equinux

VPN Configuration Guide

Netgear FVS338 / FVX538 / FVS124G

Revision 1.0.1

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 gateway 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. Please be sure to read those instructions and understand them before starting.

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 the Netgear FVS124G Router, firmware version 1.1.33 has been used.

For the Netgear FVS338/FVX538 devices, firmware version 1.6.48 has been used.

Please note: Firmware versions prior to 1.6.48 are having some issues in conjunction with VPN Tracker. According to the Netgear support pages, you should restore the factory defaults, when upgrading from a previous firmware version with this model.

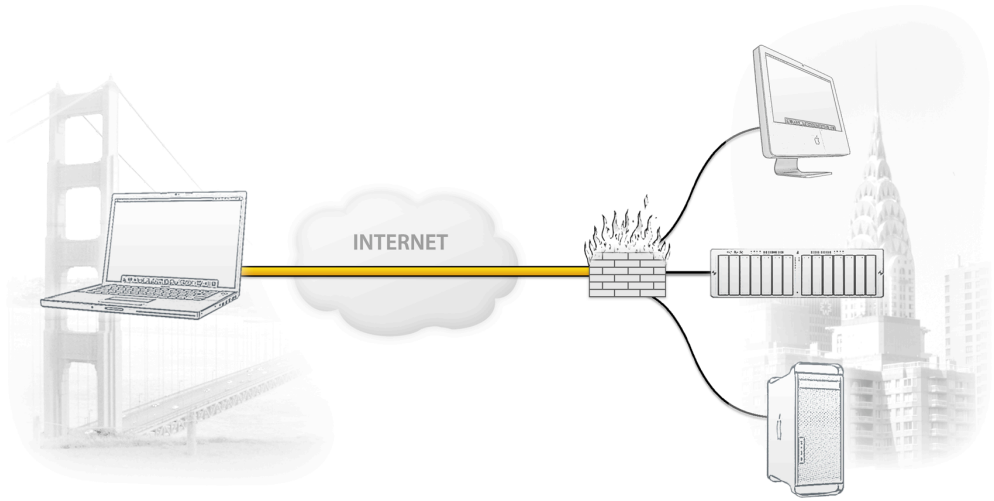
Please note: VPN Tracker has been only been tested with the Netgear and the above firmware version.

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

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 version 10.2.5+, 10.3 and 10.4.1+

Scenario

In our example, we need to connect an employee's Mac Book in San Francisco to an office in New York. The following diagram illustrates this scenario:



The MacBook is directly connected to the Internet and has a public IP address, assigned by an ISP.

The office's VPN gateway is also connected to the Internet and can be accessed via an static IP address. The VPN gateway also has a second interface which is connected to the internal office network. In our example, the office network has the IP range 192.168.1.0/24.

A VPN tunnel will be established between the public interfaces in San Francisco and New York. Once the VPN tunnel is up, San Francisco can access the office network behind the VPN gateway.

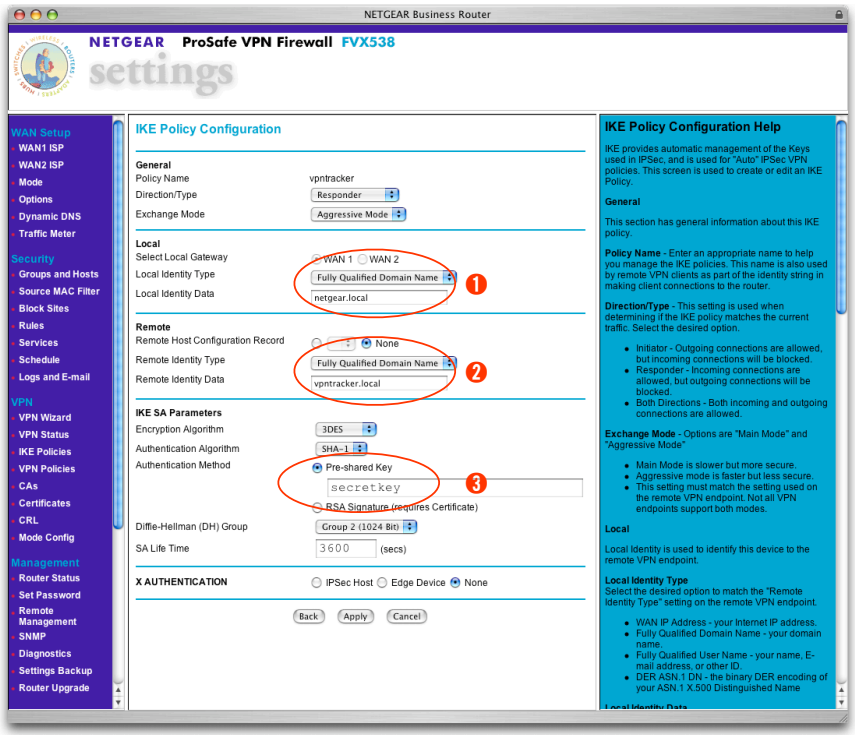
Please note that the connection from a MacBook at home to an office network is just one possible scenario. The instructions also apply to connections from a desktop computer or notebook in your office to a VPN gateway at home or at another office. Please adapt the term "office network", which is used throughout this manual, to your scenario.

