



VPN Configuration Guide

NETGEAR® FWG114P

Revision 1.0.0

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Manual Edition 1.0.0

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Introduction

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

The NETGEAR 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 NETGEAR device. Please be sure to read those instructions and understand them before starting.

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Prerequisites

First you have to make sure to use a recent NETGEAR firmware version. The latest release for your NETGEAR firewall can be obtained from <http://www.NETGEAR.com/>

For this document, firmware version 1.2._07 has been used.

Please note: VPN Tracker has been only been tested with the NETGEAR FWG114P and the above firmware version. Please make sure to use the latest firmware version.

You will need one VPN Tracker Personal Edition license for each Mac connecting to the NETGEAR device.

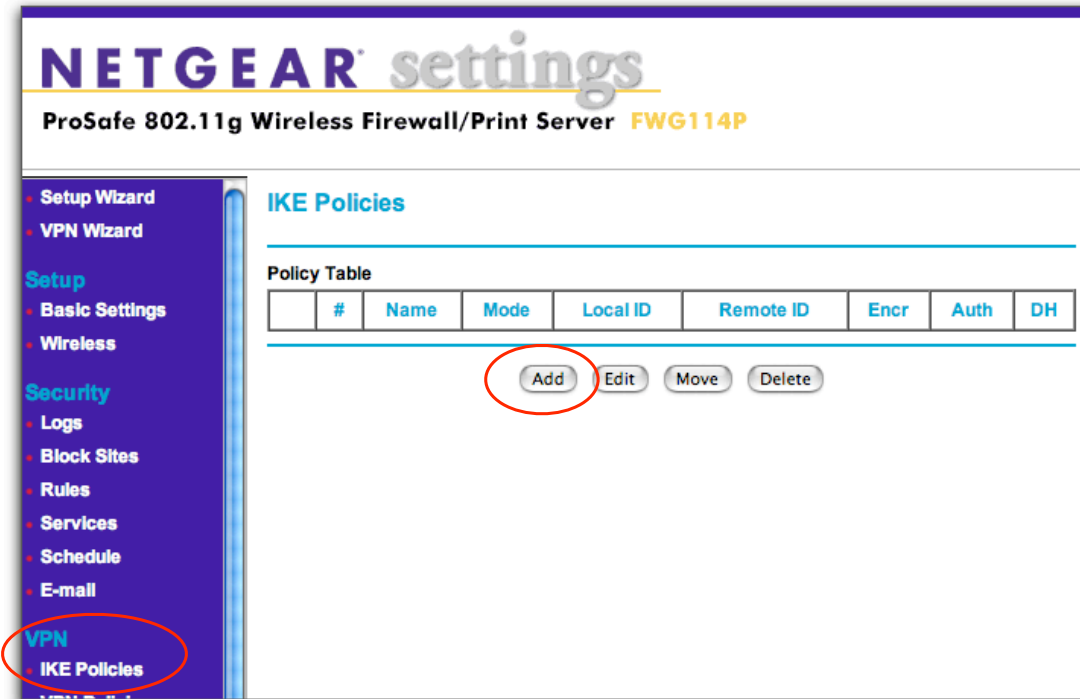
We recommend one VPN Tracker Professional Edition for the administrator's Mac in order to export configuration files to the clients. VPN Tracker is compatible with Mac OS 10.2.5+, 10.3 and 10.4.1+

Configure your Network

Configure your NETGEAR router

This section describes the configuration of your VPN router.

Step 1 - Add a new VPN Tunnel



- ▶ Select the "IKE Policies" menu entry
- ▶ Click the button "Add" to create a new IKE policy

NETGEAR settings
ProSafe 802.11g Wireless Firewall/Print Server FWG114P

IKE Policy Configuration

General

Policy Name: vpntracker

Direction/Type: Remote Access

Exchange Mode: Aggressive Mode

Local

Local Identity Type: Fully Qualified Domain Name

Local Identity Data: netgear.local **1**

Remote

Remote Identity Type: Fully Qualified Domain Name

Remote Identity Data: vpntracker.local **2**

IKE SA Parameters

Encryption Algorithm: 3DES

Authentication Algorithm: SHA-1

Authentication Method: Pre-shared Key **3**

RSA Signature (requires Certificate)

