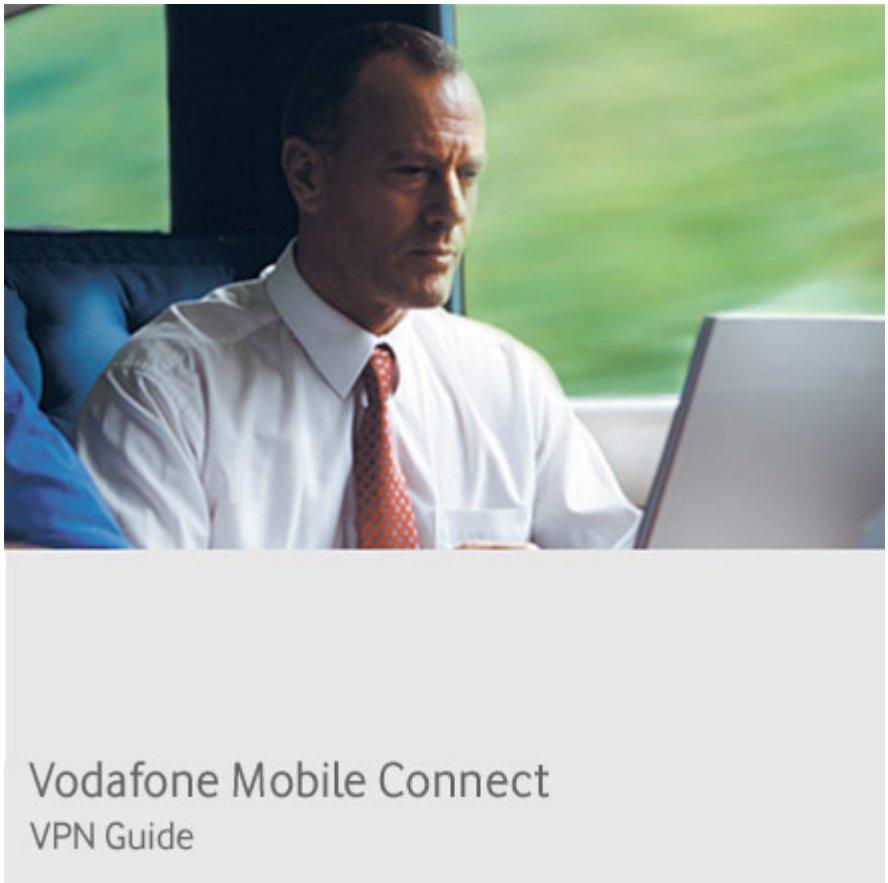
VPN End to End – SonicWALL VPN Client

Appendix B: SonicWALL Global VPN Client

Technical Notes for use with Vodafone Mobile Connect services

Date: **31 May 2007**

Revision No: **3.0**



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Scope

This document presents results of installation, configuration, and operations testing of VPN components with the Vodafone Mobile Connect service. The document is not intended to be a tutorial on VPN concepts nor does it supersede or replace the vendor's documentation. The reader is referred to the VPN vendor for definitive guidance on the proper and recommended use of their product. While Vodafone Group has taken care to ensure that the information contained herein is accurate, no responsibility can be accepted for errors, omissions, or inaccuracies.

Document History

Version	Date	Reason
1.0	October 2003	Initial release using GPRS network. Client documentation included in main document.
2.0	May 2006	Creation of separate document for client configuration. Update to new versions of VPN software and focus on 3G network performance.
3.0	May 2007	Editorial changes, R9 references

File Reference

VPN_SonicWall_TZ_170W_Appendix_B_Client v3

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1 Executive summary

This Appendix B is in addition to the detailed document for SonicWALL Global VPN Client and describes the set up process in a detailed way with example screen shots taken from the initial processes. It is a companion guide to 'VPN - SonicWALL_TZ 170 W_5GT_Appendix_A_Concentrator.doc' and the overview document for the SonicWALL VPN solutions.

- Initial installation of the client software is reviewed.
- Configuration of the VPN client using sample parameters is illustrated.
- The default configuration for the client is to start up manually. Options for automatic start-up are presented.
- As the VPN client runs as a system utility, no special integration with Vodafone Mobile Connect software is available
- Connections to corporate applications and file servers are shown
- Logging of connection status is illustrated.

Further information is available from the vendor documentation and website www.sonicwall.com.