Task 1 – Configure your Netgear router

This section describes the configuration of your Netgear VPN router.

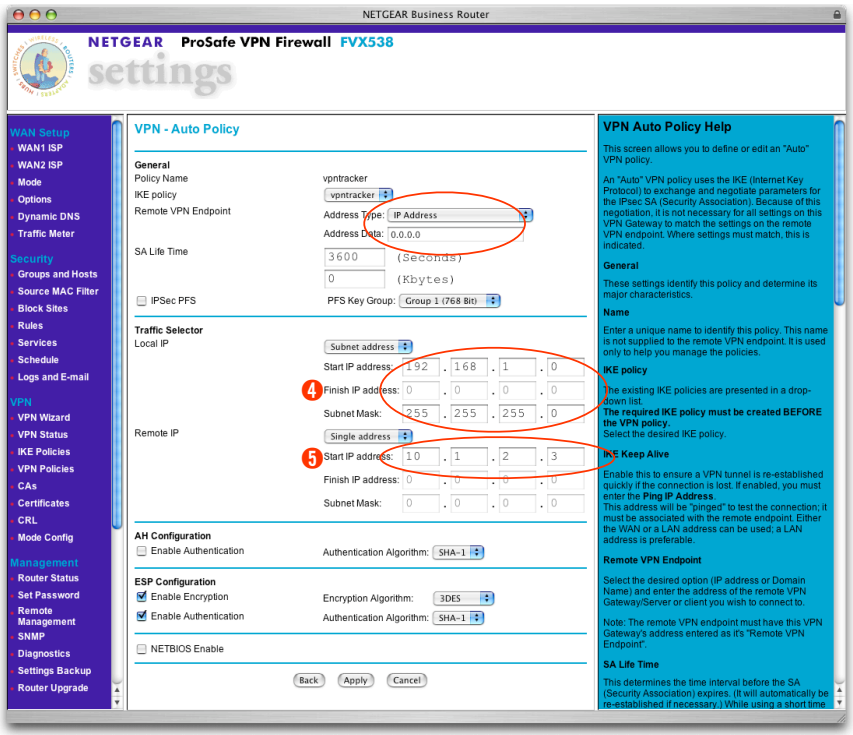
TIP When setting up a VPN, you'll have to handle a couple of parameters. Those parameters are marked with red dots with little numbers in it. Throughout the setup we will point back to those parameters.

Step 1 - Create a new IKE Policy



- **Policy Name:** Enter an arbitrary name (e.g. **vpntracker**)
- **Direction/Type:** Select **Responder**
- **Exchange Mode:** Select **Aggressive Mode**
- **Local Identity Type:** Select **Fully Qualified Domain Name**
- **Local Identity Data:** Enter an arbitrary identifier (e.g. **netgear.local**) ❶
- **Remote Identity Type:** Select **Fully Qualified Domain Name**
- **Remote Identity Data:** Enter **an arbitrary identifier** (e.g. **vpntracker.local**) ❷
- **Pre-shared Key:** Enter **an arbitrary key** (e.g **secretkey**) ❸