Diffie-Hellman (DH) Group: Group 1 (768 Bit)

SA Life Time: 180 (secs)

Back Apply Cancel

- ▶ **Policy Name:** Enter an arbitrary name (e.g. "vpntracker")
- ▶ **Direction/Type:** Select "Remote Access"
- ▶ **Exchange Mode:** Select "Aggressive Mode"
- ▶ **Local Identity Type:** Choose "Fully Qualified Domain Name"
- ▶ **Local Identity data:** Enter an arbitrary identifier (e.g. "netgear.local"). **1**
- ▶ **Remote Identity Type:** Choose "Fully Qualified Domain Name"
- ▶ **Remote Identity data:** Enter an arbitrary identifier (e.g. "vpntracker.local"). **2**
- ▶ **Authentication Method:** Select "Pre-shared Key" and enter a password (e.g. "secretkey") **3**
- ▶ Click "Apply"

NETGEAR settings
ProSafe 802.11g Wireless Firewall/Print Server FWG114P

Setup Wizard
VPN Wizard

Setup
Basic Settings
Wireless

Security
Logs
Block Sites
Rules
Services
Schedule
E-mail

VPN
IKE Policies
VPN Policies
CAs
Certificates
CRL
VPN Status

Maintenance
Router Status
Attached Devices
Settings Backup
Set Password
Diagnostics
Router Upgrade

VPN Policies

Policy Table

| # | Enable | Name | Type | Local | Remote | AH | ESP |
|---|--------|------|------|-------|--------|----|-----|
|---|--------|------|------|-------|--------|----|-----|

Edit Move Delete

Apply Cancel

Add Auto Policy Add Manual Policy

- ▶ Select the VPN Policies menu
- ▶ Click on “Add Auto Policy”

VPN - Auto Policy

General

Policy Name:

IKE policy:

IKE Keep Alive

Remote VPN Endpoint

Ping IP Address:

Address Type:

Address Data:

SA Life Time

(Seconds)

(Kbytes)

IPsec PFS

NetBIOS Enable

PFS Key Group:

Traffic Selector

Local IP

Start IP address: . . . ⁴

Finish IP address: . . .

Subnet Mask: . . .

Remote IP

Start IP address: . . . ⁵

Finish IP address: . . .

Subnet Mask: . . .

AH Configuration

Enable Authentication

Authentication Algorithm:

ESP Configuration

Enable Encryption

Encryption Algorithm:

Enable Authentication

Authentication Algorithm:

- ▶ **Policy Name:** Enter an arbitrary name (e.g. "vpntracker")
- ▶ **IKE policy:** Select your previously create IKE policy (e.g. "vpntracker")
- ▶ **Remote VPN Endpoint:**
 - Address Type: Select "IP Address"
 - Address Data: Enter "0.0.0.0"
- ▶ **Local IP:** Select "Subnet address"
 - **Start IP address:** Enter the network address of the Netgear LAN (e.g. "192.168.0.1") ⁴
 - **Subnet Mask:** Enter 255.255.255.0
- ▶ **Remote IP:** Select "Single address"
 - **Start IP address:** Enter an unique virtual IP address for the client (e.g. "10.1.2.3") ⁵
- ▶ **ESP Configuration:**
 - Enable Encryption: "3DES"
 - Enable Authentication: "SHA1"
- ▶ Click "Apply"

Configure VPN Tracker

This section describes the configuration of VPN Tracker for your NETGEAR FWG114P router.

