



VPN Tracker for Mac OS X



How-to:
Interoperability with
DrayTek Vigor
Internet Security Appliances

Rev. 4.0

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1. Introduction

This document describes how VPN Tracker can be used to establish a VPN connection between a Macintosh running Mac OS X and a DrayTek Vigor Internet Security Appliance.

The DrayTek Vigor 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 DrayTek Vigor. Please be sure to read those instructions and understand them before starting.

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2. Prerequisites

First you have to make sure that your DrayTek Vigor has VPN support built in. Please refer to your DrayTek Vigor manual for details.

Furthermore you should use a recent DrayTek Vigor firmware version. The latest firmware release for your DrayTek Vigor appliance can be obtained from

<http://www.DrayTek.com.tw/>

For this document, firmware version 2.3.1 has been used.

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

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

3. Connecting a VPN Tracker host to a DrayTek Vigor

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

The DrayTek Vigor 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 DrayTek Vigor use 192.168.1.1 as their default gateway and should have a working Internet connection.

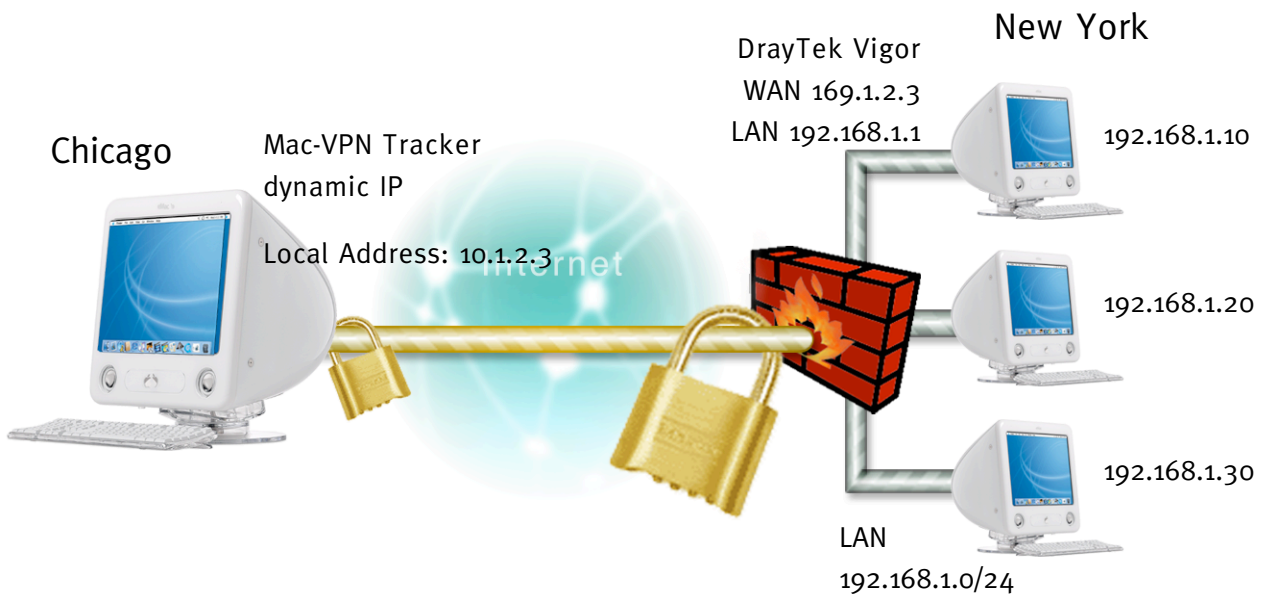


Figure 1: VPN Tracker – DrayTek Vigor connection diagram

3. Connecting a VPN Tracker host to a DrayTek Vigor

3.1 DrayTek Vigor Configuration

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

Step 1

Enable IPSec VPN Service:

Go to [Advanced Setup -> Remote Access Control Setup] and enable “IPSec VPN Service”

