



# VPN Tracker for Mac OS X



**How-to:**  
**Interoperability with**  
**NetScreen**  
**Internet Security Appliances**

Rev. 4.0

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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 NetScreen Internet Security Appliance.

The NetScreen 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 NetScreen. 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 NetScreen has VPN support built in. Please refer to your NetScreen manual for details.

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

<http://www.NetScreen.com/>

For this document, ScreenOS 4.01 and 5.0.0r3.0 has been used.

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

VPN Tracker is compatible with Mac OS X 10.2.5+ / 10.3.

### 3. Connecting to a NetScreen VPN Appliance (single user)

In this example the Mac running VPN Tracker is directly connected to the Internet via a dialup or PPP connection.<sup>1</sup>

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

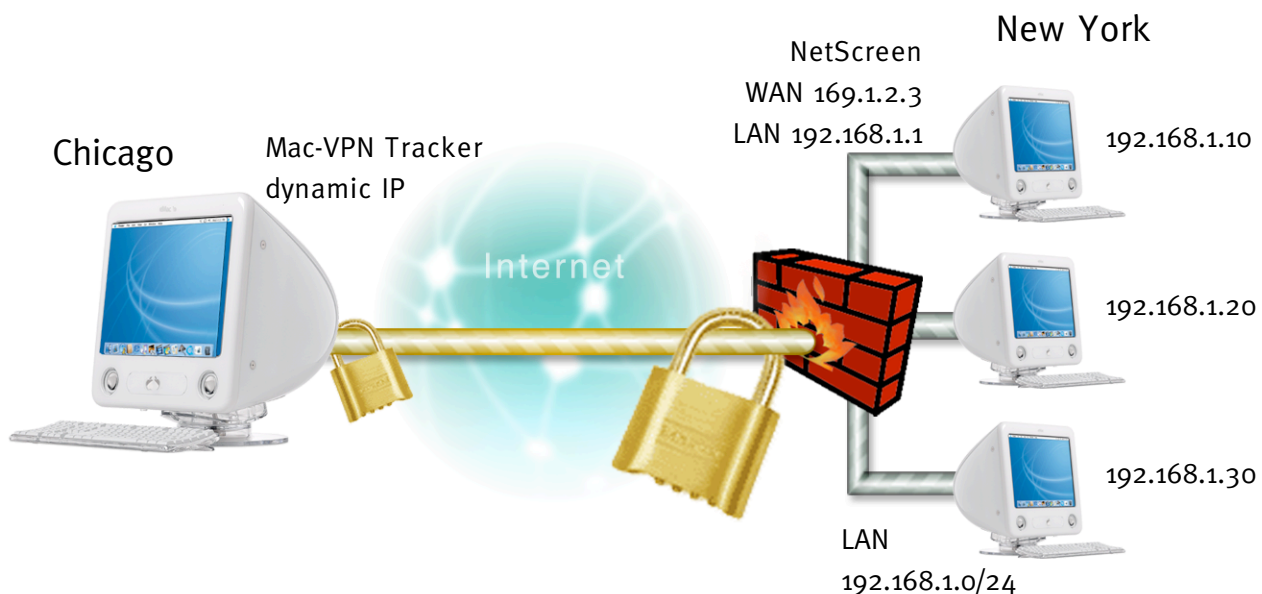


Figure 1: VPN Tracker – NetScreen connection diagram

<sup>1</sup> Please note that the connection via a router, which uses Network Address Translation (NAT), only works if the NAT router supports „IPSEC passthrough“. Please contact your router’s manufacturer for details.

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### 3.1 NetScreen Configuration

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

##### **Step 1**

Create a new User Group:

Go to [Objects -> Users -> Local Groups]. Click “New” to add a group. Type in an arbitrary group name eg. vpntracker-dialup.

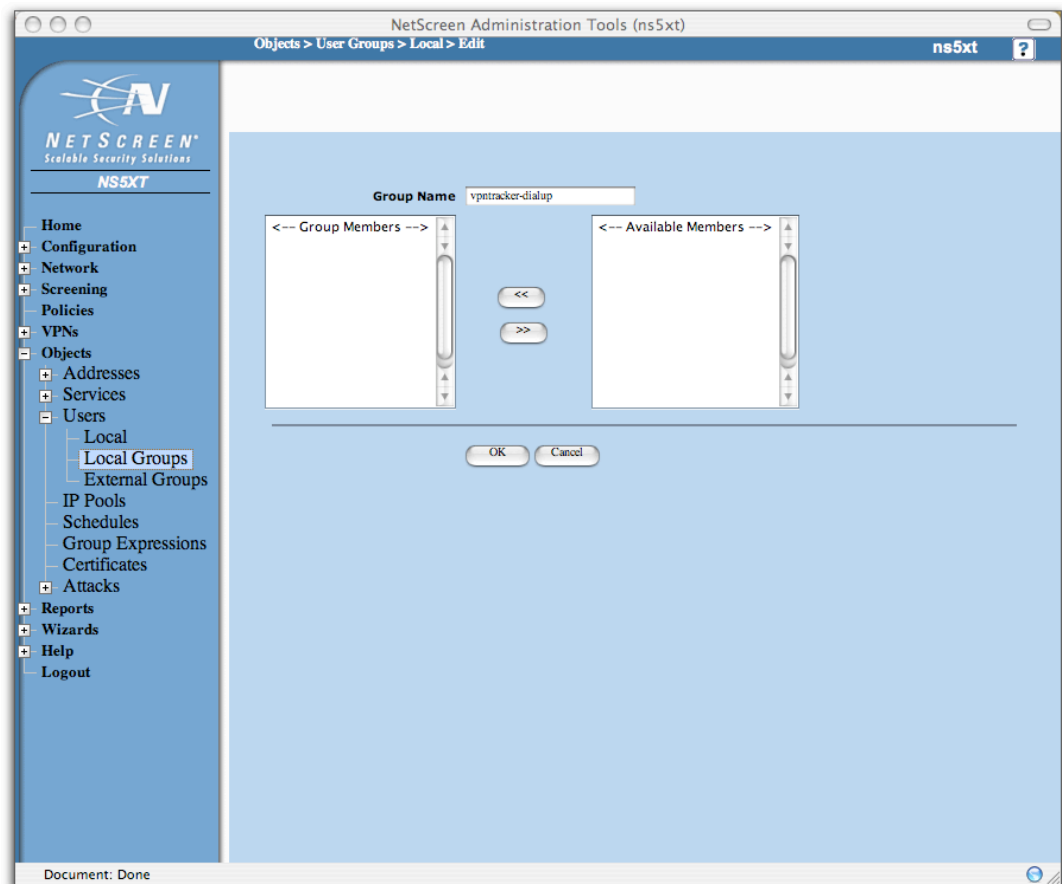


Figure 2: NetScreen – Create User Group

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### Step 2

Create a new user:

Go to [Objects -> Users -> Local]. Then add a user (eg. vpntracker@example.net) to the previously created group. Select “IKE User” and “Simple Identity” and type in an IKE Identity eg. your email address.