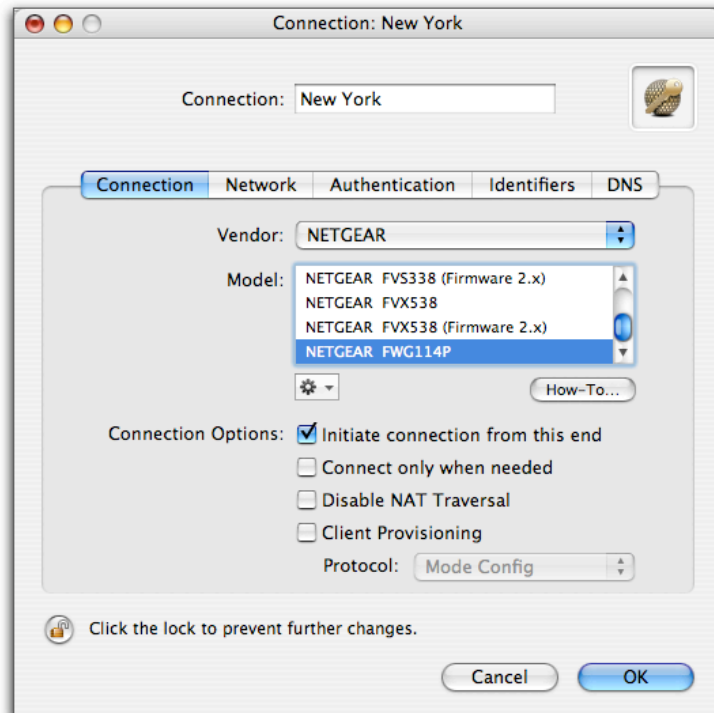
Step 1 - Create a new Connection



▶ Click on "New" in the VPN Tracker main window.

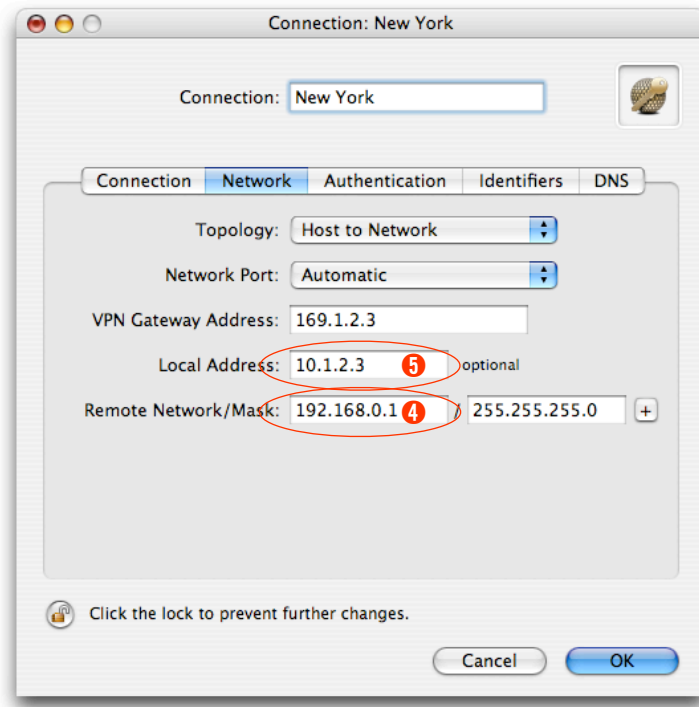
Step 2 - Connection Settings

The pre-defined VPN Tracker connection for the NETGEAR VPN router is based on the default settings for your NETGEAR VPN router. If you changed any of the settings while configuring the device, you might have to adjust the connection type in VPN Tracker.



- ▶ Select the vendor NETGEAR
- ▶ Select your VPN model (Netgear FWG114P)
- ▶ Make sure to enable "Initiate connection from this end"