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2 VPN Client Installation and Configuration

The Global VPN Client can be installed on a Windows Workstation. To install the Software a user needs Administrator rights on the local machine. This client can be used to establish a VPN connection to the SonicWALL TZ 170 W firewall/VPN appliance. Other VPN Clients have to be de-installed.

The Global VPN Client uses the “Deterministic Network Extender” (DNE) Package of Deterministic Networks, Inc.

2.1 Test Environment

The following components were used in this evaluation:

- Windows 2000 Professional (with Service Pack 3)
- SonicWALL TZ 170 W gateway running Sonic OS 3.1.0
- SonicWALL Global VPN Client 3.1.0.556

Of course, newer versions of the components may be available with differing capabilities or a different interface. However, the general principles of configuration and settings illustrated here are likely to still be relevant and valid.

2.2 VPN Client System requirements

Verify that your computer meets these requirements:

- A single, Pentium®-class processor or its equivalent.
- One of the following operating systems:
  - Microsoft® Windows 98 (second edition)
  - Windows ME
  - Windows NT 4.0 (with Service Pack 6, or higher)
  - Windows 2000 Professional (with Service Pack 3, or higher)
  - Windows XP Professional or Home Edition or Tablet PC edition
- A SonicWALL gateway running firmware version 6.4.2.0 (or higher), SonicOS 1.0.0.0 (or higher), SonicOS Standard 2.0.0.0 (or higher), or SonicOS Enhanced 2.0.0.0 (or higher) and configured for SonicWALL GroupVPN.
- To install the VPN Client:
  - CD-ROM drive, network drive or web site
  - Administrator privileges if installing on Windows NT or Windows 2000

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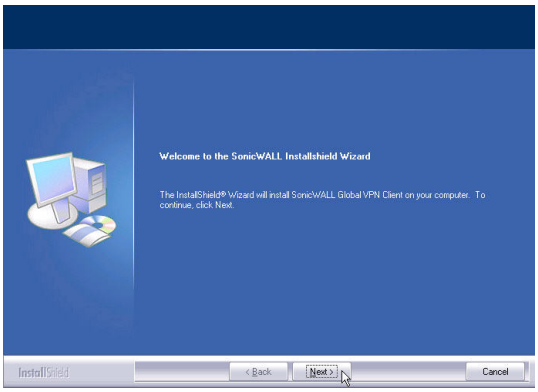
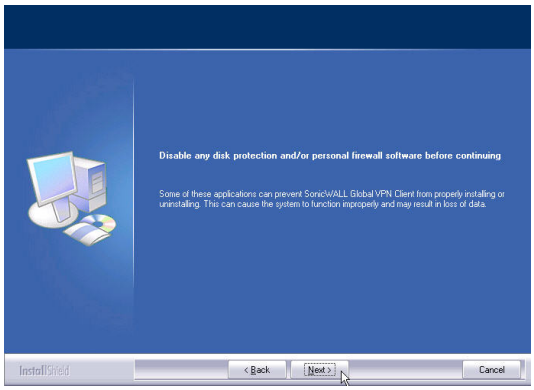
- To use the VPN Client:
  - Direct network connection (cable, WLAN or DSL modem and network adapter/interface card)
  - Internal or external modem
  - PPPoE drivers if DSL is used
- To connect using a digital certificate for authentication:
  - A digital certificate signed by a Certificate Authority (CA) installed on your PC

2.3 VPN Client installation

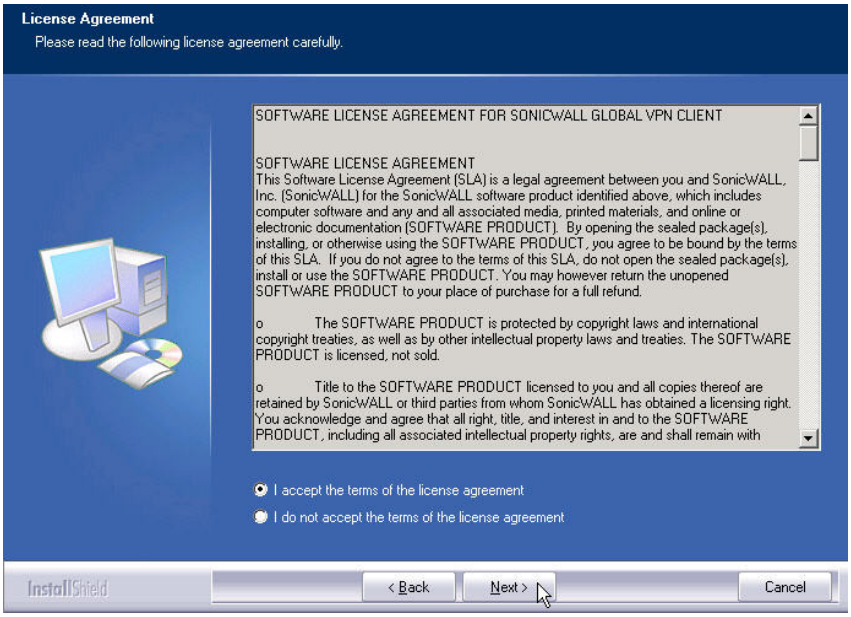
Run the installation program according to the directions given by the program. Following slides shows the Global VPN Client 3.1.0.556 Installation :

