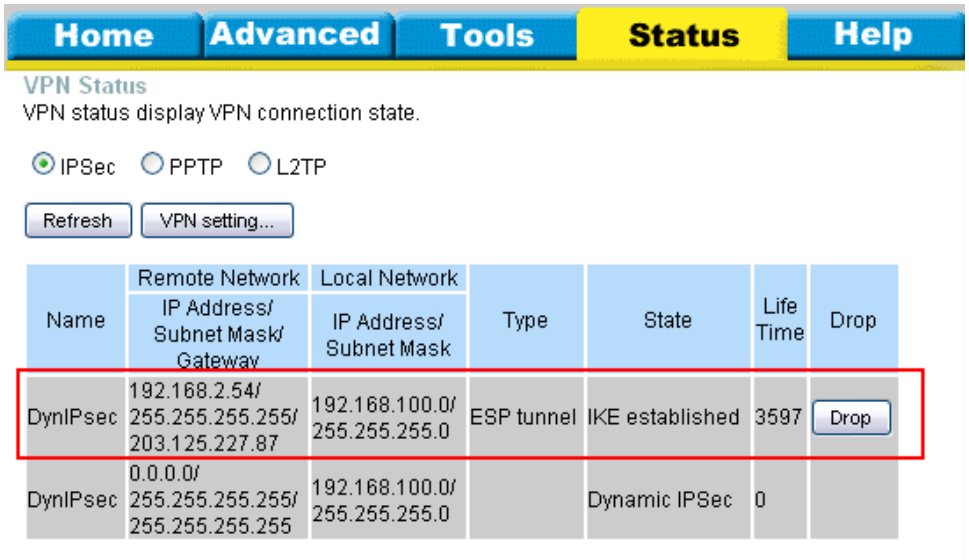
7.2) Test Result

a. The VPN tunnel will be open at any negotiate mode set in Phase 1 and Phase 2.



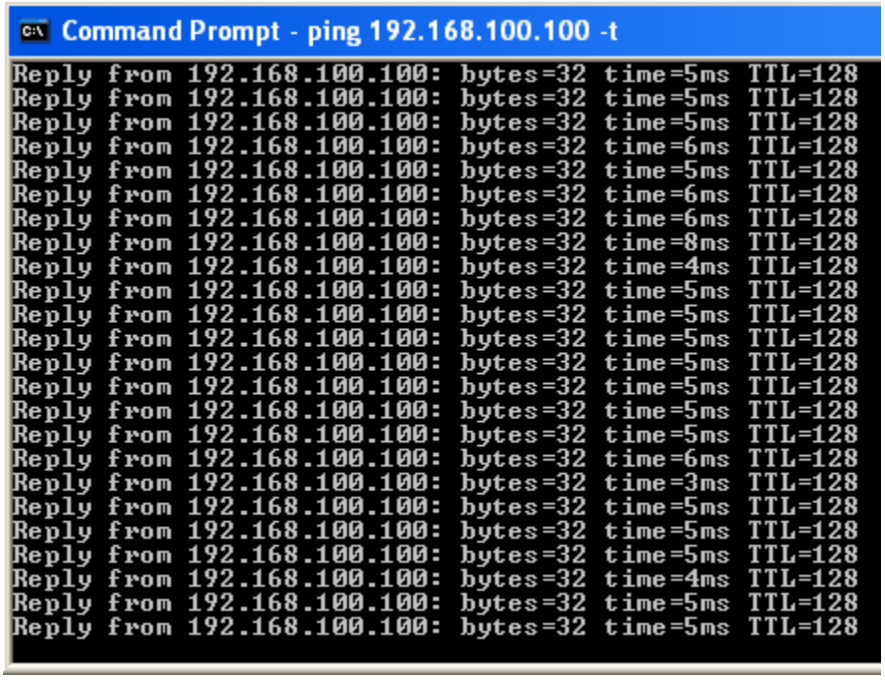
TheGreenBow VPN Software

b. The Wireless VPN Router DI-824VUP+ will show the tunnel is up at their VPN status.



DI-824VUP+ VPN status

c. VPN Client is able to Ping to the remote network.



8. Conclusion

The Application Notes demonstrate how D-Link VPN products and TheGreenBow software combined perfectly address the requirements of the small and medium businesses worldwide. The joint VPN solution offer advantages around multiple access control and authorization mechanisms for users and tunneling capabilities to access the entire corporate network; it can also provide different access rights to different users.

D-Link is the worldwide leader and an award-winning designer, developer, and manufacturer of Wi-Fi and Ethernet networking, broadband, multimedia, voice and data communications and digital electronics solutions.