

VNC Server for Windows Mobile Devices

1. Motivation

The VNC (= Virtual Network Computing) is a graphical desktop sharing system which uses the RFB (**R**emote **F**rame**B**uffer) protocol to remotely control computers over a network.

Originally the VNC system was developed by the Olivetti & Oracle Research Lab which was later acquired by AT&T.

VNC consists of three major parts:

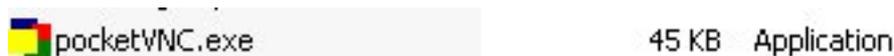
- *Server*: The computer which is controlled remotely.
- *Client*: The device which controls the server.
- *Protocol*: Open communication protocol between client and server.

The VNC system exists for quite a while now and it has established as a non official standard for remote controlling graphical operating systems. While alternative solutions, like Microsoft's Remote Desktop Protocol, often offer a lot more features, the open protocol of VNC offers platform independency. As a result there exist a countless number of client and server implementations for almost every software platform available.

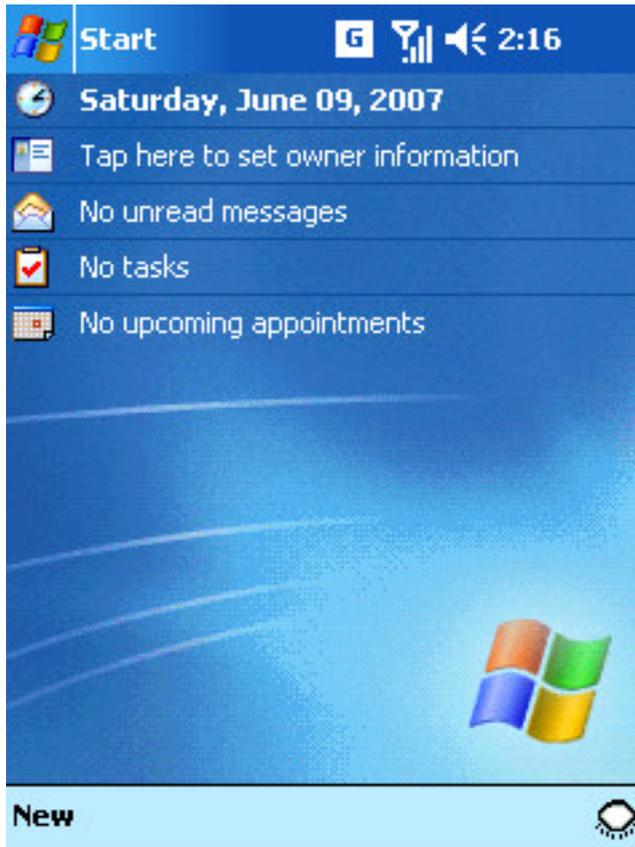
This PocketVNC server represents a VNC server implementation for the RFB protocol.

2. Install Instructions

The PocketVNC server application, as it is shown in following screenshot, can be copied and started on any WindowsCE device through the FileExplorer.



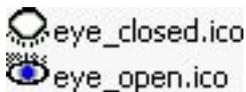
The started PocketVNC server displays an eye-icon in the taskbar, which is placed at the bottom of the Home-Screen, as it is shown in Figure 1.



The eye-icon indicates an open connection and a click opens the config dialog.

Fig. 1. The eye-icon

If the icon shows a closed eye it means that no VNC client is connected at the moment. If the icon shows an open eye it means that at least one VNC client is watching the screen at the moment. **Important: The demo version of the PocketVNC software quits after a connection time of 1 minute!** Following screenshot shows both icons:



The PocketVNC server is running in the background and waits for connecting VNC Clients.

A click on this icon opens the configuration settings for the PocketVNC server. The configuration settings dialog is shown in Figure 2. The configuration screen is split in different configuration tabs which represent different configuration groups.

3. The Control-tab

The Control-tab enables the control of the VNC server. It offers buttons for starting and stopping the VNC server, to initiate an outgoing connection to a listening VNC server (the Out-tab contains the connection settings for the listening viewer), to soft reset the mobile device from remote and to shutdown and quit the VNC server program.