Step 2 - Create a new VPN Policy



- **Policy Name:** Enter an arbitrary name (e.g. **vpntracker**)
- **IKE policy**: Select your previously created IKE policy (e.g. **vpntracker**)
- **Remote VPN Endpoint:**
  - **Address Type**: Select **IP Address**
  - **Address Data**: Enter **0.0.0.0**
- **Local IP:** Subnet address
- **Start IP address:** Enter the network address of the Netgear LAN (e.g. **192.168.1.0**)
- **Subnet Mask:** Enter **255.255.255.0**
- **Remote IP:** Select **Single address**
- **Start IP address:** Enter a virtual IP address for the VPN Tracker client (e.g. **10.1.2.3**)
- **ESP Configuration -> Enable Encryption:** 3DES
- **ESP Configuration -> Enable Authentication**: SHA1

Task 2 – Configure VPN Tracker

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

Step 1 - Create a new Connection

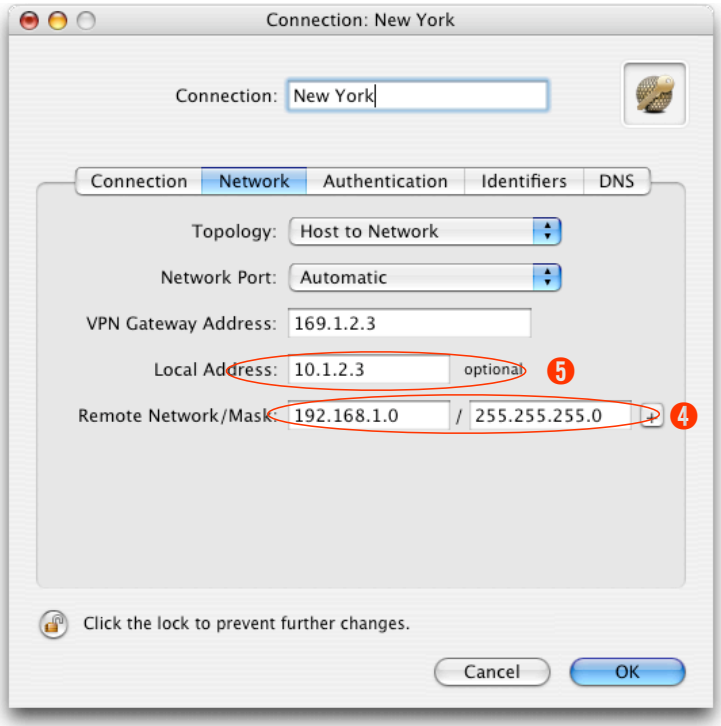
- Click on “New” in the VPN Tracker main window.

Step 2 - Connection Settings

- Select the vendor (**Netgear**)
- Select your VPN router model (e.g. **Netgear FVX538**)
- Make sure to enable "Initiate connection from this end"

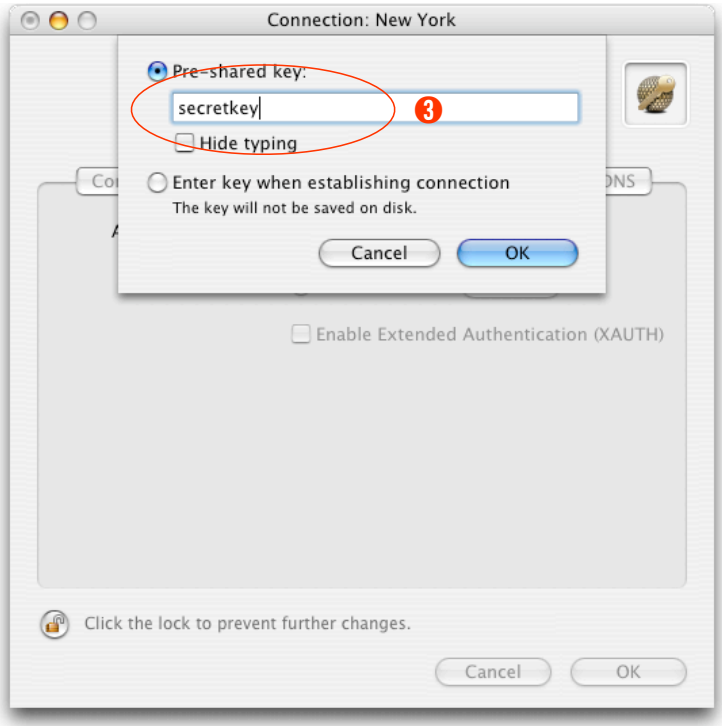
TIP The pre-defined VPN Tracker connection for the Netgear router is based on the default settings for your Netgear VPN router. If you or the administrator changed any of the settings while configuring the device, you might have to adjust the connection type in VPN Tracker by double-clicking the model.