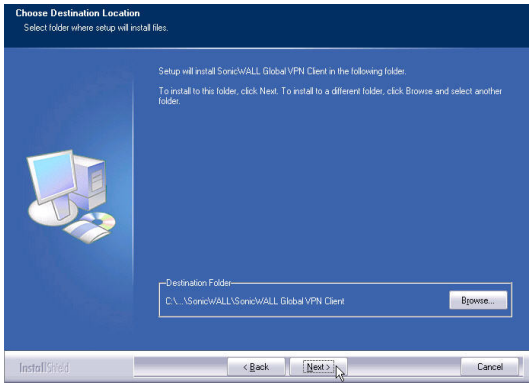
At the “Setup” window click “Next >”, until the License Agreement appears.

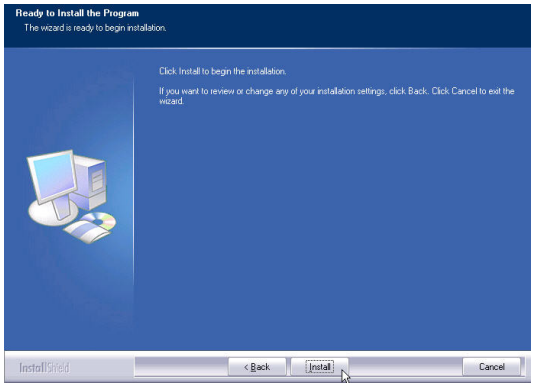


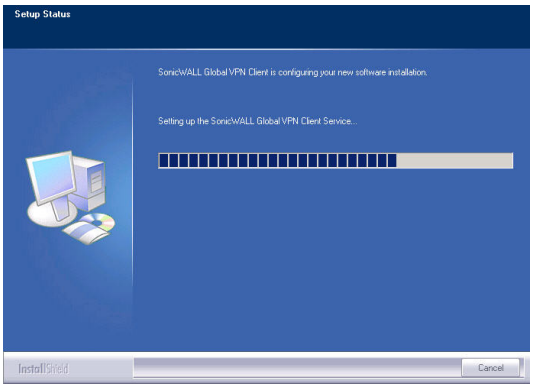


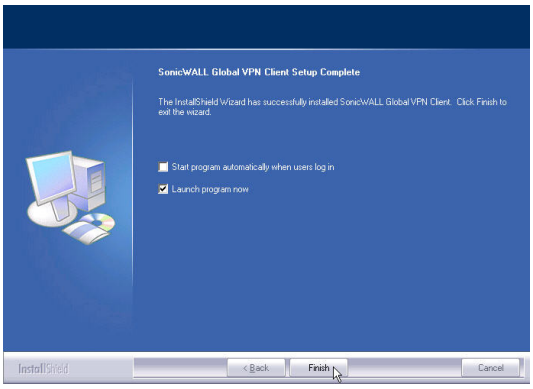
Follow the screens for “License Agreement” and “Setup Type and Destination and Program Folders” and install the Global VPN Client.