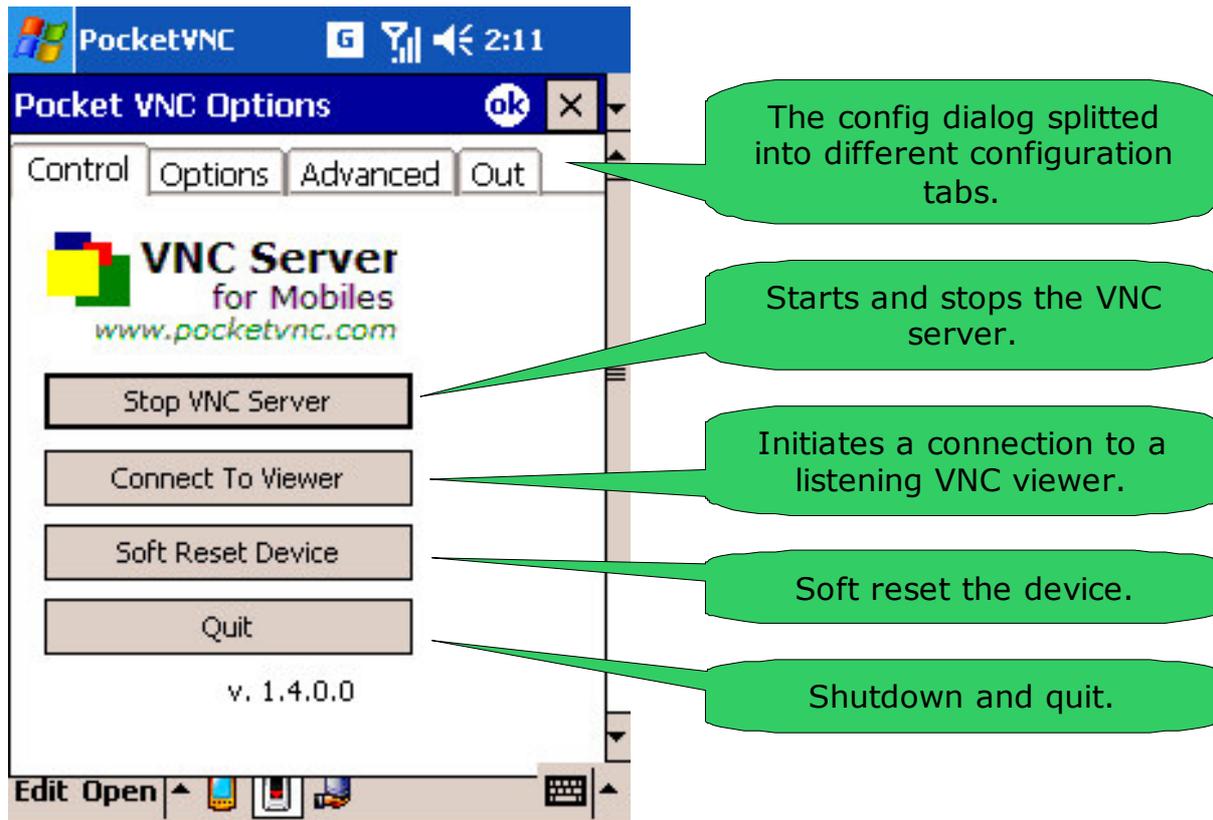


Fig. 2. The Control-tab of the configuration screen

4. The Options-tab

The Options-tab represents general VNC specific settings as it is shown in Figure 3.

The name text field specifies the name that appears at the client viewers dialog. The display specifies the port address that this VNC server uses (default is set to 0, which means $5900 + 0 = \text{port } 5900$).

The encoding style can be set to RAW (without compression, slowly) to HEXTILE (fast, high compression).

The security mode can be set to 'None' or to password where the VNC client user has to enter the password set in the password text field.