The screenshot shows the NetScreen Administration Tools (ns5xt) interface. The left sidebar contains a tree view with the following items: Home, Configuration, Network, Screening, Policies, VPNs, Objects (expanded), Addresses, Services, Users (expanded), Local (selected), Local Groups, External Groups, IP Pools, Schedules, Group Expressions, Certificates, Attacks, Reports, Wizards, Help, and Logout. The main content area is titled 'Auth/IKE/L2TP/XAuth User' and contains the following fields and options:

- User Name:** vpntracker@example.net
- Status:** ☒ Enable, ☐ Disable
- IKE User:** ☒ (Number of Multiple Logins with Same ID: 1)
- Simple Identity:** ☒ (IKE ID Type: AUTO, IKE Identity: vpntracker@example.net)
- Use Distinguished Name For ID:** ☐ (Fields: CN, OU, Organization, Location, State, Country, E-mail, Container)
- Authentication User:** ☐ (User Password: [field])
- XAuth User:** ☐ (Confirm Password: [field])
- L2TP User:** ☐
- L2TP/XAuth Remote Settings:** (Remote IP: 0.0.0.0)
  - IP Pool: None
  - Static IP: 0.0.0.0
  - Primary DNS IP: 0.0.0.0
  - Primary WINS IP: 0.0.0.0
  - Secondary DNS IP: 0.0.0.0
  - Secondary WINS IP: 0.0.0.0

At the bottom of the form are 'OK' and 'Cancel' buttons. The status bar at the bottom left says 'Document: Done'.

Figure 3: NetScreen – Create User

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### Step 3

Add user to your vpnuser group:

Go to [Objects -> Users -> Local Groups]. Then click on “Edit”. Select the user from the list and click on “<<”.

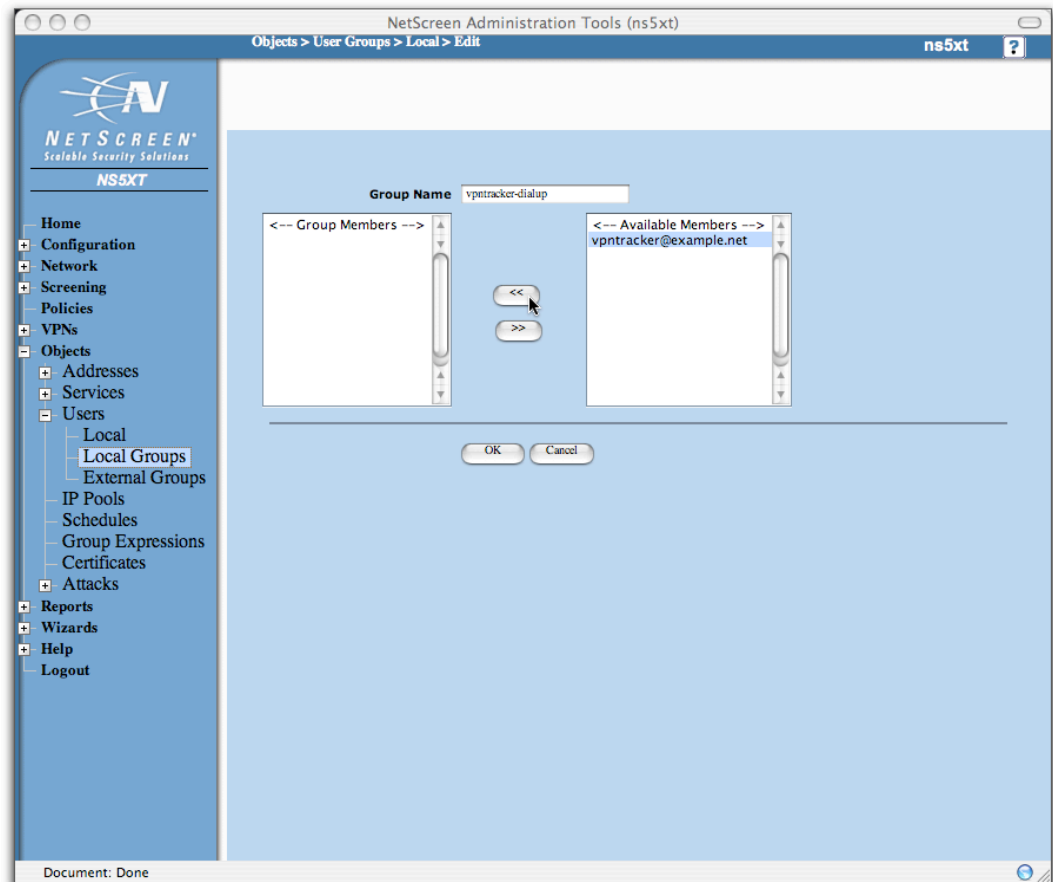


Figure 4: NetScreen - User Group settings

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### Step 4

Create a new Gateway:

- Gateway Name: arbitrary Name (e.g. **mac-vpntracker**)
- Security Level: **Compatible**
- Remote Gateway Type: **Dialup User**: the previously created User Group
- Preshared Key: your Pre-shared key

**Please Note:** Every user in the Dialup User Group “vpntracker-dialup” uses the same Pre-shared key. If you don’t want to allow this, you must create a separate gateway for every user.

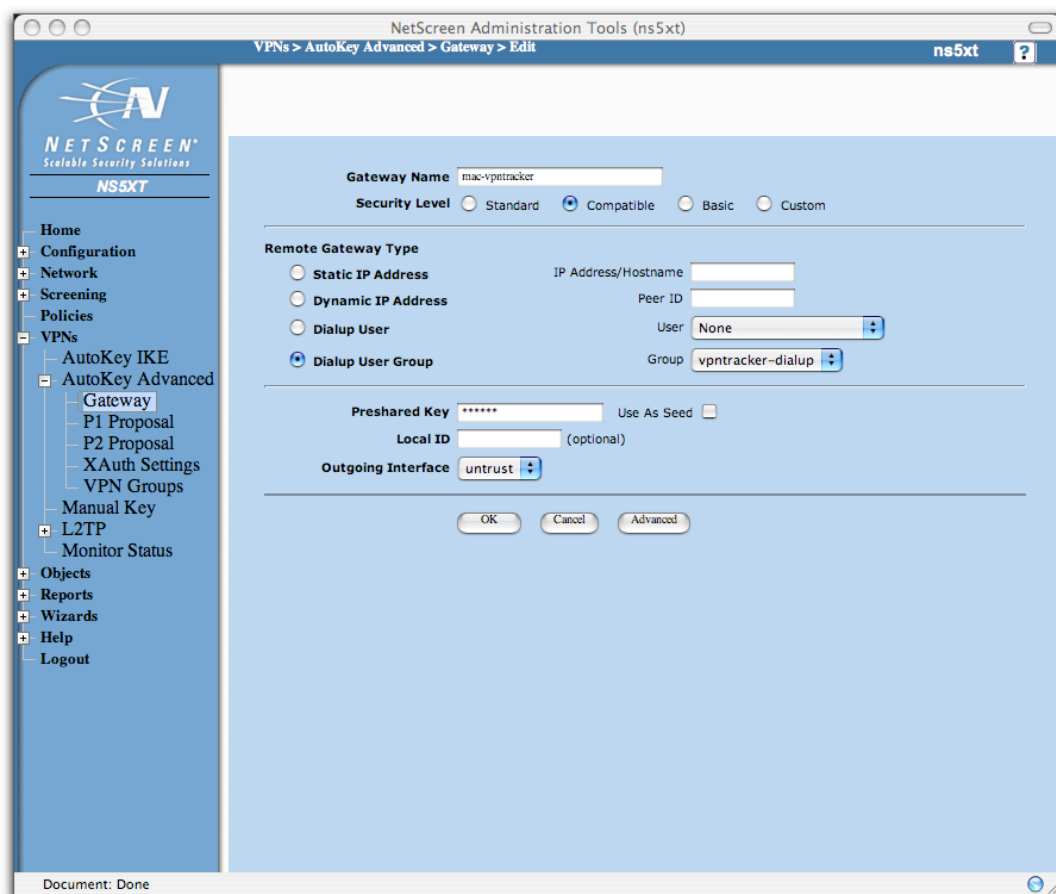


Figure 5: NetScreen – Gateway Settings



### 3. Connecting to a NetScreen VPN Appliance (single user)

Click on the “Advanced” Button and enable “**Aggressive Mode**”. You can leave the other settings at their default value (i.e. NAT-Traversal and all other options should be unchecked).