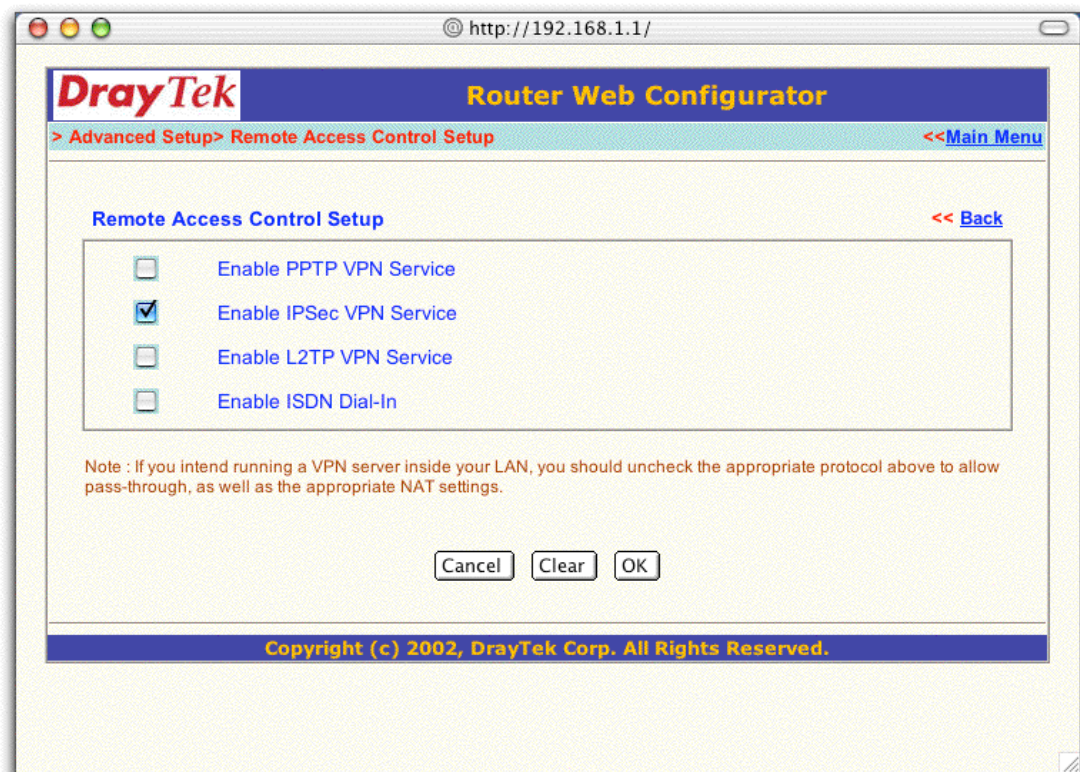


Figure 2: Enable IPSec VPN Service

3. Connecting a VPN Tracker host to a DrayTek Vigor

Step 2

VPN IKE / IPSec Setup:

Go to [Advanced Setup -> VPN IKE / IPSec Setup]. Enter your pre-shared key twice in the Dial-in Setup. Disable “Medium (AH)” and select “High (ESP)” and choose “Both” from the pop-up menu. You can leave the pre-shared key for the Dial-Out Setup blank.

The screenshot displays the DrayTek Router Web Configurator interface for the 'VPN IKE / IPSec Setup' page. The browser address bar shows 'http://192.168.1.1/'. The page title is 'DrayTek Router Web Configurator'. The breadcrumb navigation is '> Advanced Setup > VPN IKE / IPSec Setup' with a '<< Main Menu' link. The main heading is 'VPN IKE/IPSec Setup' with a '<< Back' link. The 'Dial-in Set up' section contains an 'IKE Authentication Method' sub-section with 'Pre-Shared Key' and 'Re-type Pre-Shared Key' fields, both filled with asterisks. Below this is the 'IPSec Security Method' section with a checkbox for 'Medium (AH)' (unchecked) and a checkbox for 'High (ESP)' (checked). A dropdown menu next to 'High (ESP)' is set to 'Both'. A note states 'Data will be encrypted and authentic.' for the selected method. The 'Dial-out Set up' section has empty 'Pre-Shared Key' and 'Re-type Pre-Shared Key' fields. At the bottom of the form area is a '<< LAN-to-LAN Dialer Profiles' link. At the very bottom of the page are 'Cancel' and 'OK' buttons, and a footer with the text 'Copyright (c) 2002, DrayTek Corp. All Rights Reserved.'

Figure 3: VPN IKE / IPSec Setup

3. Connecting a VPN Tracker host to a DrayTek Vigor

Step 3 Add a LAN-to-LAN dialer profile:

To add a dialer profile, go to [Advanced Setup -> LAN-to-LAN Dialer Profile Setup]. By clicking on Index '1,' you can create a new dialer profile.