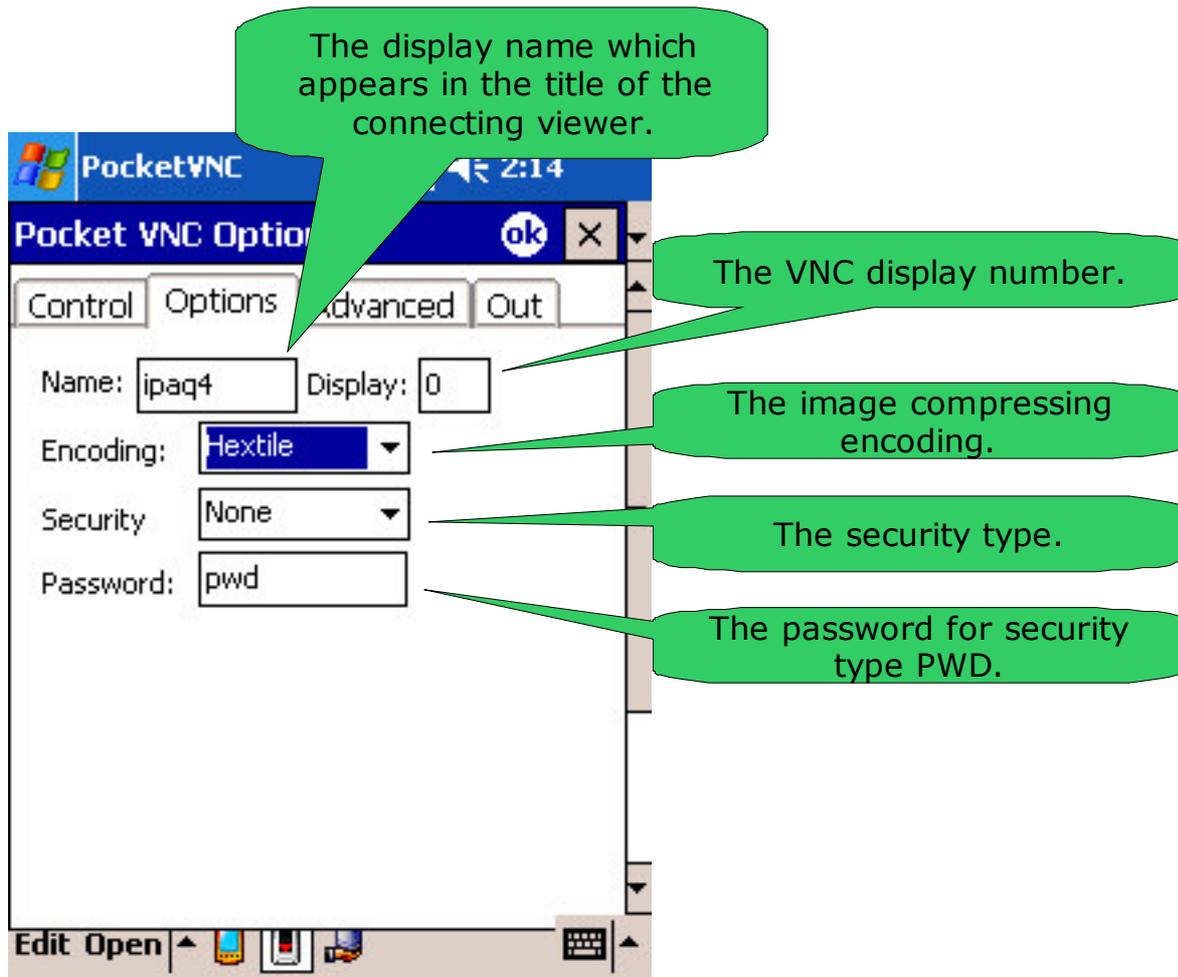


Fig. 3. The Options-tab

5. The Advanced-tab

The Advanced-tab contains advanced options for customizing the VNC appearance and operating system specific things as it is shown in Figure 4.

The update frequency field controls the delay in ms between the screen updates. In a high bandwidth network with a strong processor device this delay can be smaller otherwise the delay should be higher.

