

VPN Tracker for Mac OS X



How-to:

Interoperability with

Linksys BEFVP41

VPN Routers

Rev. 1.0

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1. Introduction

This document describes how VPN Tracker can be used to establish a connection between a Macintosh running Mac OS X and a Linksys BEFVP41 VPN router.

The Linksys BEFVP41 firewall is configured as a router connecting a company LAN to the Internet.

This paper is only a supplement to, not a replacement for, the instructions that have been included with your Linksys BEFVP41. Please be sure to read those instructions and understand them before starting.

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2. Prerequisites

First you have to make sure to use a recent Linksys BEFVP41 firmware version. The latest release for your Linksys BEFVP41 firewall can be obtained from

http://www.linksys.com/

For this document, firmware version 1.01.04 has been used.

Please note: VPN Tracker has been only been tested with the BEFVP41 V2.0 and the related firmware version. Please make sure to use the latest firmware version.

When using Pre-shared key authentication you need one VPN Tracker Personal Edition license for each Mac connecting to the Linksys BEFVP41.

We recommend one VPN Tracker Professional Edition for the administrator's Mac in order to export configuration files to the clients.

VPN Tracker is compatible with Mac OS X 10.2.5+, 10.3 and 10.4.

3. Connecting a VPN Tracker host to a Linksys BEFVP41

In this example the Mac running VPN Tracker is directly connected to the Internet via a dialup or PPP connection.

The Linksys BEFVP41 VPN router is configured in NAT mode and has the static WAN IP address 169.1.2.3 and the private LAN IP address 192.168.1.1. The Stations in the LAN behind the Linksys BEFVP41 use 192.168.1.1 as their default gateway and should have a working Internet connection.

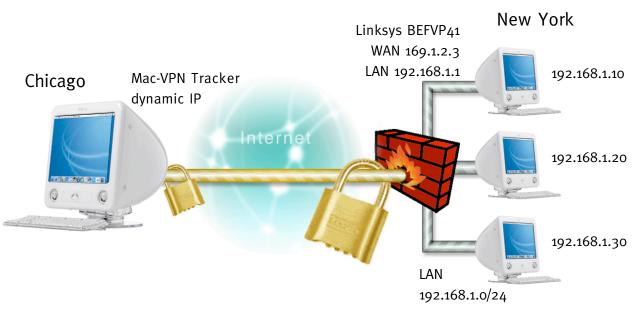


Figure 1: VPN Tracker – Linksys BEFVP41 connection diagram

3.1 Linksys BEFVP41 Configuration

The pre-defined VPN Tracker connection type has been created using the default settings for your Linksys BEFVP41 VPN router. If you change any of the settings on the Linksys BEFVP41, you will eventually have to adjust the connection type in VPN Tracker.

Step 1 Create a new VPN tunnel for the VPN Tracker client:

- VPN Tunnel: enabled
- Tunnel name: an arbritary name for the tunnel (e.g. **vpntracker**)
- Local Secure Group: Subnet
- IP/Mask: the network address and mask of the Linksys LAN subnet
- Remote Secure Group: Any
- Remote Security Gateway: Any
- Key Management: Auto. (IKE)
- Pre-shared-key: your pre-shared key (e.g. secretkey)

| | | Security | | |
|-----------------------------------|-----------------------------|---|----------------------|--------|
| A Division of Cisco Systems, Inc. | | | Firmware Version: 1 | .01.04 |
| | | Etherfast® Cable/DS | L VPN Router BEFVP41 | V2 |
| Security | Setup Security Firewall VPN | Access Applications Administration Restrictions & Gaming | Status | |
| VPN Passthrough | | | More | |
| | IPSec Pass-Through: | 💿 Enabled 🔘 Disabled | | |
| | PPPoE Pass-Through | 0 0 | | |
| | PPTP Pass-Through: | 💿 Enabled 🔘 Disabled | | |
| VPN Tunnel | | | | |
| | Select Tunnel Entry: | Tunnel 1 (vpntracker) | | |
| | | Delete Summary | | |
| | VPN Tunnel: | 💿 Enabled 🛛 Disabled | | |
| | Tunnel Name: | vpntracker | | |
| Local Secure Group: | | Subnet 🛟 | - | |
| Local Secure Group. | IP: | 192 . 168 . 1 . 0 | | |
| | Mask: | 255 . 255 . 255 . 0 | | |
| | | | - | |
| Remote Secure Group: | | Any | | |
| | | (This Gateway accepts request from any IP address!) | | |
| Remote Security Gateway: | | Any | - | |
| Remote Security Gateway. | | (This Gateway accepts request from | | |
| | | any IP address!) | | |
| | Encryption: | DES | | |
| | Authentication: | MD5 | | |
| | | | | |
| Key Management | 250 | Auto. (IKE) | | |
| | PFS: Pre-shared Key: | Enabled Oisabled | | |
| | Key Lifetime: | 3600 Sec. | | |
| | | | | |
| Status | Disconnected | | | |
| | | | | |
| | Con | Nect View Logs Advanced Setting | | |