Step 3 - Network Settings



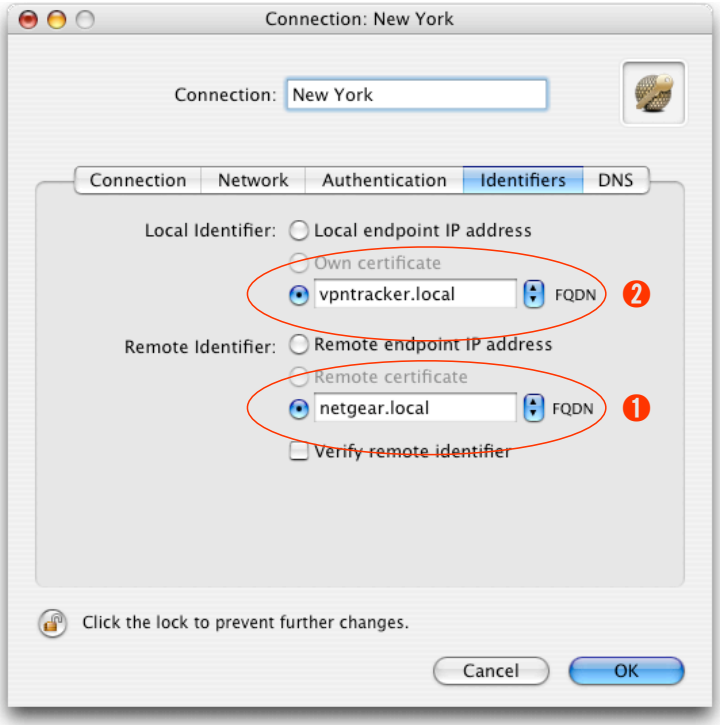
- ***VPN Server Address***: Enter the public IP address of your VPN Gateway (e.g. **169.1.2.3**)
- ***Local Address***: Enter the virtual IP address you've chosen for the VPN Tracker client (e.g. **10.1.2.3**) 5
- ***Remote Network/Mask***: Enter network address and netmask of your office (Netgear) network.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

Step 4 - Authentication Settings



- ***Pre-shared key:*** Enter the Pre-shared key you've used earlier when configuring the Netgear router. 3

Step 5 - Identifiers Settings



- ***Local Identifier:*** Enter the remote identity date you've used when configuring the Netgear. (e.g. **vpntracker.local**) 2
- ***Remote Identifier:*** Enter the local identity date you've used when configuring the Netgear. (e.g. **netgear.local**) 1

TIP Please note, that the identifiers are switched in the VPN Tracker configuration. The local identifier in VPN Tracker corresponds to the remote identity data on your Netgear router and vice versa.

Task 3 - Check the VPN connection

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

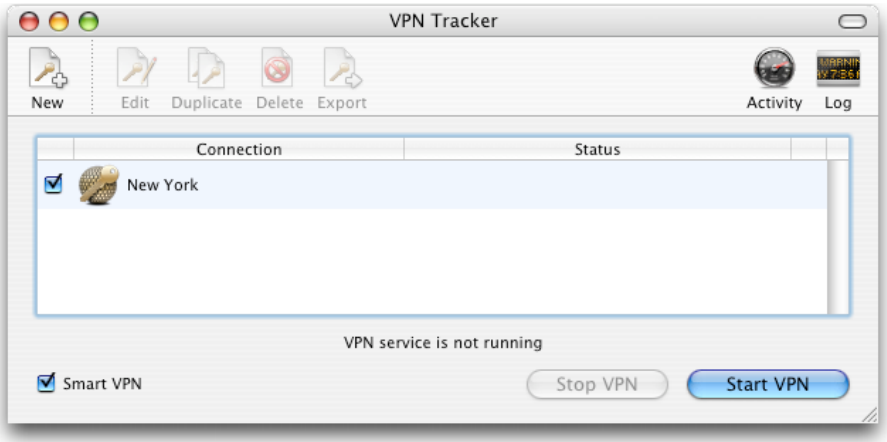
It‘s time to go out!