The Enable Logging option enables information and error logging into a file called log.txt within the local PocketVNC directory.

To automatically startup the server at the startup time of the thin client, enable the Autostart option.

The Silent Startup option disables the showing of the configuration dialog at the startup time of PocketVNC. The reason for this option is the fact that uninformed users may often change the configuration if the configuration dialog appears at startup. With the Show Taskbar Icon option it is

even possible to hide the eye-icon which completely disables the user to access the configuration screen.

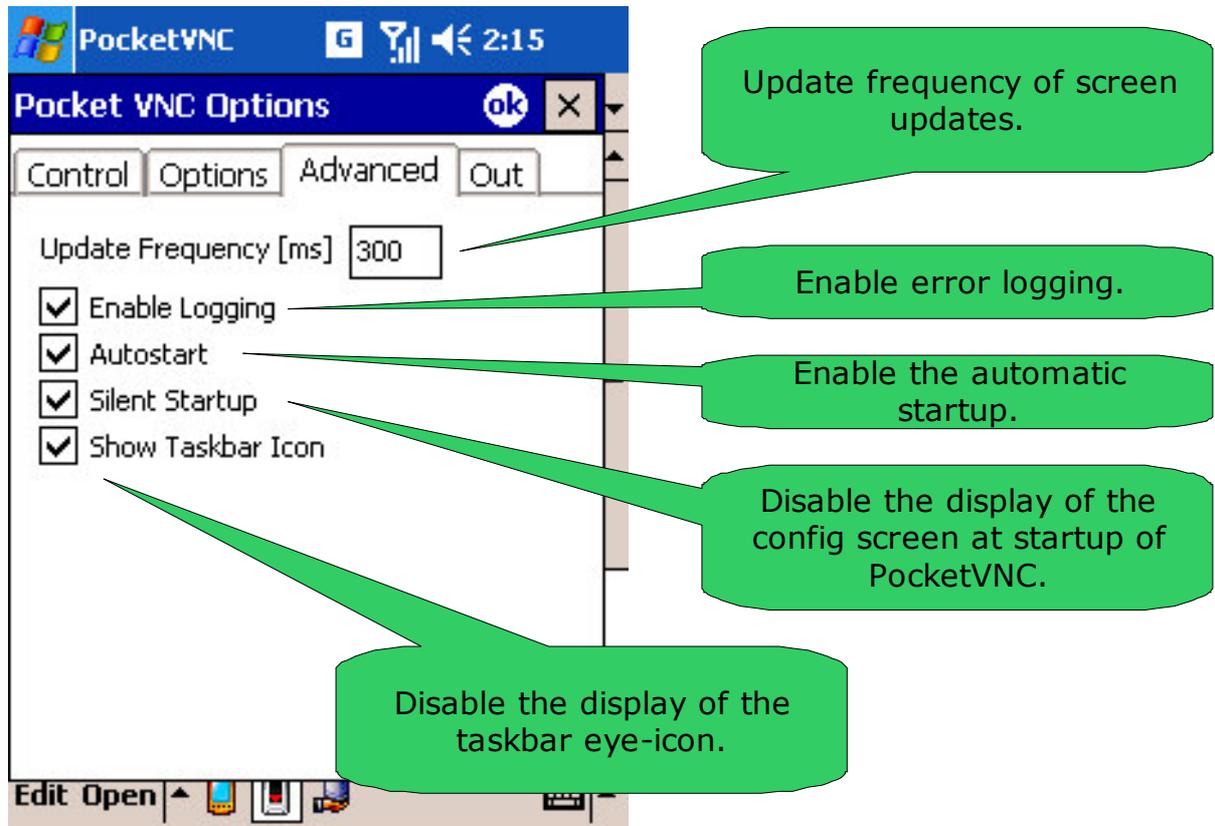


Fig. 4. The Advanced-tab

6. The Out-tab

The Out-tab contains the configuration settings for an outgoing connection to a listening VNC viewer software, or to an UltraVNC repeater. Many modern VNC viewers offer the possibility to start the software in listening mode. The reason is that mobile devices most of the time do not have a public IP address to refer to. So it is practicable to have a public IP address on an Office Computer which runs a listening VNC viewer. A user can then easily call for support by pressing the 'Connect to viewer' button on the Control-tab. The Out-tab is shown in Figure 4.