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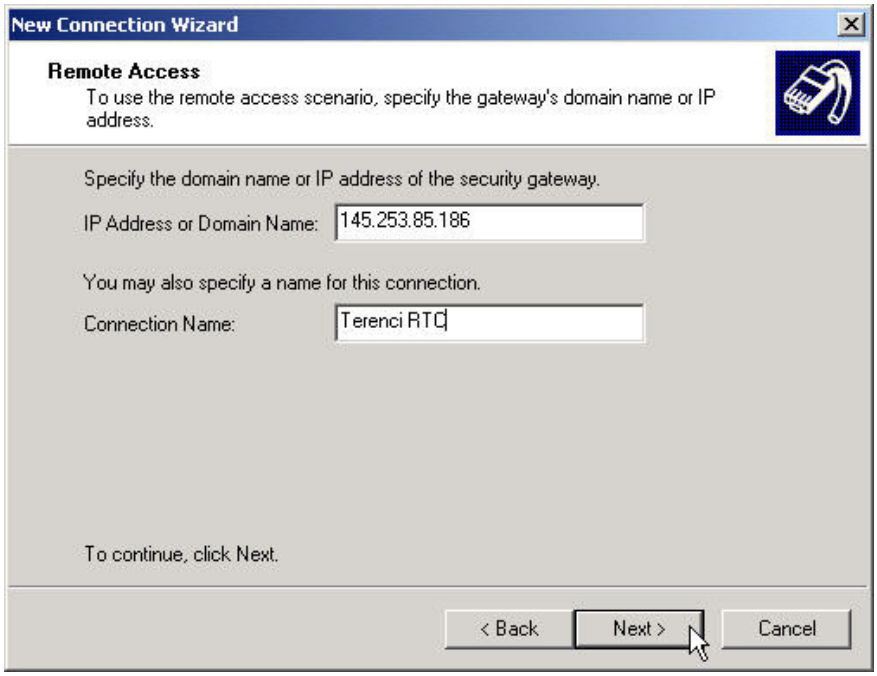
The Client is automatically started and is displayed in the system tray.

2.4 Configuring a new Client connection

When started for the first time, the New Connection Wizard is initiated. Here, the basic data of the gateway is configured; the residual setup is acquired from the SonicWALL device after authentication. To complete the configuration, it is recommended to have a working connection to the internet.

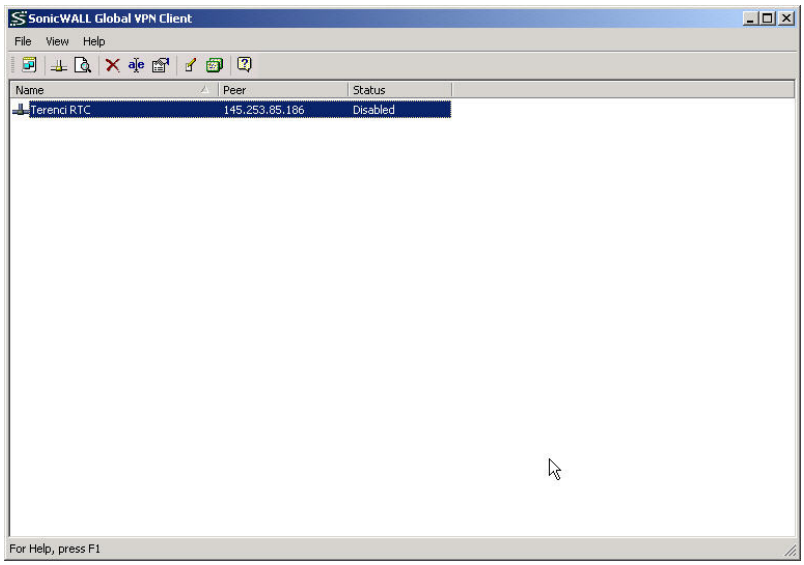
In this case, we want to establish a Remote Access Connection, therefore select the "Remote Access" radio button and click "Next >".

In the next screen, enter the FQDN or the IP address of the gateway and a descriptive name for this connection.



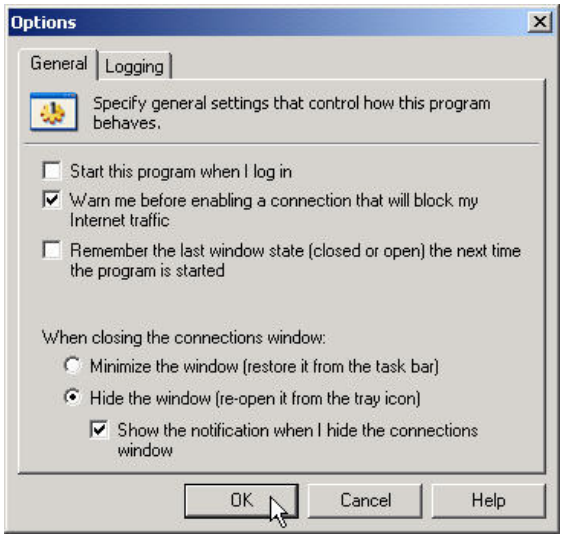
If desired, a shortcut can be put on the desktop to easily access the connection.