You will not be able to test and use your VPN connection from within your office 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.

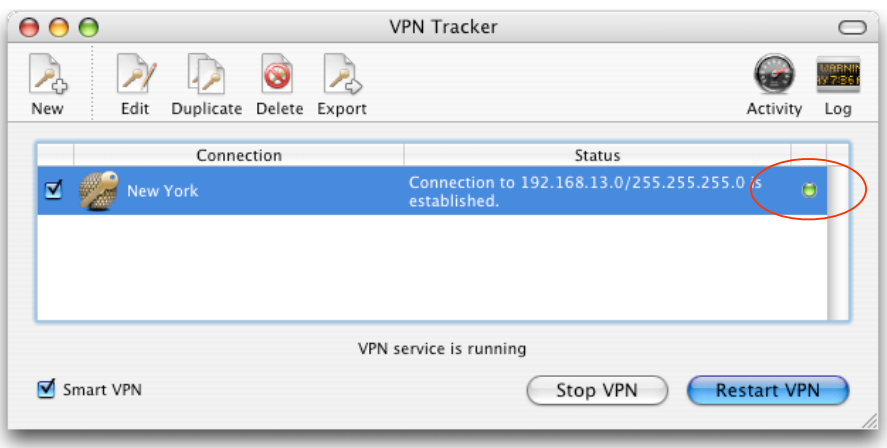
Test your connection

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
- Hit 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 office network you want to connect to.
- Make sure, that the **Identifier** 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 cannot 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 is established successfully: Your internet connection is working and does not block VPN connections. Please check the VPN log file of your Netgear for error messages.
- If you’re still having issues with your connection, please create some screenshots of your settings on both ends, gather the log files and send them over to our support team via http://www.equinux.com/us/products/vpntracker/contactus.html.

What's next?

This section explains how to use your VPN connection.

Introduction

As the VPN connection has now been established, you should be able to access most of the resources in your office network.

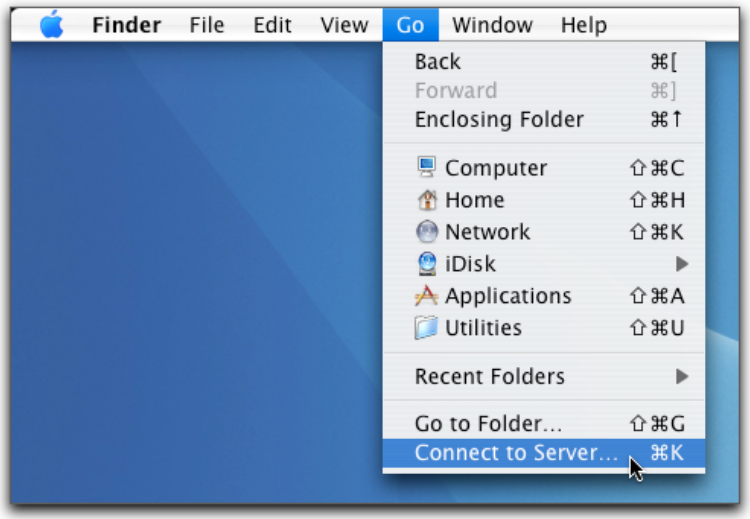
Known Limitations

There are some limitations of a VPN connection compared to a direct connection to a office network.

