



**FBR-4000 IPSec VPN (static IP)**

**V.S.**

**WBR-3460 IPSec VPN (dynamic IP)**

**Information**

FBR-4000 VPN (Router A)

WAN IP: Static; 61.31.163.203

LAN IP: 192.168.1.1

LAN IP subnet mask: 255.255.255.0

WBR-3460A VPN (Router B)

WAN IP: Dynamic; 3460vpn.dyndns.org

LAN IP: 192.168.0.1

LAN IP subnet mask: 255.255.255.0

## Setup:

FBR-4000:

### 1. VPN Configuration/ IPSec Policy Setup

The screenshot displays the configuration interface for the FBR-4000 Multi-WAN VPN Router. The browser window shows the URL `http://192.168.1.1/`. The page title is "FBR-4000 MULTI-WAN VPN ROUTER". The left sidebar contains navigation menus for Basic Configuration, Advanced Port, Advanced Configuration, Security Management, VPN Configuration, Bandwidth Management, Management Assistant, and Network Info. The main content area is titled "IPSec Policy Setup" and includes a "Help" icon.

**Policy Entry**

Name	State	Interface	Session	Local Identity Option
3460vpn	<input checked="" type="checkbox"/> Enabled	WAN 1	Session 1	IP Address

**Traffic Selector**

Protocol Type: Any

Local Security Network	Local Type	IP Address	Subnet Mask	Port Range
	Subnet	192.168.1.0	255.255.255.0	0 ~ 0

Remote Security Network	Remote Type	IP Address	Subnet Mask	Port Range
	Subnet	192.168.0.0	255.255.255.0	0 ~ 0

Remote Security Gateway Identity Type: Domain Name, 3460vpn.dyndns.org, Resolve and update

**Security Level**

Encapsulation Format: ESP  
Encryption Method: DES  
Authentication Method: MD5

**Key Management**

Key Type: Autokey (IKE)  
Phase 1 Negotiation: Main Mode  
Perfect Forward Security: No PFS  
Preshared Key: 123456 Characters / Hex: 0x  
Key Lifetime: In Time: 3600 Seconds, In Volume: 0 Kbytes, Note: 0 for no expiry

**Action**

Disconnect, Flush Tunnel, Reload Policy, Tunnel Status .., Set Options ..

## 2. VPN Configuration/ IKE Global Setup

FBR-4000 Multi-WAN VPN Router - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://192.168.1.1/

**level**  
one

# FBR-4000

## MULTI-WAN VPN ROUTER

Basic Configuration  
Advanced Port  
Advanced Configuration  
Security Management  
VPN Configuration  
IKE Global Setup  
IPSec Policy Setup  
Mesh Group  
VPN Logs  
Bandwidth Management  
Management Assistant  
Network Info

### IKE Global Setup

Global List (Phase 1)

WAN	State	ISAKmp Port	DH Group	Encryption Method	Authentication Method
WAN 1	Enabled	500	DH Group 2 (1024-bit)	DES	MD5
WAN 2	Disabled	500	DH Group 2 (1024-bit)	3DES	MD5
WAN 3	Disabled	500	DH Group 2 (1024-bit)	3DES	MD5
WAN 4	Disabled	500	DH Group 2 (1024-bit)	3DES	MD5

Global Parameters

WAN 1

Enable Setting

ISAKmp Port

Phase 1 DH Group

Phase 1 Encryption Method

Phase 1 Authentication Method

Phase 1 SA Lifetime  Seconds

Retry Counter

Retry Interval  Seconds

Maxtime to complete Phase 1  Seconds

Maxtime to complete Phase 2  Seconds

Count Per Send

NAT Traversal Port

Log Level

Log Level

Tunnel Action

All Tunnels

Done Internet

WBR-3460A:

### 3. Advanced VPN

The screenshot shows a Microsoft Internet Explorer browser window displaying the configuration page for a Level One Advanced Web Router. The address bar shows the URL `http://192.168.0.1/home_router.htm`. The page has a dark blue background with a yellow 'A' logo and the word 'Advanced' in white. On the left side, there is a navigation menu with links for LAN, Wireless, Password, Mode, Status, and Advanced (which is highlighted). Below the menu are buttons for 'Log Out' and 'Restart', and a 'Help' icon. The main content area is titled 'Features' and lists various configuration options with brief descriptions:

- Internet**: DMZ, URL Filter
- Dynamic DNS**: Use with "Virtual Servers" to allow Internet users to connect to your Servers using a URL instead of an IP address.
- Firewall Rules**: Create and manage Firewall Rules.
- Firewall Services**: Modify the list of Services which are available when creating Firewall Rules.
- Options**: MTU size, UPnP.
- Schedule**: Define the schedule used in URL filter and Firewall Rules.
- Virtual Servers**: Allow Internet users to access Servers on your LAN.
- VPN**: View, create and deleted VPN Policies.

Below the 'Features' section is an 'Administration' section with the following items:

- PC Database**: View and modify the list of PCs.
- Config File**: Backup or restore the configuration file for the Wireless Router.
- Logs**: Set system log options, view all logs.
- E-mail**: Set E-Mailing of log files and alerts
- Diagnostics**: Ping, DNS Lookup.
- QoS**: Quality Of Service.
- Remote Admin**: Allow management of this device via the Internet.
- Routing**: Only required if your LAN has other Routers or Gateways.
- Upgrade Firmware**: The firmware can be upgraded using your Web Browser.

The browser's status bar at the bottom shows 'Done' and 'Internet'.

#### 4. Click on "Add Auto Policy"

VPN Policies - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://192.168.0.1/vpn\\_list.htm](http://192.168.0.1/vpn_list.htm) Go Links

# VPN Policies

#	Enable	Name	Endpoint	Type	Local LAN	Remote LAN	ESP
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Save Edit Delete

Add Auto Policy Add Manual Policy VPN Status Help

Done Internet

5. Enter the VPN information as shown below:

**VPN Policy - Auto - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Address <http://192.168.0.1/setup.cgi> Go Links

# VPN - Auto Policy

**General** Policy Name:

Remote VPN Endpoint

Address Type:

Address Data:

NetBIOS Enable

**Local LAN** IP Address:

IP address:

Subnet Mask:

**Remote LAN** IP Address:

IP address:

Subnet Mask:

**IKE** Direction:

Exchange Mode:

Diffie-Hellman (DH) Group:

Local Identity Type:

Data:

Remote Identity Type:

Data:

**SA Parameters** Encryption:

Authentication:

Pre-shared Key:

SA Life Time:  (Seconds)

Enable PFS (Perfect Forward Security)

Done Internet

## 6. Finish

VPN Policies

#	Enable	Name	Endpoint	Type	Local LAN	Remote LAN	ESP
1	<input checked="" type="checkbox"/>	3460vpn	61.31.163.203	Auto	192.168.0.0/ 255.255.255.0	192.168.1.0/ 255.255.255.0	DES

Save Edit Delete

Add Auto Policy Add Manual Policy VPN Status Help

- Initiate the VPN connection from FBR-4000 and click on VPN Status on WBR-3460A. Once VPN is successfully established, remote endpoint and SPI information would appear.

The screenshot displays a web browser interface for configuring a Level One router. The main page, titled "VPN Policies", shows a table of existing policies:

#	Enable	Name	Endpoint	Type	Local LAN	Remote LAN	ESP
1	<input checked="" type="checkbox"/>	3460vpn	61.31.163.203	Auto	192.168.0.0 / 255.255.255.0	192.168.1.0 / 255.255.255.0	DES

Below the table are buttons for "Save", "Edit", and "Delete". At the bottom of the page are buttons for "Add Auto Policy", "Add Manual Policy", "VPN Status", and "Help".

An inset window titled "VPN Status" shows the "Current VPN Tunnels (SAs)" table:

Policy Name	Remote Endpoint	SPI (In)	SPI (Out)	Action
3460vpn	61.31.163.203	7ad37c40	ea639e26	Drop

Below this table are buttons for "Auto Refresh", "VPN Log", and "Close". The status bar at the bottom of the inset window indicates "Auto-Refresh is OFF".



8. Once VPN tunnel is created, you can ping both LAN networks. In this example, the testing PC is on 192.168.1.x subnet and it can ping both LAN IP of routers.