After clicking “Finish”, the new connection is visible in the VPN client’s main window.



2.5 Logging on the client

There are some additional options which can be modified depending on the desired work flow. Further logging can be set up. From the menu bar, select “View > Options…”.



Logging can be enabled for different aspects of the VPN connection. Depending on the requirement of the user, logging can be enabled or disabled for

- ISAKMP (IKE) information
- Dead Peer Detection telegrams
- NAT keep alive packets

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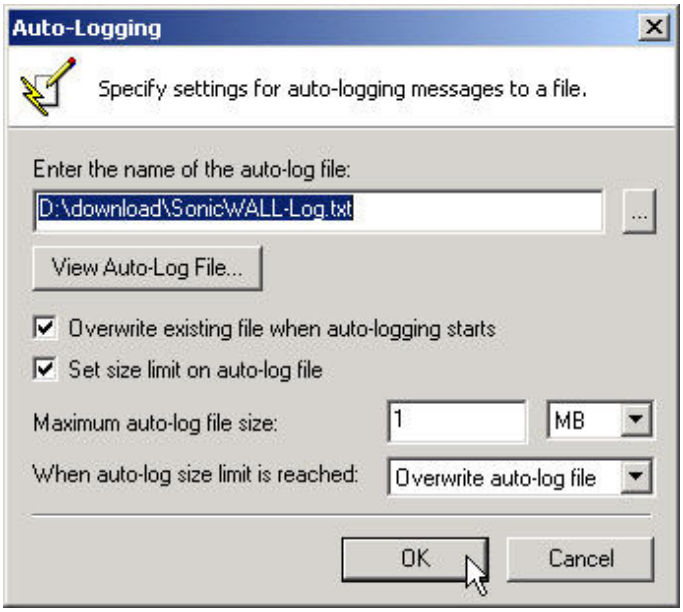
The log can be captured to a file. Enter file name and select behaviour when the size limit is reached.



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3 Configuring VMC Software for VPN Usage

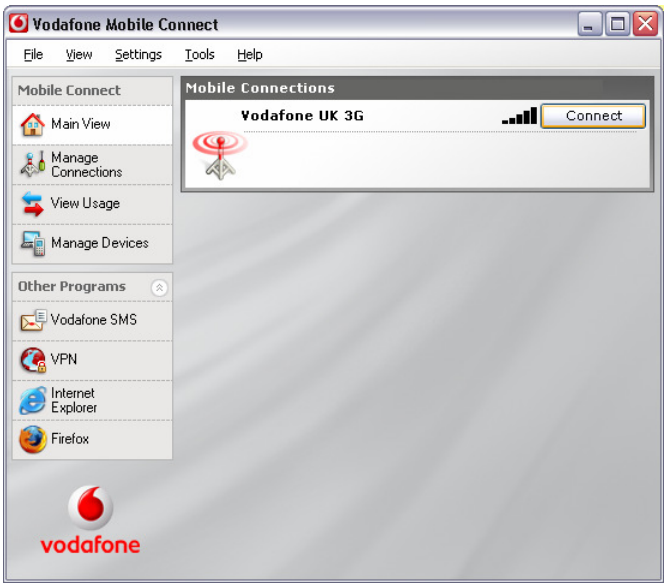
The SonicWALL VPN client is installed as a system utility and runs transparently whenever the computer is started. The client is accessed via the icon in the Windows Notification Area (System Tray). As the client is always running, there is no need (and it is not possible) to configure the VPN button in the Vodafone Mobile Connect software to launch the client.

3.1 Establish the connection (VMC R9)

The new R9 of Vodafone Mobile Connect software offers the same features as earlier versions but with a different user interface.