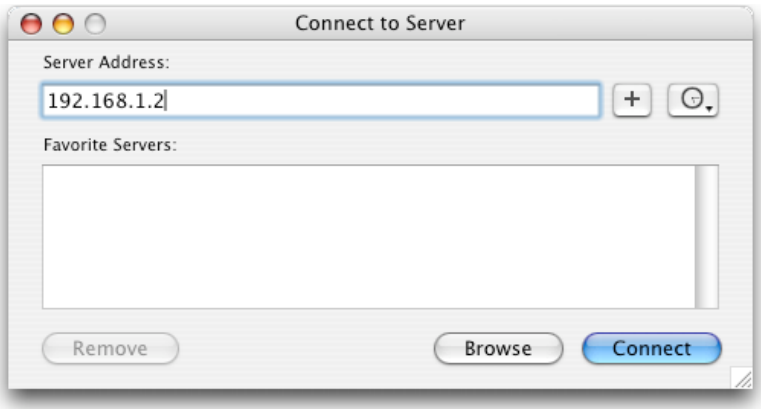
- **Bonjour**: As Bonjour Chat is not supported over a VPN tunnel, you'll need to use iChat server in order to chat remotely.
- **Browsing the network**: You can't "browse" the remote network as you're normally used to. You need to connect to each machine manually, as described on the next page.

Accessing Files

To access files in your office network, just follow the steps below:



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

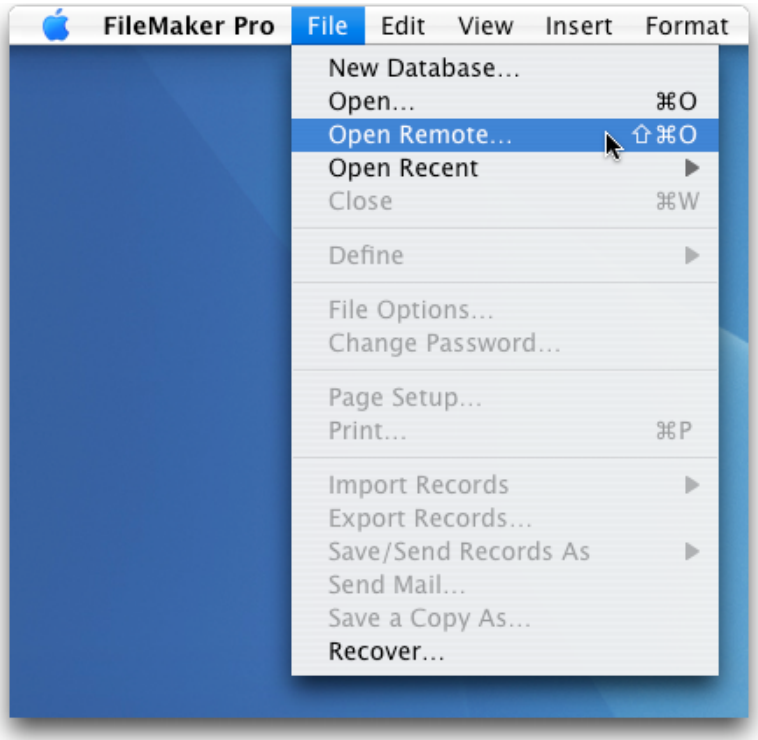


- Enter the IP address of the machine you want to connect to. In our example network this would be the IP address **192.168.1.2**
- Click on the **Connect** button
- Enter your **Username** and **Password** to access the files

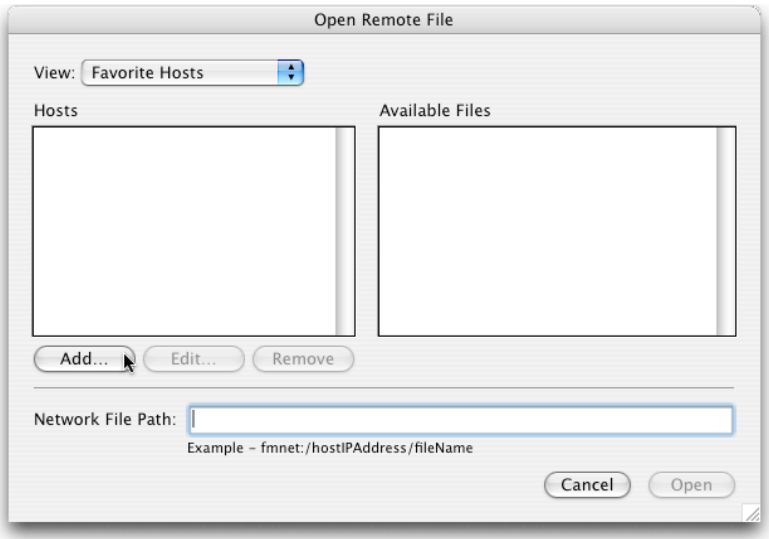
TIP When connecting to a Windows fileserver, you'll need to prefix the IP address with "*smb://*", e.g. "*smb://192.168.1.2*".