Step 3 - Network Settings



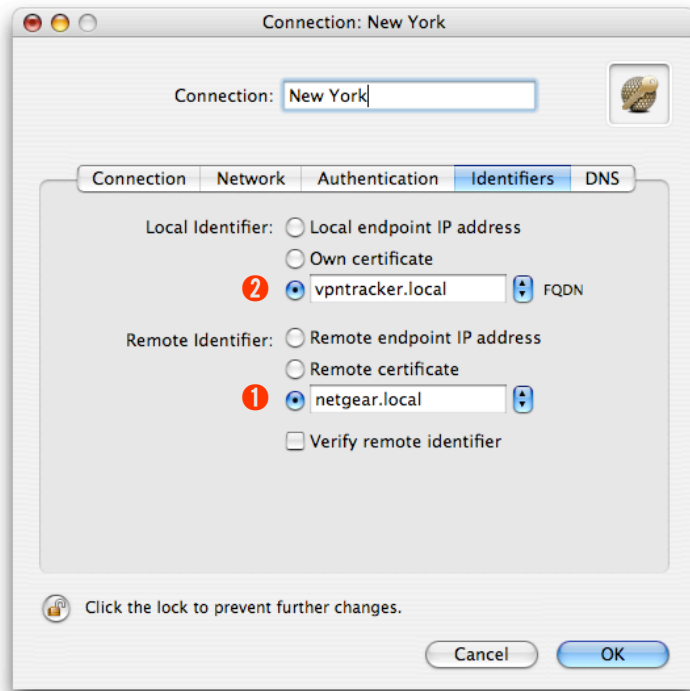
- ▶ **VPN Gateway Address:** Enter the public IP address of your VPN Gateway (e.g. 169.1.2.3)
- ▶ **Local Address:** Enter the virtual IP address for the VPN Tracker client (e.g. 10.1.2.3) 5
- ▶ **Remote Network/Mask:** Enter the network address and netmask of your office network. 4

Step 4 - Authentication Settings



- ▶ **Pre-shared key:** Enter the Pre-shared key you used earlier when configuring the NETGEAR router. **3**

Step 5 - Identifiers Settings



- ▶ **Local Identifier:** Enter the remote identifier data from your Netgear FWG114P. **2**
- ▶ **Remote Identifier:** Enter the local identifier data from your Netgear FWG114P. **1**

Note The local/remote identifiers in VPN Tracker are vice versa compared to the "Local/Remote Identity Data" settings on your Netgear FWG114P.

Check the VPN connection

This section explains how to start and test your VPN connection.

It's time to go out!

You will not be able to test and use your VPN connection from within your Private Network. In order to test your connection, you'll need to connect from a different location. That's why it's now time to go out. Take your MacBook Pro and have a coffee at your favorite Internet cafe or go visit a friend.

Test your connection

To test if everything is setup correctly please follow the steps below:

- ▶ Get access to the Internet
- ▶ Make sure the Internet connection is working; open your Internet browser and try to connect to <http://www.equinux.com>
- ▶ Start VPN Tracker if it's not already running



- ▶ Select the connection you configured for your NETGEAR device
- ▶ Click on the **Start VPN** button



- ▶ If the light turns red after a few seconds, then please read the **Troubleshooting** section on the next page
- ▶ If the light turns green, that means you've successfully established a connection

Congratulations! You did it!

Troubleshooting

I don't get a green light in the VPN Tracker main window

- ▶ Make sure that your computer is not connected directly to the Private Network you want to connect to.
- ▶ Make sure, that the Identifiers and the **Pre-shared key** you've entered in the router configuration match the settings you entered in VPN Tracker.
- ▶ Verify that the **public IP address** you entered in VPN Tracker matches the public IP address of your router.
- ▶ Download our sample configuration and connect to our test device at <http://www.vpntracker.com/connectiontest/>
 - If the test connection could **not** be established: Make sure, that the internet connection is working and verify, that your local router is not blocking any connection attempts.
 - If the test connection could be established: Check the log file of your remote VPN router for any error messages.
- ▶ If you're still having issues with your connection, then please create some screenshots of your settings on both ends, gather the log files and send them over to our support team at vpntracker@equinux.com.

What's next?

This section explains the usage of your newly configured VPN connection.

Introduction

As the VPN connection has now been established, you should be able to access all resources in your Private Network.