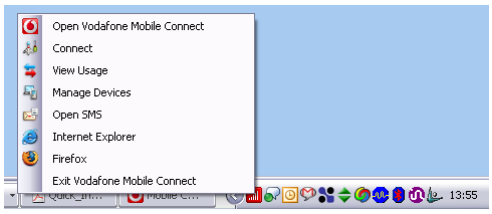
With a SIM card inserted into your datacard (or USB modem), to establish a connection:

1. In the main view, use the **Connect** button, or



2. In the mini-view, use the **Connect** button, or

3. From the Windows Notification Area (system tray), right-click and select **Connect**.



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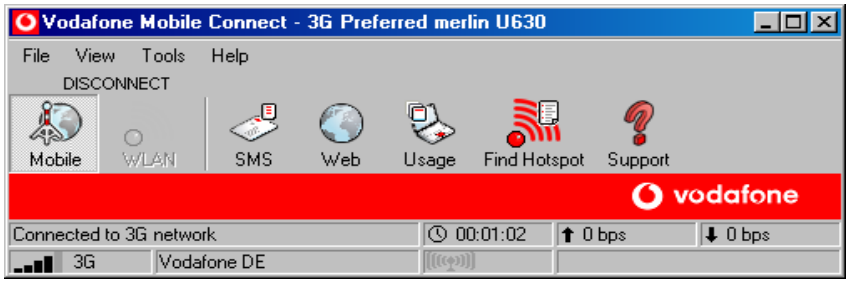
3.2 Establish the connection (VMC R7 and earlier)

Note: The following steps apply to the legacy version of Vodafone Mobile Connect software R7 and earlier.

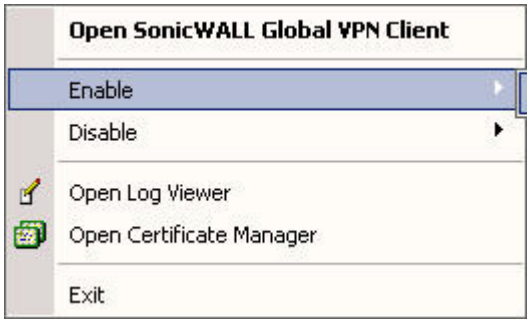


- First you need to build up a connection using your VMC. Insert SIM and PCMCIA card and open the Vodafone Mobile Connect application.
- Press the **Mobile** button in the CONNECT/DISCONNECT area of the toolbar

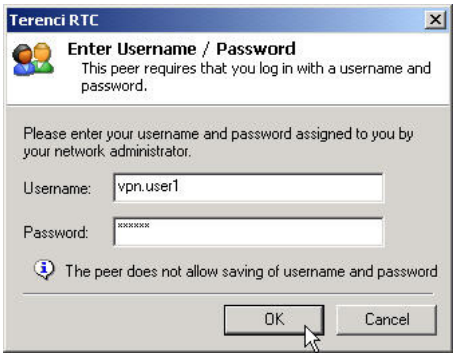
3.3 Establish the VPN

After you build up your preferred connection, the Global VPN Client is able to connect to the remote gateway automatically. Make sure that the Global VPN Client is running in the system tray.

Optionally, the VPN connection can be forced to start by right-clicking the Icon in the system tray and select “Enable… > <VPN Connection Name>”.



When the Phase 1 key exchange is executed by the client, the XAUTH setup will ensure that the user name and password is requested. On entering a correct username and password, the key exchange will be completed.