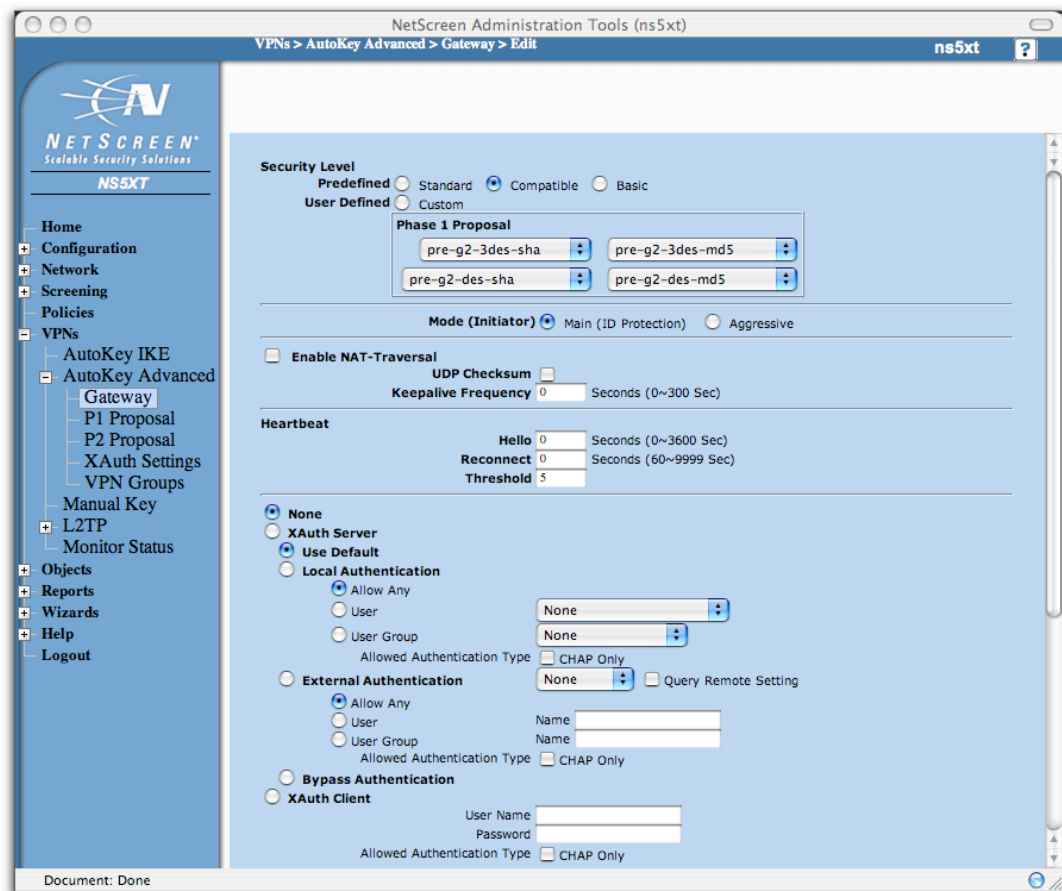


Figure 6: NetScreen – Advanced Gateway settings

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### Step 5

Create a new AutoKey IKE

Go to [VPNs -> Autokey IKE] and click “New”. Enter a name and select “**Compatible**” as Security Level. Choose as “Remote Gateway” the predefined gateway from step 4 (e.g. “**mac-vpntracker**”).

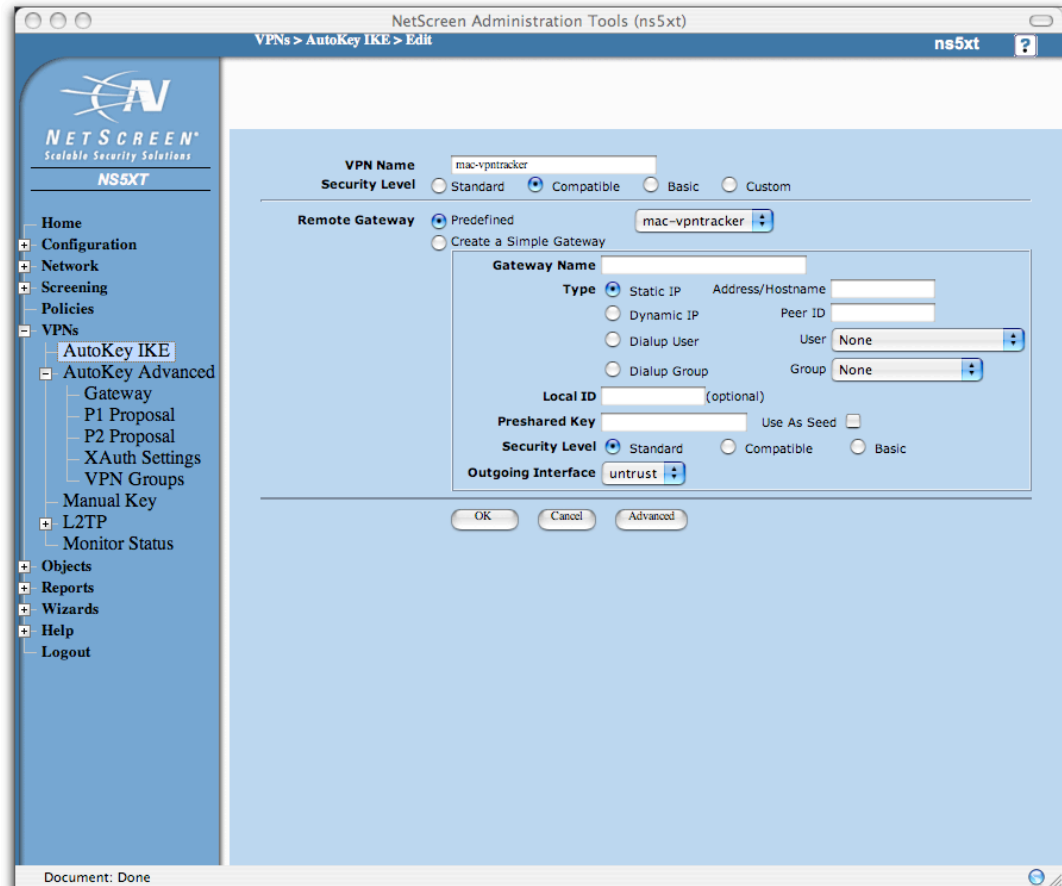


Figure 7: NetScreen - AutoKey IKE settings

### 3. Connecting to a NetScreen VPN Appliance (single user)

Click on “Advanced” to check the default settings. Normally it isn’t necessary to change anything here.