If an UltraVNC repeater is used in Mode II the Id has to specify the server's unique identification number. If Id is '0' no repeater is used just a simple listening viewer.

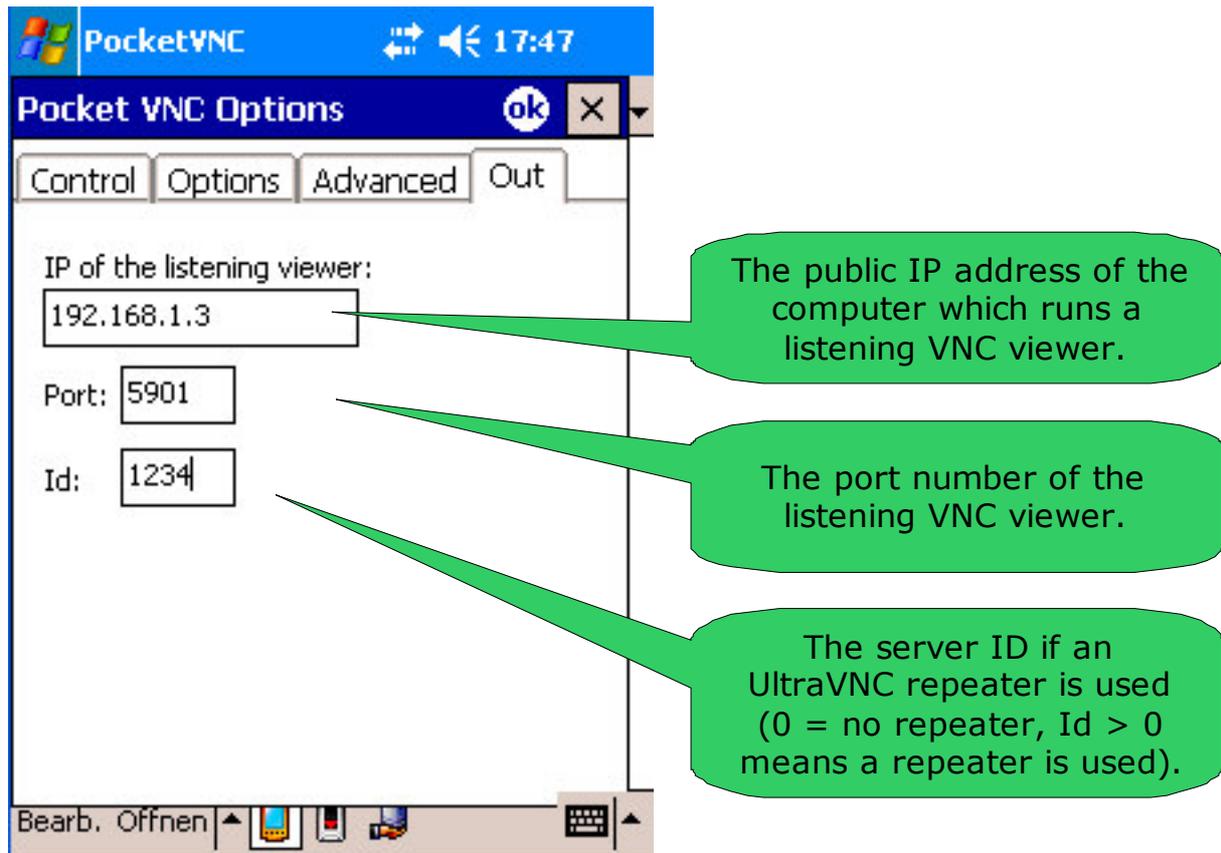


Fig. 5. The Out-tab