Figure 2: Linksys BEFVP41 – VPN Tunnel

Step 2 Advanced VPN Tunnel settings:

After step 1 the advanced settings should look like this:

| 000 | Advanced VPN Tunnel Setup |
|-----------|---|
| Adv Tu | vanced VPN nnel Setup |
| | |
| | Tunnel 1 Phase 1: |
| | Operation mode : 💿 Main mode |
| | Username: |
| | Proposal : |
| | Encryption : DES 😯 |
| | Group: 768-bit ; |
| | Key Lifetime : 3600 seconds |
| | (Note: Following three additional proposals are also proposed in Main mode: DES/MD5/768, 3DES/SHA/1024 and 3DES/MD5/1024.) |
| | Phase 2: Proposal : |
| | Encryption : DES Authentication : MD5 PFS : OFF Group : 768-bit \$ |
| | Key Lifetime: 3600 seconds |
| | Other Setting: NetBIOS broadcast Anti-replay Keep-Alive If IKE failed more than 5 times, block this unauthorized IP for 60 seconds |
| | (Save Settings) (Cancel Changes) |
| | |

Figure 3: Linksys BEFVP41 – Advanced VPN Tunnel

Please note: If you're using a different IPsec proposal than DES, then please make sure to adjust the according settings in the Linksys BEFVP41 connection type in VPN Tracker.

3.2 VPN Tracker Configuration



Add a new connection with the following options:

- Vendor: Linksys
- Model: Linksys BEFVP41

| 00 | Connection: New York | |
|-----------|--|--------------|
| | Connection: New York | |
| Connect | ion Network Authentication Idea | ntifiers DNS |
| | Vendor: Linksys | • |
| | Model: Linksys BEFVP41 | |
| | tion Options: ♥ Initiate connection from Connect only when nee Disable NAT Traversal Client Provisioning Protocol: Mode Conf | eded |
| Click the | ock to prevent further changes. | |
| | Cance | |

Figure 4: VPN Tracker - Connection settings

Step 2 Change your Network Settings:

- VPN Server Address: public IP address of your VPN Gateway (e.g. 169.1.2.3)
- Remote Network/Mask: network address and netmask of the remote network (eg. 192.168.1.0/255.255.25.0).

| \varTheta 🕤 Connection: New York | | | |
|--|--|--|--|
| Connection: New York | | | |
| Connection Network Authentication Identifiers DNS | | | |
| Topology: Host to Network | | | |
| Network Port: Automatic | | | |
| VPN Gateway Address: 169.1.2.3 | | | |
| Local Address: optional | | | |
| Remote Network/Mask: 192.168.1.0 / 255.255.255.0 + | | | |
| | | | |
| Click the lock to prevent further changes. | | | |
| Cancel OK | | | |

Figure 5: VPN Tracker - Network settings

Please note: In order to access multiple remote networks simultaneously, just add them by pressing the Plus-button.¹

¹ For this step VPN Tracker Professional Edition is needed.

Step 3 Change your Authentication Settings:

Pre-shared key: the same Pre-shared key as in the Linksys BEFVP41 configuration.

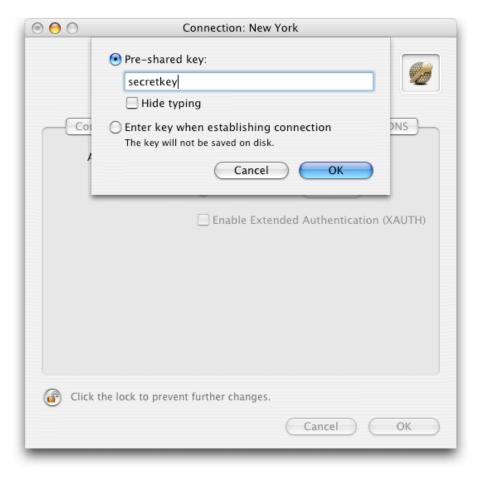


Figure 6: VPN Tracker - Authentication settings

Step 4 Identifier Settings:

- Local Identifier: Local endpoint IP address.
- Remote Identifier: Remote endpoint IP address.

| 0 0 | Connection: New York |
|-------|---|
| | Connection: New York |
| C | onnection Network Authentication Identifiers DNS |
| | Local Identifier: • Local endpoint IP address |
| | 0 |
| | Remote Identifier: Remote endpoint IP address Remote certificate Verify remote identifier |
| | |
| 🕜 Cli | ick the lock to prevent further changes. |
| | Cancel OK |

Figure 7: VPN Tracker - Identifier settings

Step 5 Save the connection and Click "Start VPN" in the VPN Tracker main window.

You're done. After 10-20 seconds the red status indicator for the connection should change to green, which means you're securely connected to the Linksys BEFVP41. After IPsec has been started, you may quit VPN Tracker. The IPsec service will keep running.

Now to test your connection simply ping a host in the Linksys BEFVP41 network from the dialed-in Mac in the "Terminal" utility:

ping 192.168.1.10