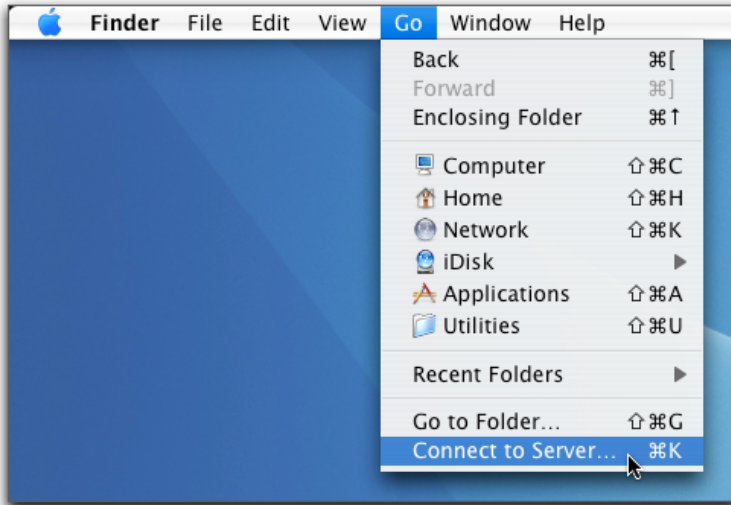
Known Limitations

There are some limitations of a VPN connection compared to a direct connection to a Private Network.

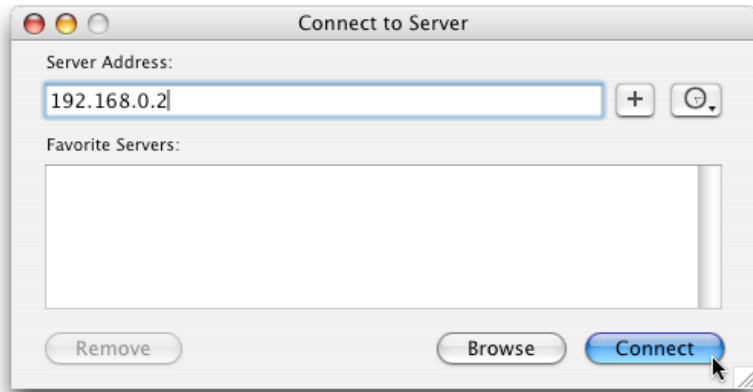
- ▶ **Bonjour:** As Bonjour Chat is not supported over a VPN tunnel, you'll need to use iChat server in order to chat remotely.
- ▶ **Browsing the network:** You can't "browse" the remote network as you're normally used to. You need to connect to each machine manually, as described on the next page.

Accessing Files

To access files in your Private Network, just follow the steps below:



- ▶ Go to the **Finder** application
- ▶ In the menu bar, click on **Go->Connect To Server...**



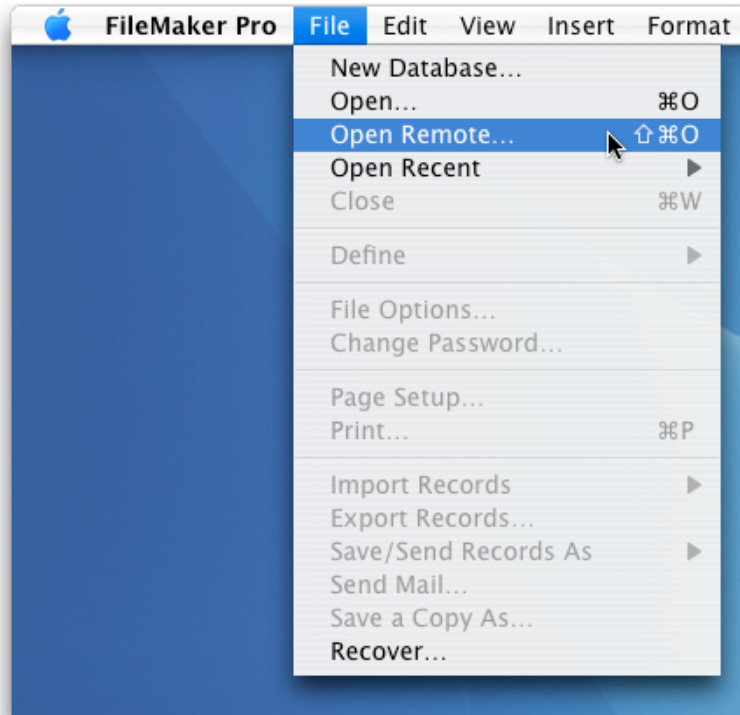
- ▶ Enter the IP address of the machine you want to connect to. In our example network this would be the IP address **192.168.0.2**
- ▶ Click on the **Connect** button
- ▶ Enter your **Username** and **Password** to access the files