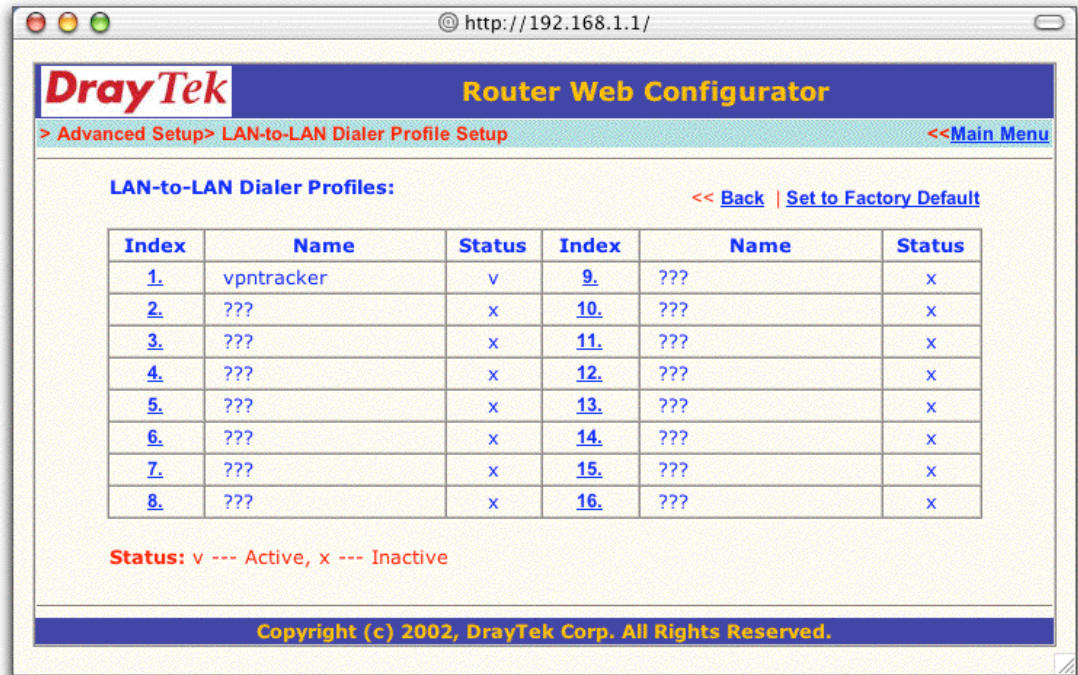


Figure 4: DrayTek - LAN-to-LAN Dialer Profile Setup

Step 4 Edit a LAN-to-LAN dialer Profile Setup:

Enter a name for this profile (e.g. vpntracker) and select "Enable this profile". The "Call Direction" should be "Dial-In" or "Both".

Please leave the Dial-Out Settings blank and make sure that the only allowed dial-in type is 'IPSec tunnel'.

Enter the same "Remote Network IP" (e.g. 10.1.2.3) that you will use for "Local Address" in VPN Tracker (figure 7) and change the "Remote Network Mask" to '255.255.255.255'. This setting refers to the "Local Address" field in VPN Tracker. Please note: The "Remote Network IP" is **not** the same as the dynamic IP from the ISP. Finally please change the "RIP direction" to 'Disable'.

3. Connecting a VPN Tracker host to a DrayTek Vigor

DrayTek Router Web Configurator

> Advanced Setup > LAN-to-LAN Dialer Profile Setup << Main Menu

Profile Index : 1 << Back | Clear |

1. Common Settings

Profile Name: vpntracker
 Enable this profile

Call Direction: Both Dial-Out Dial-In
 Always on
Idle Timeout: 300 second(s)
 Enable PING to keep alive
PING to the IP: _____

2. Dial-Out Settings

Username: ???
Password: _____
Dial Number for ISDN or Server IP/Host Name for VPN.
(such as 5551234, draytek.com or 123.45.67.89)
Type of Server I am calling:
 ISDN PPTP
 IPsec Tunnel
 L2TP with IPsec Policy: None
 Medium(AH)
 High(ESP)
DES with Authentication: _____

Link Type: 64k bps
PPP Authentication: PAP/CHAP
VJ Compression: On Off

Scheduler (1-15): _____

Callback Function (CBCP)
 Require Remote to Callback
 Provide ISDN Number to Remote

3. Dial-In Settings

Username: ???
Password: _____
 Enable CLID Authentication
Peer ISDN Number or Peer VPN Server IP: _____

Allowed Dial-In Type:
 ISDN PPTP
 IPsec Tunnel
 L2TP with IPsec Policy: None

Link Type: Disable
PPP Authentication: PAP/CHAP
VJ Compression: On Off

Callback Function (CBCP)
 Enable Callback Function
 Use the Following Number to Callback
Callback Number: _____
Callback Budget: 0 minute(s)

4. TCP/IP Network Settings

My WAN IP: 0.0.0.0
Remote Gateway IP: 0.0.0.0
Remote Network IP: 10.1.2.3
Remote Network Mask: 255.255.255.255
More: _____

RIP Direction: Disable
RIP Version: Ver. 2
For NAT operation, treat remote sub-net as: Private IP

Change default route to this VPN tunnel

Work OK

Figure 5: DrayTek - LAN-to-LAN Dialer Profile Setup

❖ Multiple VPN Tracker Clients

Repeat step 4, using a different 'Remote Network IP'.