Accessing a FileMaker Database

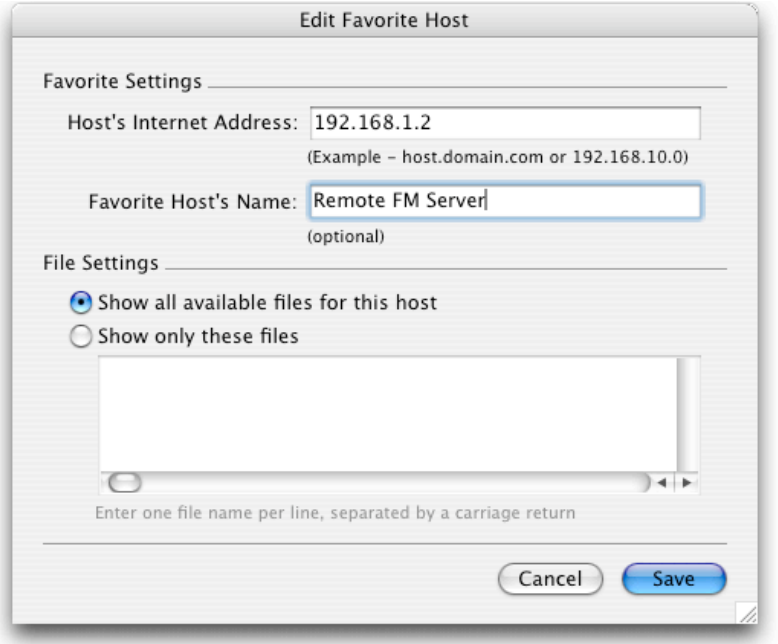
To access a database available in your office network, just follow the steps below:



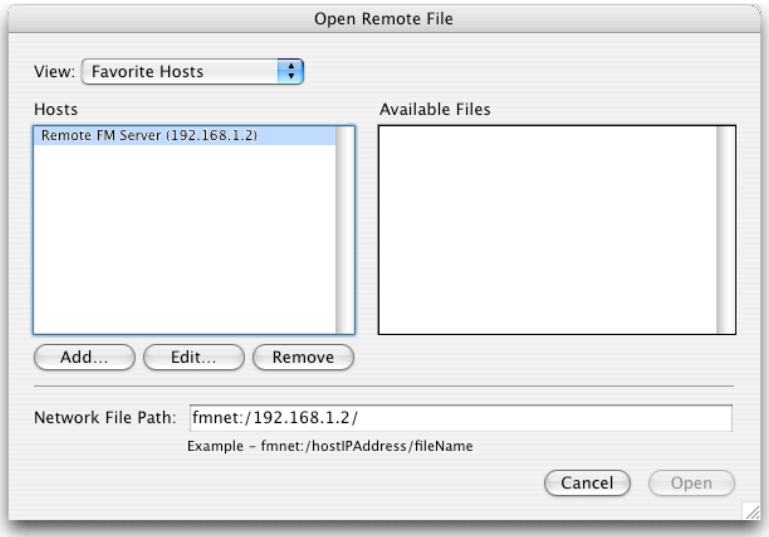
- Start the **FileMaker** application
- In the menu bar, click on **File->Open Remote...**



- Click on the **Add...** button



- Enter the **IP address** of the FileMaker server machine
- Enter a hostname for this machine (optional)
- Click on the **Save** button



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

Acquire more Licenses

If two or more people need to access your office network via VPN, 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.