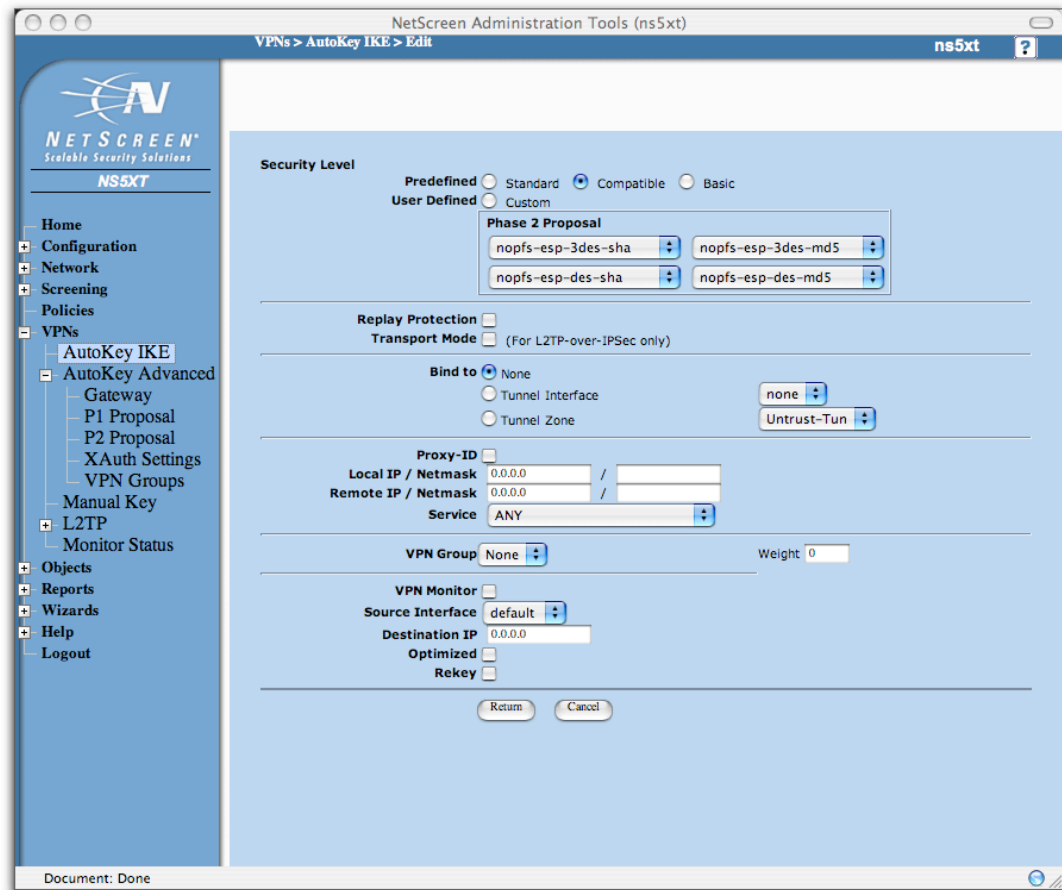


Figure 8: NetScreen - Advanced AutoKey IKE settings

### 3. Connecting to a NetScreen VPN Appliance (single user)

After steps 1-5 the IPsec Configuration should look like this:

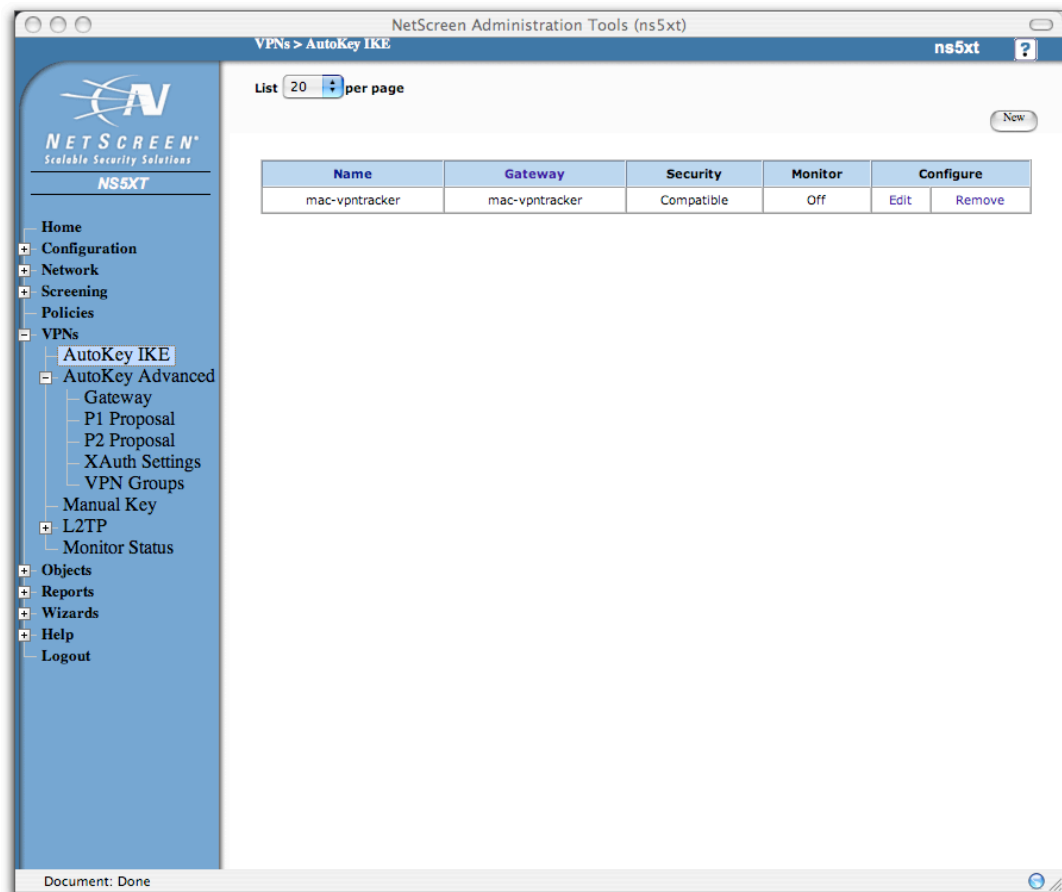


Figure 9: NetScreen - Auto IKE Summary

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### Step 6

Create a new Policy

You must now edit the Firewall policies to allow the VPN Tracker Mac to access the local network on the NetScreen side.

To create a new policy, choose “From: Untrust” -> “To: Trust” and press the “New” button:

- Source Address: **Address Book -> Dial-Up VPN**
- Destination Address: the network behind your Netscreen appliance (e.g. **192.168.1.0/24**)
- Action: **Tunnel**
- Tunnel: the previously created VPN (e.g. **mac-vpntracker**)
- Position at Top: **checked**