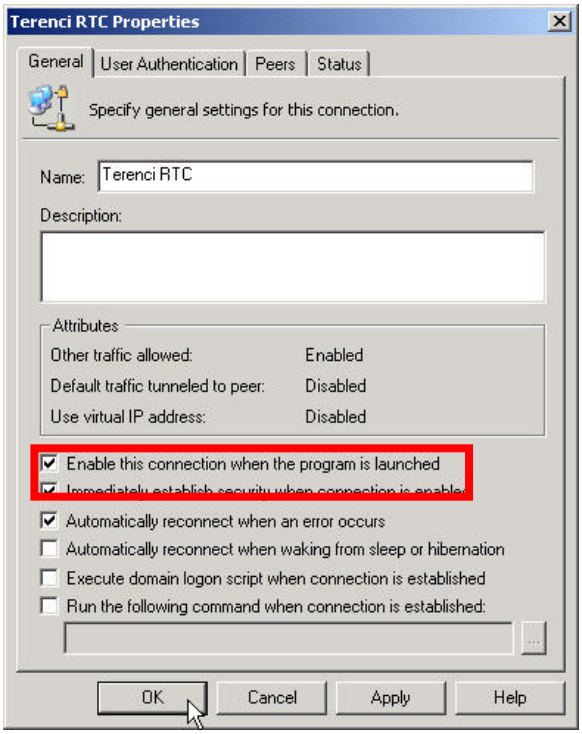


4 Usage & Configuration Options

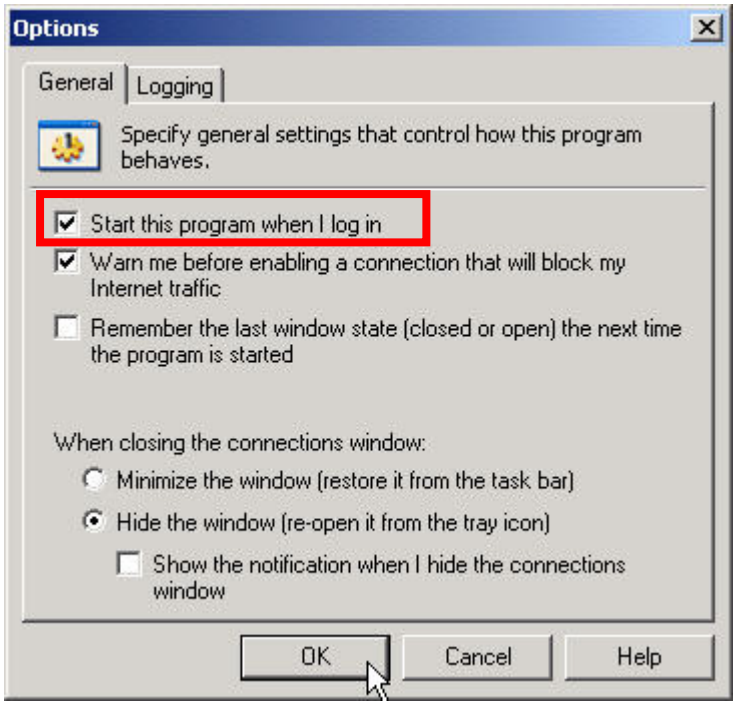
4.1 Configuring the VPN Client to start automatically

Two steps have to be executed to start the client with the Windows startup.

- In the connection properties, “General” tab, select “Enable this connection when the program is launched”



- In the VPN client options, Menu bar “View > Options…”, check “Start this program when I log in”.

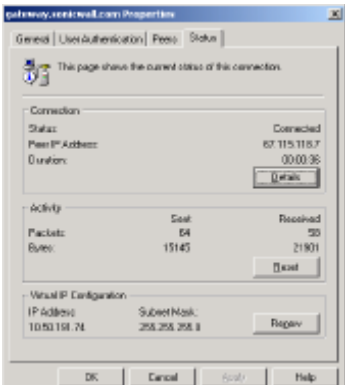


4.2 Keepalive Frequency

When NAT-Traversal is activated, as is necessary with the GPRS and 3G services in most countries, the Keepalive packet frequency defaults to 20 seconds. This will cause a comparatively high administrative traffic volume. A Keepalive packet frequency (set on the concentrator) to 30 to 60 seconds is fully sufficient.

4.3 Connection Status

The status of the VPN connection can be seen in the main window of the client application and further details are available from the ‘Status’ tab:



5 Connections to Different Services

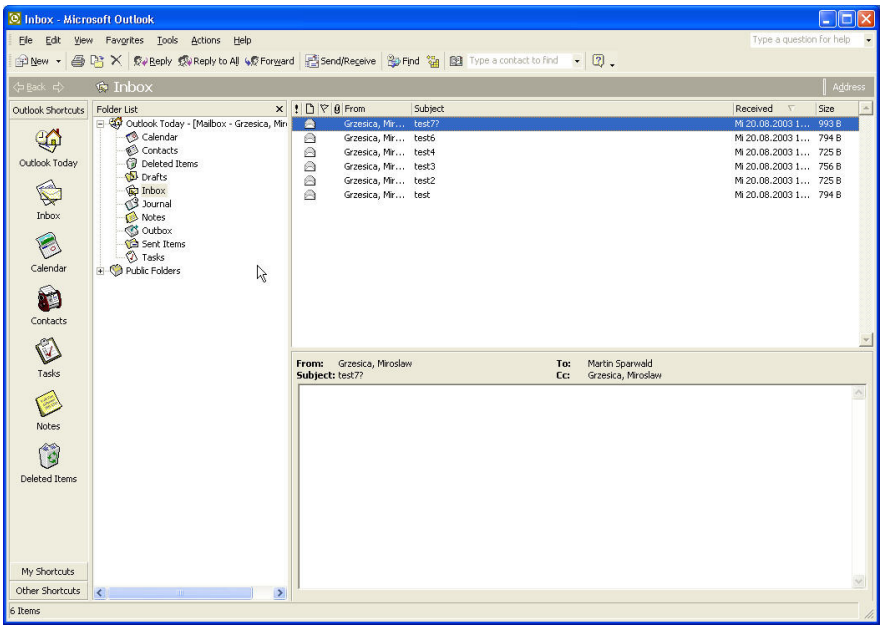
You can connect to all services via the VPN tunnel; you can connect to if you are in your local LAN.