3.2 VPN Tracker Configuration

Step 1

Add a new connection with the following options:

- Vendor: „Draytek“
- Model: your VPN device

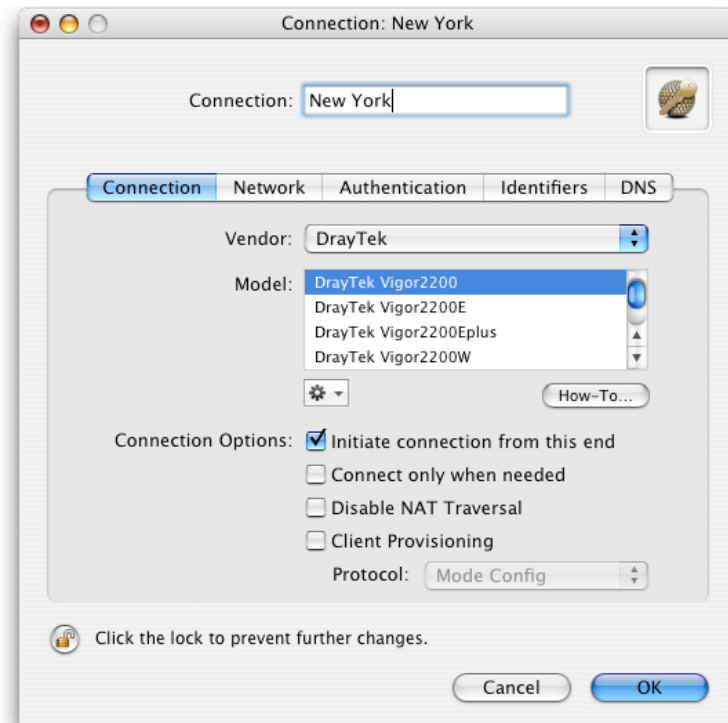


Figure 6: VPN Tracker - Connection Settings

3. Connecting a VPN Tracker host to a DrayTek Vigor

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. **192.168.1.0/255.255.255.0**).

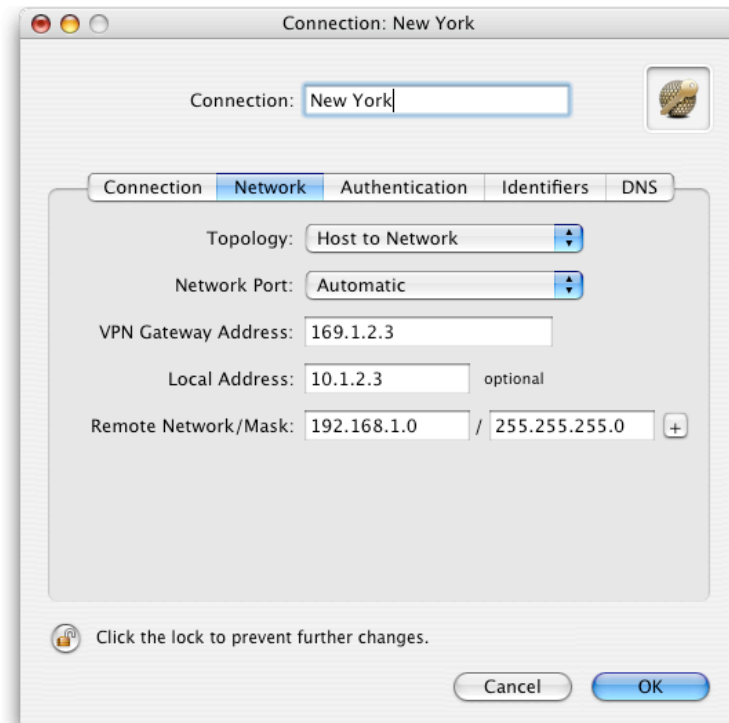


Figure 7: VPN Tracker - Network Settings

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.

3. Connecting a VPN Tracker host to a DrayTek Vigor

Step 3

Change your Authentication Settings:

Pre-shared key: the same Pre-shared key as in the DrayTek Vigor configuration.



Figure 8: VPN Tracker - Authentication Settings

3. Connecting a VPN Tracker host to a DrayTek Vigor

Step 4

Identifier Settings:

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



Figure 9: VPN Tracker - Identifiers Settings

Step 5

Save the connection and click „Start IPsec“ 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 DrayTek Vigor. After IPsec has been started, you may quit VPN Tracker. The IPsec service will be still running.

To test your connection simply ping a host in the remote network from the dialed-in Mac in the "Terminal" utility:

```
ping 192.168.1.10
```