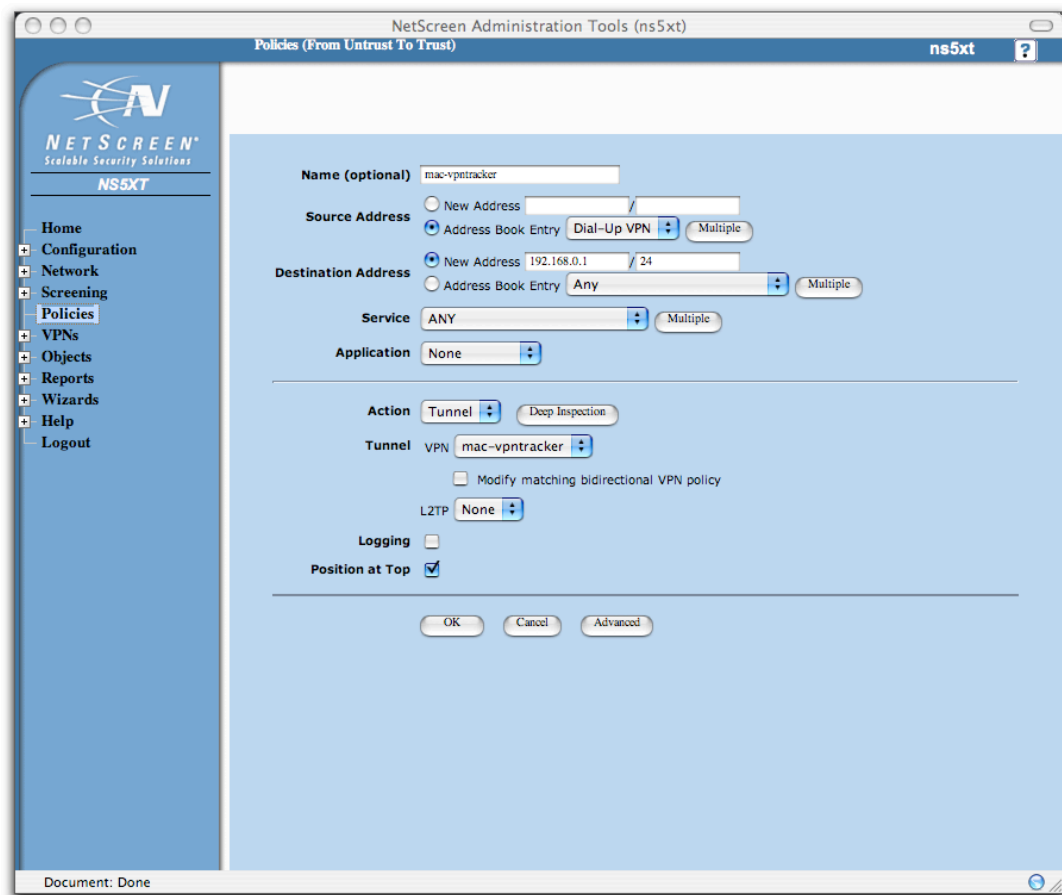


Figure 10: NetScreen - Policies

#### 3.2 VPN Tracker configuration

##### Step 1

Add a new connection with the following options:

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

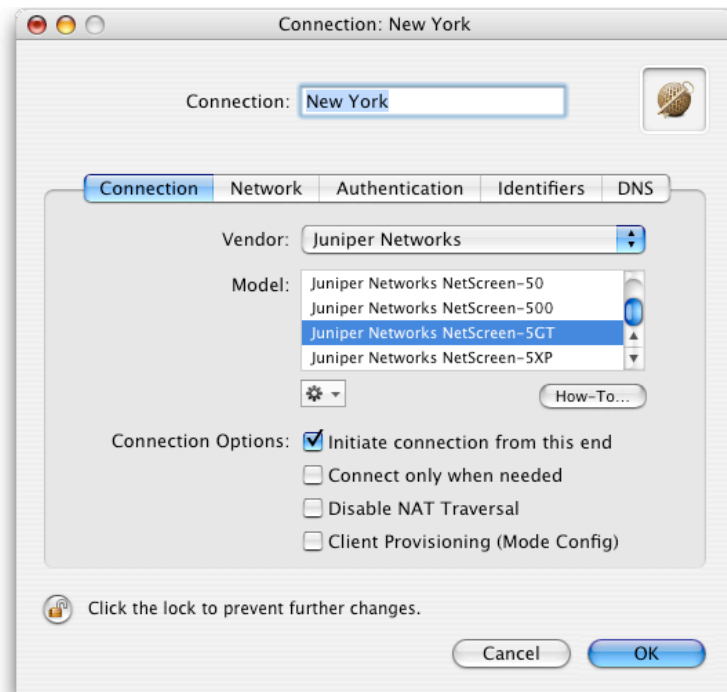


Figure 11: VPN Tracker - Connection settings

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### 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).

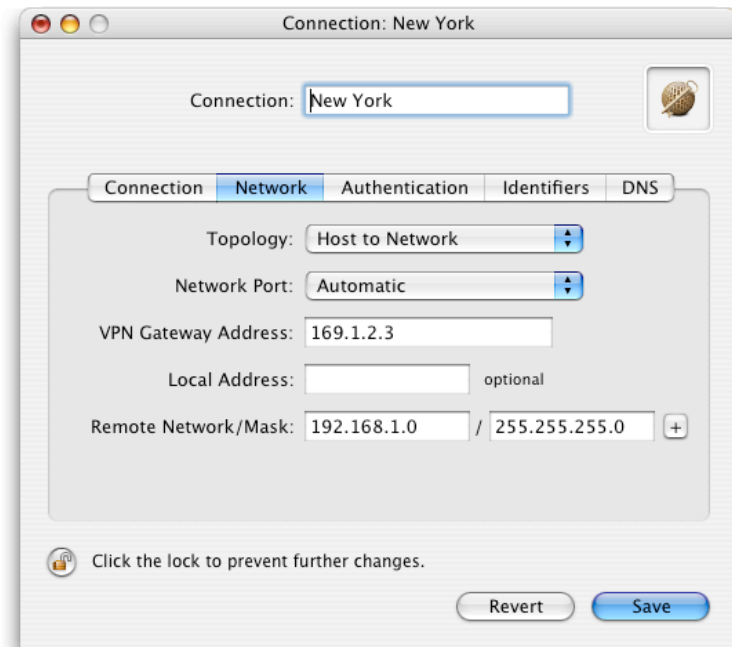


Figure 12: VPN Tracker – Network settings

**Please note:** In order to access multiple remote networks simultaneously, just add them by pressing the Plus-button.<sup>2</sup>

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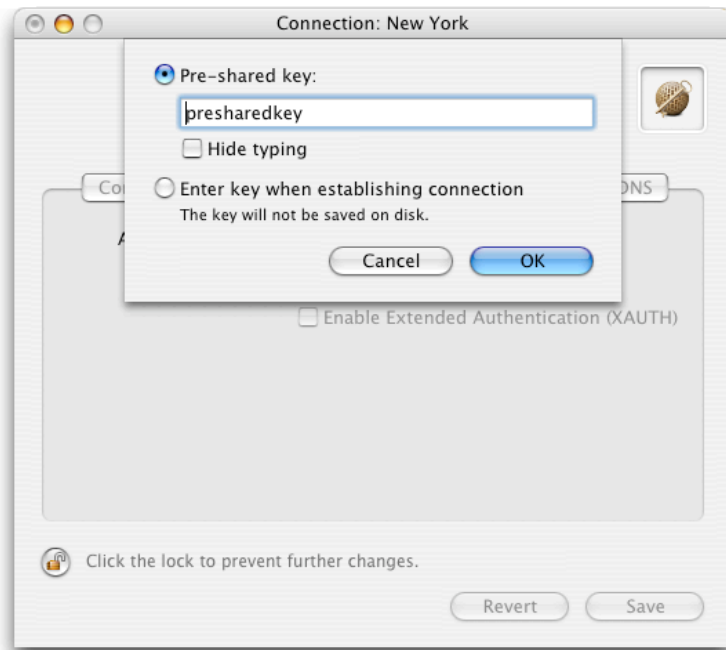
<sup>2</sup> For this step VPN Tracker Professional Edition is needed.

### 3. Connecting to a NetScreen VPN Appliance (single user)

#### Step 3

Change your Authentication Settings:

- Pre-shared key: the same Pre-shared key as in the NetScreen configuration.
- Enable XAUTH if the corresponding option is enabled on the NetScreen.



*Figure 13: VPN Tracker - Authentication settings*



### 3. Connecting to a NetScreen VPN Appliance (single user)

#### Step 4

Identifier Settings:

- Local Identifier: your identity you've supplied in figure 2 in section 3.1 (e.g. **vpntracker@equinux.com**)
- Remote Identifier: **Remote endpoint IP address.**



Figure 14: VPN Tracker - Identifier 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 NetScreen. 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 NetScreen network from the dialed-in Mac in the "Terminal" utility:

```
ping 192.168.1.10
```

## 4. Connecting to a NetScreen VPN Appliance (multiple users)

In order to authenticate multiple clients with different credentials, we recommend using XAuth for user authentication. To assign virtual IP addresses by the NetScreen appliance, Mode-Config will be used.