Of course, an internet connection must be established and the VPN Client has to be started. If these requirements are fulfilled you can use all applications.

5.1 Connect to MS Exchange mail server / Outlook

Due to time-outs and other problems with the VPN tunnel, sometimes you have to repeat the connection procedure. The dialog boxes (displayed below) will appear. Click **Retry** till you get a connection to the Exchange Server.

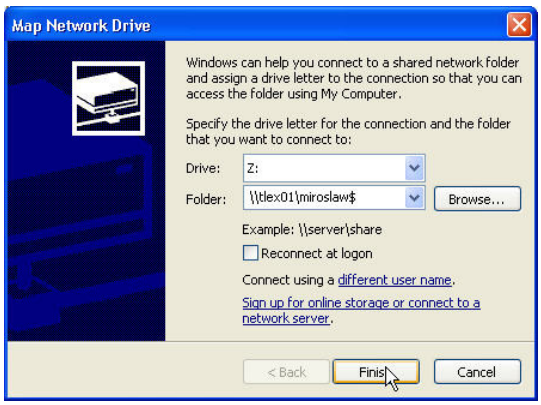
After connecting successfully to the Exchange Server, you can use MS Outlook like you are connected to your local LAN

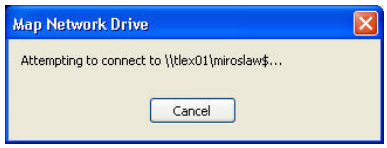


5.2 Connect to file server

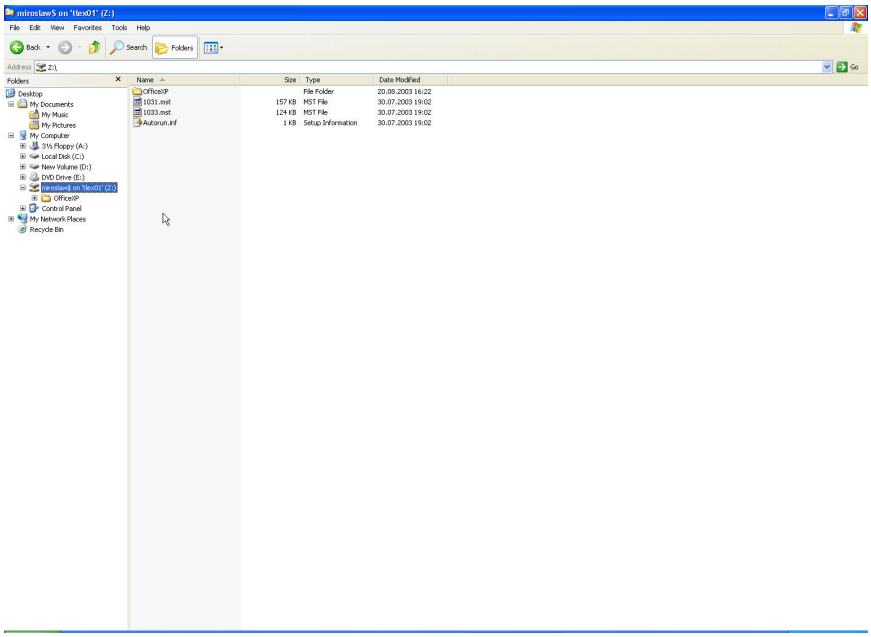
Once a VPN connection is established, you have to map a shared network folder on the file server in the LAN.

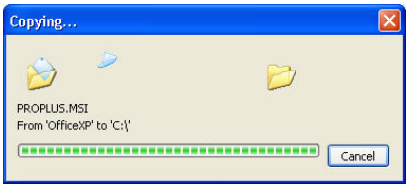
The user connecting to the shared network folder must have the permissions (in the local LAN) to connect to this folder.





After the connection to the file server via VPN is established, the user is able to transfer files between the file server and the local machine like he is connected to the local LAN.





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