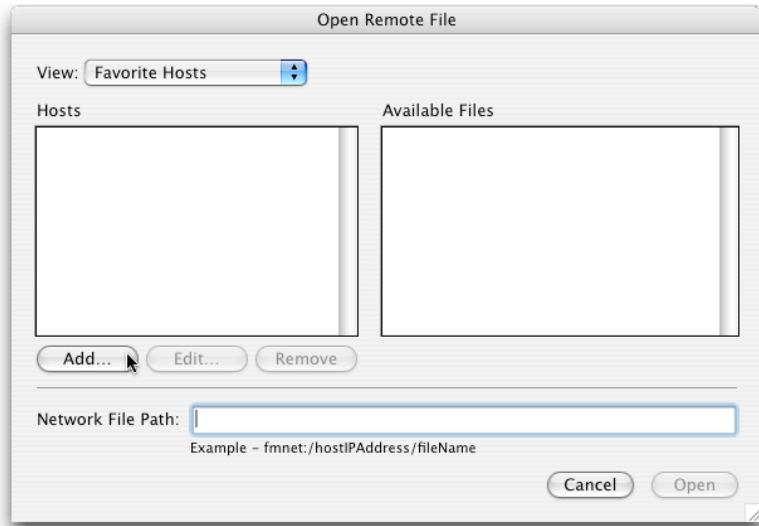
When connecting to a Windows fileserver you'll need to prefix the IP address with "smb://", e.g. "smb://192.168.0.2".

Accessing a FileMaker Database

To access a database available in your Private Network, just follow the steps below:

- ▶ Start the **FileMaker** application
- ▶ In the menu bar, click on **File->Open Remote**





▶ Click on the **Add...** button

Edit Favorite Host

Favorite Settings

Host's Internet Address:
(Example - host.domain.com or 192.168.10.0)

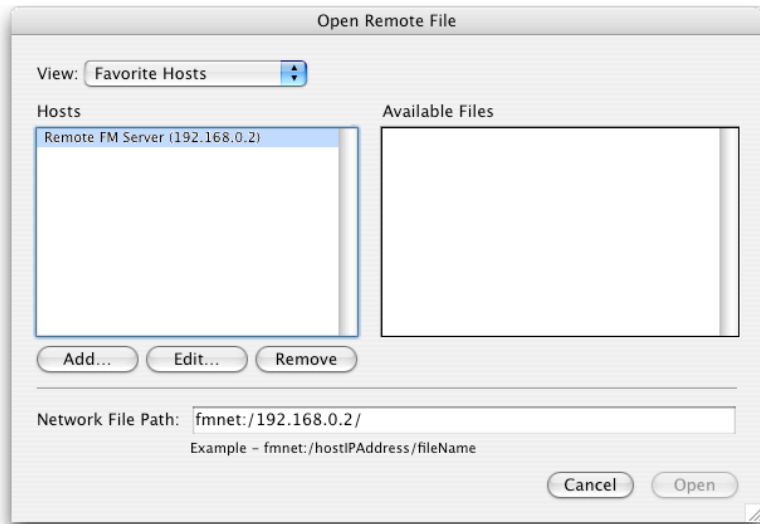
Favorite Host's Name:
(optional)

File Settings

Show all available files for this host
 Show only these files

Enter one file name per line, separated by a carriage return

- ▶ Enter the **IP address** of the FileMaker Server machine
- ▶ Enter the **Favorite Host's Name** for this machine
- ▶ Click on the **Save** button



- ▶ Select a database from the list of **Available Files** and click **Open**
- ▶ You're now able to access your FileMaker databases as usual

Acquire more Licenses

If two or more people need to access your Private Network, then you need to acquire more VPN Tracker licenses.

To get more licenses, please contact your reseller and inquire about „VPN Tracker Personal Edition“.

Or point your browser to <http://store.equinux.com> and buy additional VPN Tracker Personal Edition Licenses online.