### Step 1

Please refer to step 1 in section 3.2.

## 4. Connecting to a NetScreen VPN Appliance (multiple users)

### Step 2

Create new users:

Go to [Objects -> Users -> Local]. Then add a user (eg. vpntracker@example.net) to the previously created group. Select **"IKE User"** and **"Simple Identity"** and type in an IKE Identity eg. your email address. Additionally, check the **"XAuth User"** box and enter a password for the user. Repeat this step for all your users.

NetScreen Administration Tools (ns5xt)

Objects > Users > Local > Edit

ns5xt

**Auth/IKE/L2TP/XAuth User**

User Name: vpntracker Groups: vpntracker-dialup

Status: ☒ Enable ☐ Disable

☒ IKE User Number of Multiple Logins with Same ID: 1

☒ Simple Identity IKE ID Type: AUTO IKE Identity: vpntracker@equinix.com

☐ Use Distinguished Name For ID

CN:

OU:

Organization:

Location:

State:

Country:

E-mail:

Container:

☐ Authentication User User Password:

☒ XAuth User Confirm Password:

☐ L2TP User

**L2TP/XAuth Remote Settings** ( Remote IP: 0.0.0.0 )

IP Pool: None Static IP: 0.0.0.0

Primary DNS IP: 0.0.0.0 Primary WINS IP: 0.0.0.0

Secondary DNS IP: 0.0.0.0 Secondary WINS IP: 0.0.0.0

OK Cancel

Figure 15: NetScreen - XAuth User settings

#### 4. Connecting to a NetScreen VPN Appliance (multiple users)

##### Step 3

Add users to your vpnuser group:

Go to [Objects -> Users -> Local Groups]. Then click on “Edit”. Select the users from the list and click on “<”, in order to add them to your group.

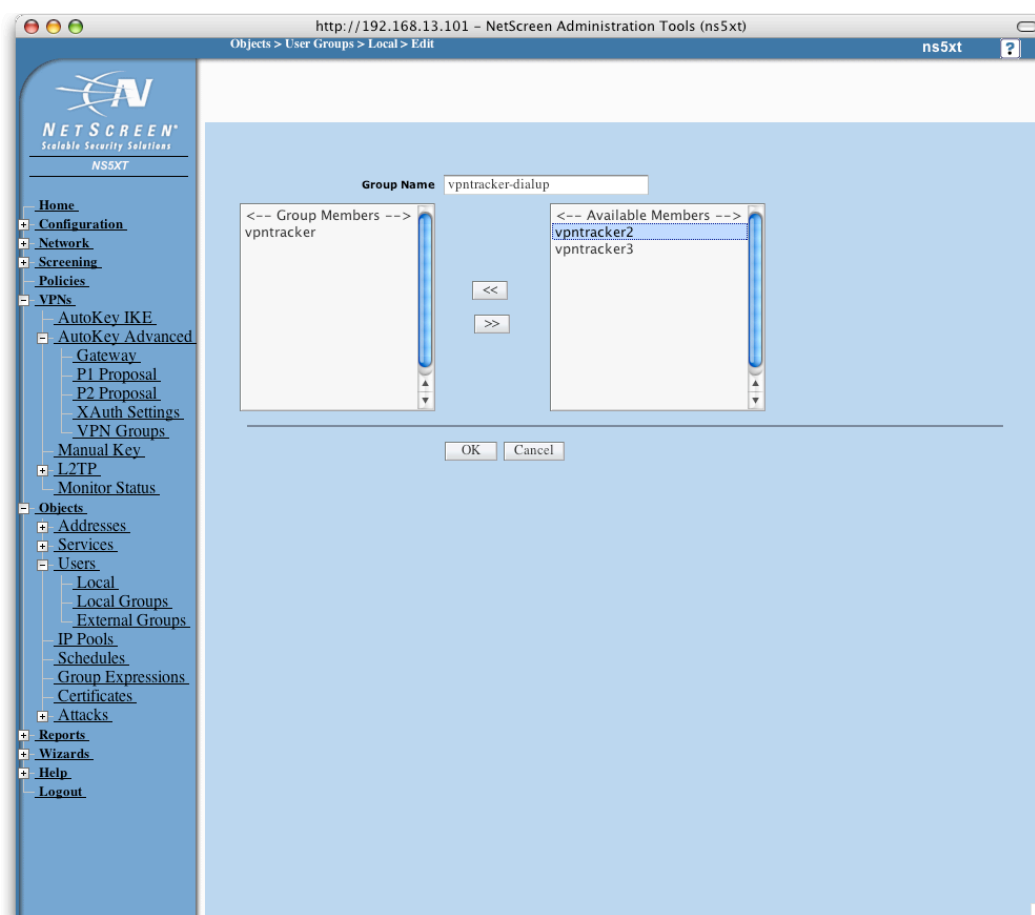


Figure 16: NetScreen - User Group settings

#### 4. Connecting to a NetScreen VPN Appliance (multiple users)

##### Step 4

Create a new Gateway:

- Gateway Name: arbitrary Name (e.g. **mac-vpntracker**)
- Security Level: **Compatible**
- Remote Gateway Type: **Dialup User**: the previously created User Group
- Preshared Key: your Pre-shared key

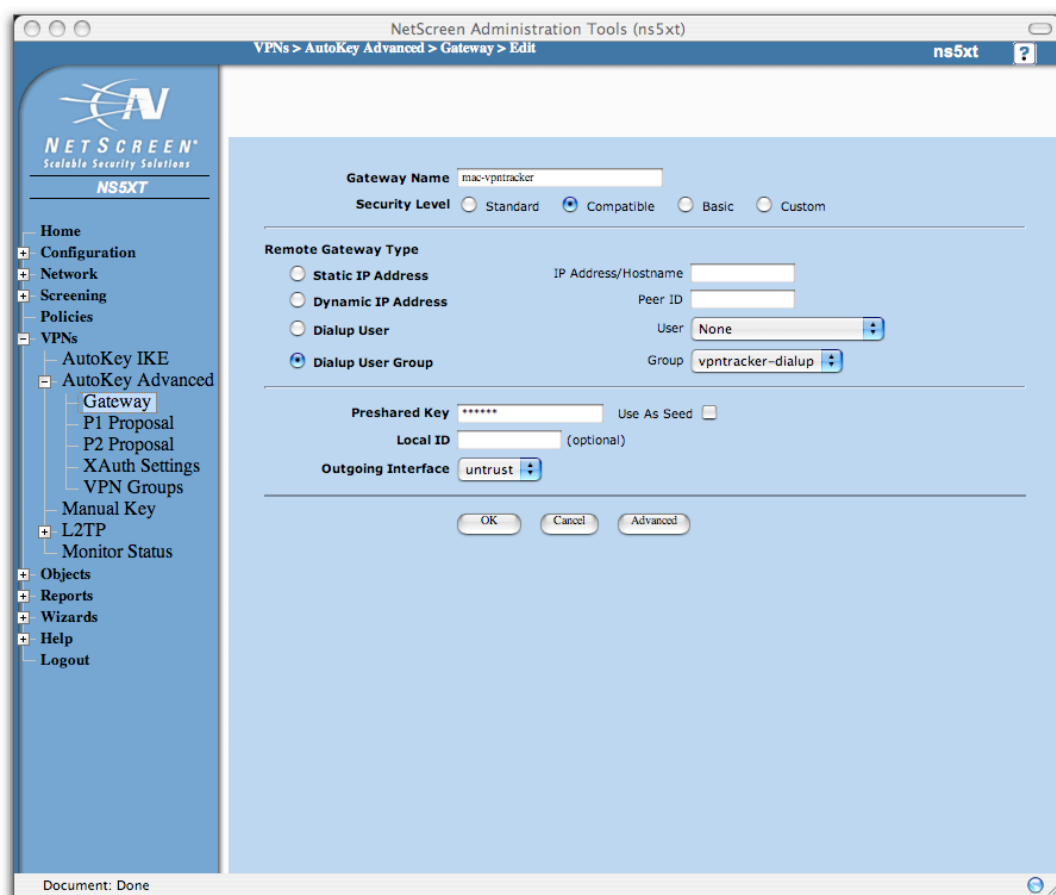


Figure 17: NetScreen – Gateway Settings

## 4. Connecting to a NetScreen VPN Appliance (multiple users)

Advanced Gateway Settings:

- Security Level (Predefined): **Compatible**
- Mode (Initiator): **Aggressive**
- NAT-Traversal: **Enabled**
- XAuth Server: **Enabled**
  - Local Authentication: **User Group** (select your VPN user group here)

Security Level

Predefined ☐ Standard ☒ Compatible ☐ Basic

User Defined ☐ Custom

Phase 1 Proposal

pre-g2-3des-sha pre-g2-3des-md5

pre-g2-des-sha pre-g2-des-md5

Mode (Initiator) ☐ Main (ID Protection) ☒ Aggressive

☒ Enable NAT-Traversal

UDP Checksum ☐

Keepalive Frequency 0 Seconds (0~300 Sec)

Heartbeat

Hello 0 Seconds (0~3600 Sec)

Reconnect 0 Seconds (60~9999 Sec)

Threshold 5

☐ None

☒ XAuth Server

☐ Use Default

☒ Local Authentication

☐ Allow Any

☐ User

☒ User Group

Allowed Authentication Type ☐ CHAP Only

☐ External Authentication

☒ Allow Any

☐ User

☒ User Group

Allowed Authentication Type ☐ CHAP Only

☐ Bypass Authentication

☐ XAuth Client

User Name

Password

Allowed Authentication Type ☐ CHAP Only

Preferred Certificate(optional)

Local Cert None

Peer CA All

Peer Type X509-SIG

☐ Use Distinguished Name for Peer ID

CN

OU

Organization

Location

State

Country

Figure 18: NetScreen - Advanced Gateway settings

## 4. Connecting to a NetScreen VPN Appliance (multiple users)

### Step 5

IP Pool settings:

Please create an IP pool with IP addresses that should get assigned to the VPN clients. This could be addresses from the local network or any other (private) network.

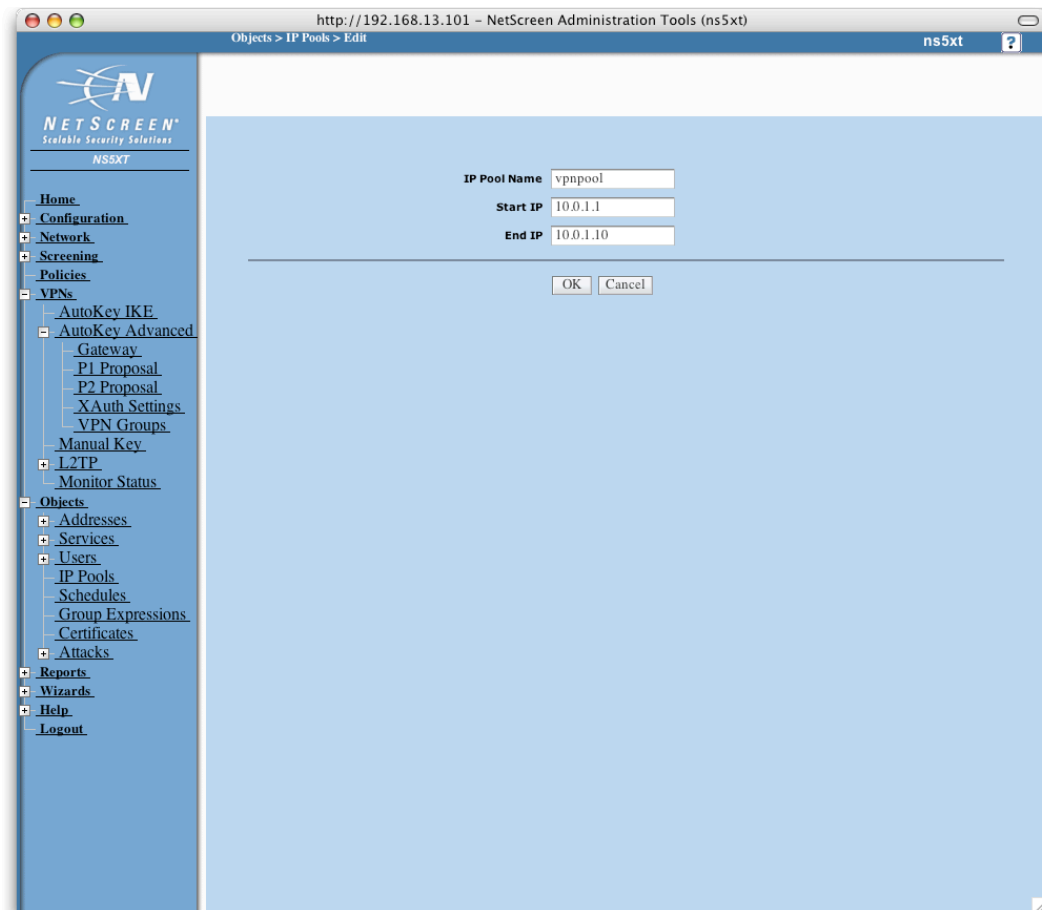


Figure 19: NetScreen - IP Pool settings

## 4. Connecting to a NetScreen VPN Appliance (multiple users)

### Step 6

XAuth Settings:

- IP Pool Name: a previously defined IP Pool (e.g. **vpnpool**)
- DNS Primary Server IP: your local primary DNS Server (e.g **192.168.1.1**)
- DNS Secondary Server IP: optional

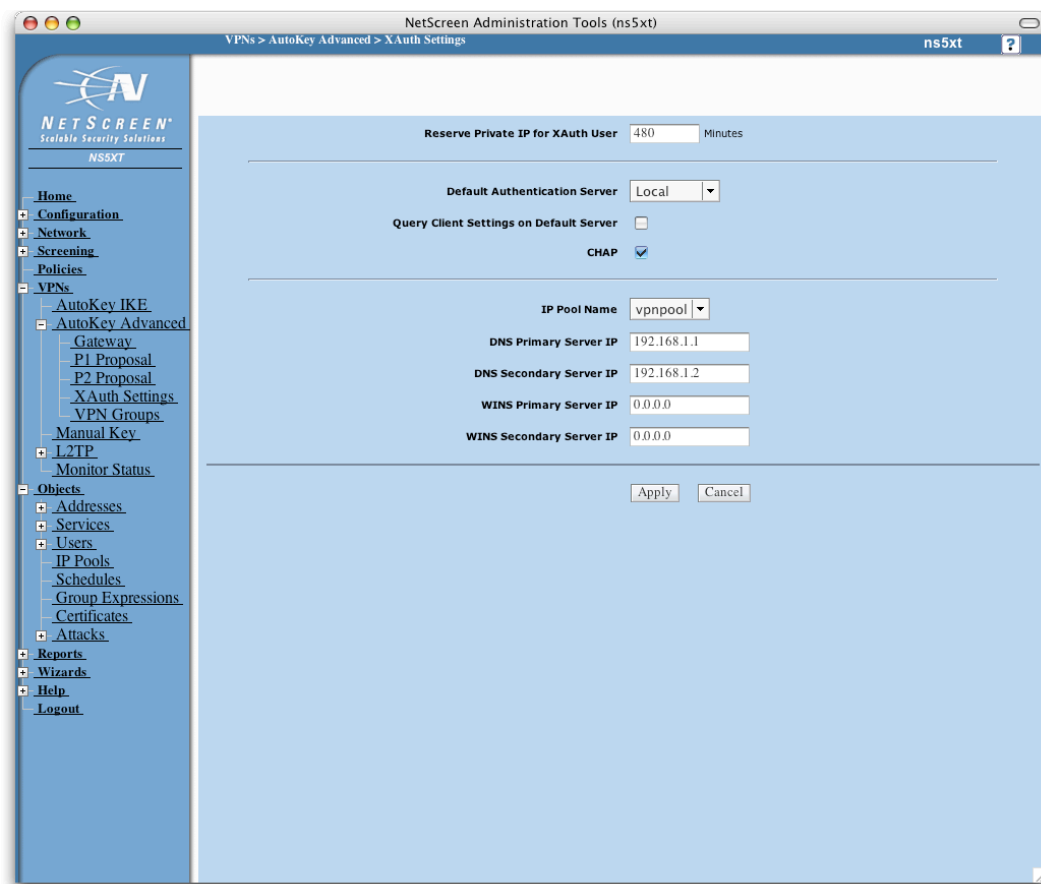


Figure 20: NetScreen - Advanced Gateway settings

### Step 7-8

Please refer to steps 5-6 in chapter 3.2.



## 4. Connecting to a NetScreen VPN Appliance (multiple users)

### 4.1 VPN Tracker Configuration

#### Step 1

Add a new connection with the following options:

- Vendor: „NetScreen“
- Model: your VPN device
- Client Provisioning (Mode Config): **Enabled**

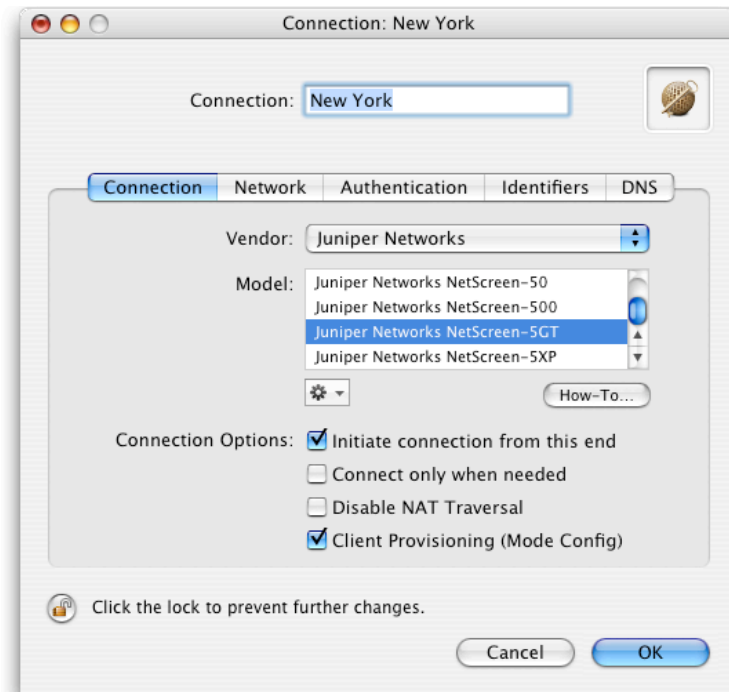


Figure 21: VPN Tracker - Connection setting

#### 4. Connecting to a NetScreen VPN Appliance (multiple users)

##### 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**).

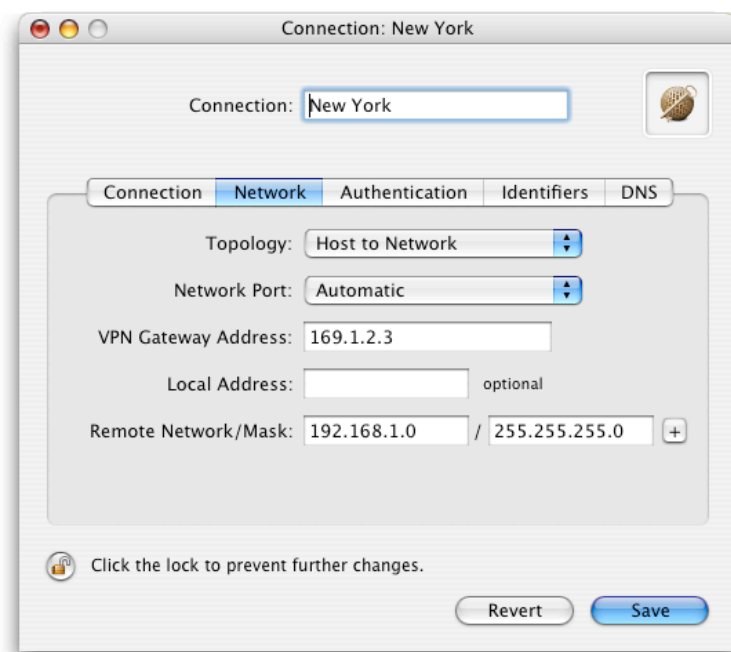


Figure 22: VPN Tracker – Network settings

**Please note:** In order to access multiple remote networks simultaneously, just add them by pressing the Plus-button.<sup>3</sup>

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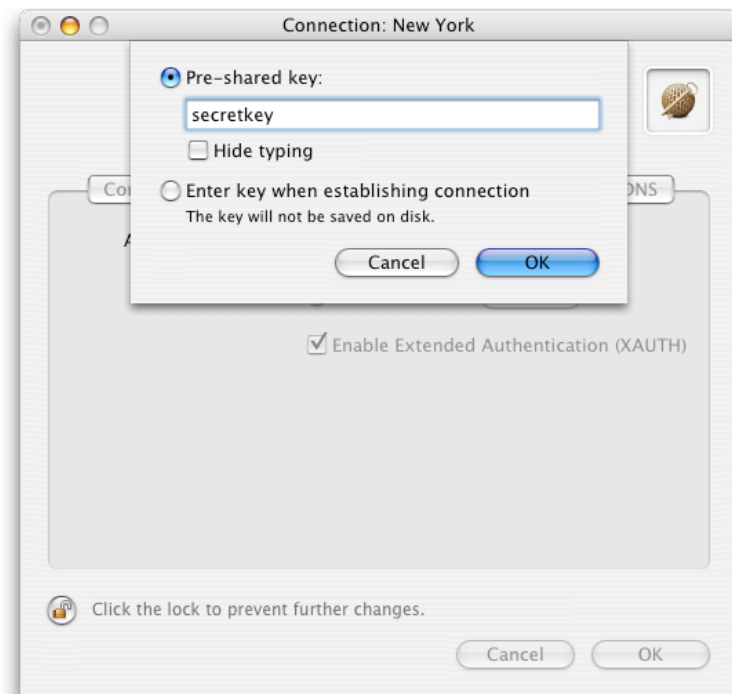
<sup>3</sup> For this step VPN Tracker Professional Edition is needed.

## 4. Connecting to a NetScreen VPN Appliance (multiple users)

### Step 3

Change your Authentication Settings:

- Pre-shared key: the same Pre-shared key as in the NetScreen configuration.
- Enable Extended Authentication (XAUTH): **Enabled**



*Figure 23: VPN Tracker - Authentication settings*

### Step 4-5

Please refer to steps 4-5 in chapter 3.2.