MobileVNC User Guide

Motivation

MobileVNC (*Virtual Network Computing*) is a graphical desktop sharing system, which uses the *RFB* (Remote FrameBuffer) protocol, to remote control and maintains computers over a network.
Originally, the VNC system was developed by the Olivetti & Oracle Research Lab which was later acquired by AT&T.

VNC systems consist of three major components:

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

VNC systems and implementations exist for quite a while now and VNC has established as a non-official standard for remote controlling graphical operating systems. While alternative solutions, like Microsoft's Remote Desktop Connection, 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 operating system platform available.

The MobileVNC server implementation was specifically developed for Windows CE based operating systems. Microsoft offers a broad spectrum of operating systems that are based on the Windows CE kernel and that are targeting specific application areas. Examples for Windows CE based operating systems are *PocketPC*, *Smartphone*, *Windows Mobile*, *Phone 7* and *Phone 8* flavours targeting mobile communication devices, *AutoPC* for automotive applications and *Zune* for media player applications.

Since release 2.0, MobileVNC can also run on standard Windows operating systems, such as *Windows XP*, *Vista*, *Windows 7* and *Windows 8*.

Install Instructions

MobileVNC supports a simple copy to install process without the need to add any install information to your systems registry. Just select the correct CPU (ARM, MIPS or X86) and operating platform (Win32 or Windows CE) folder from the MobileVNC zip archive and copy the subfolder to your target device.

It is possible to copy and start the MobileVNC server application on any Win32 or Windows CE device by using your systems file explorer, as it is shown in Figure 1.
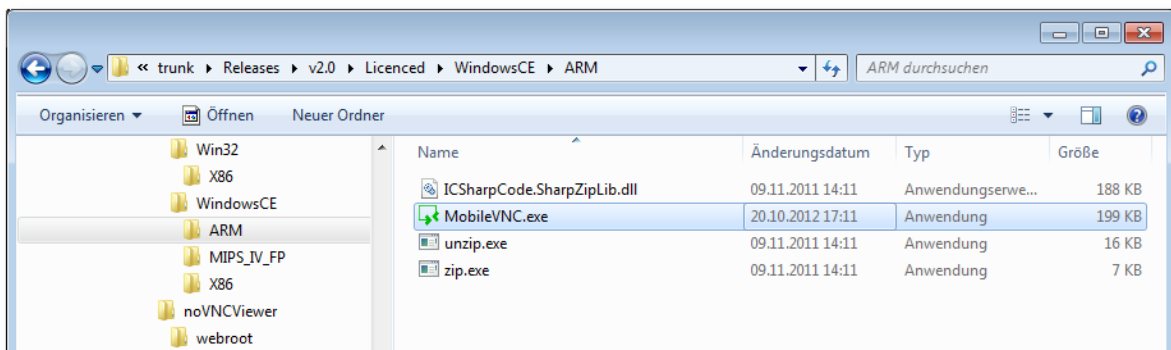

Figure 1: Select and copy MobileVNC folder to your target device

A running MobileVNC server places an eye-icon on the taskbar, which is placed at the bottom of the Home-Screen, as it is shown in Figure 1.

Figure 2: MobileVNC taskbar icon

If the taskbar icon shows a closed eye, it means that no VNC client is connected. 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 MobileVNC software quits after a connection time of 1 minute!

Following screenshot shows both icons:

Figure 3: MobileVNC taskbar icon

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

A click on the taskbar icon opens the MobileVNC server configuration settings. The configuration settings dialog is shown in Figure 4. The configuration screen is split in four configuration tabs: *Control*, *Options*, *Advanced* and *Out*;
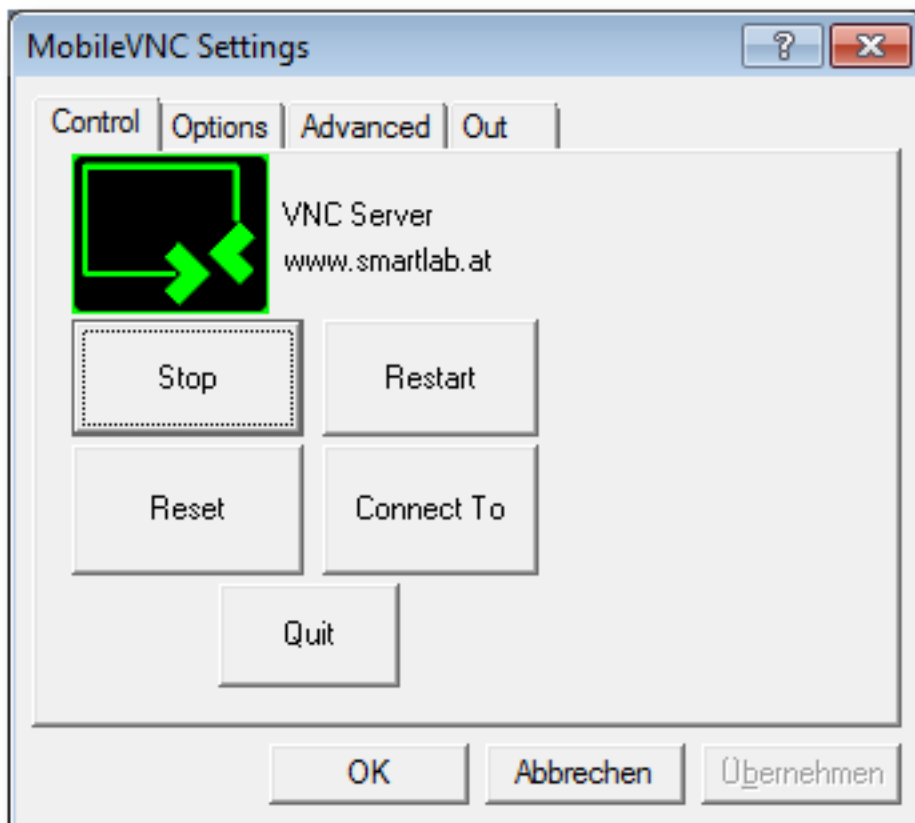

Figure 4: MobileVNC Configuration Screen

The Control-Tab

The Control-tab enables the operational control of the MobileVNC 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.
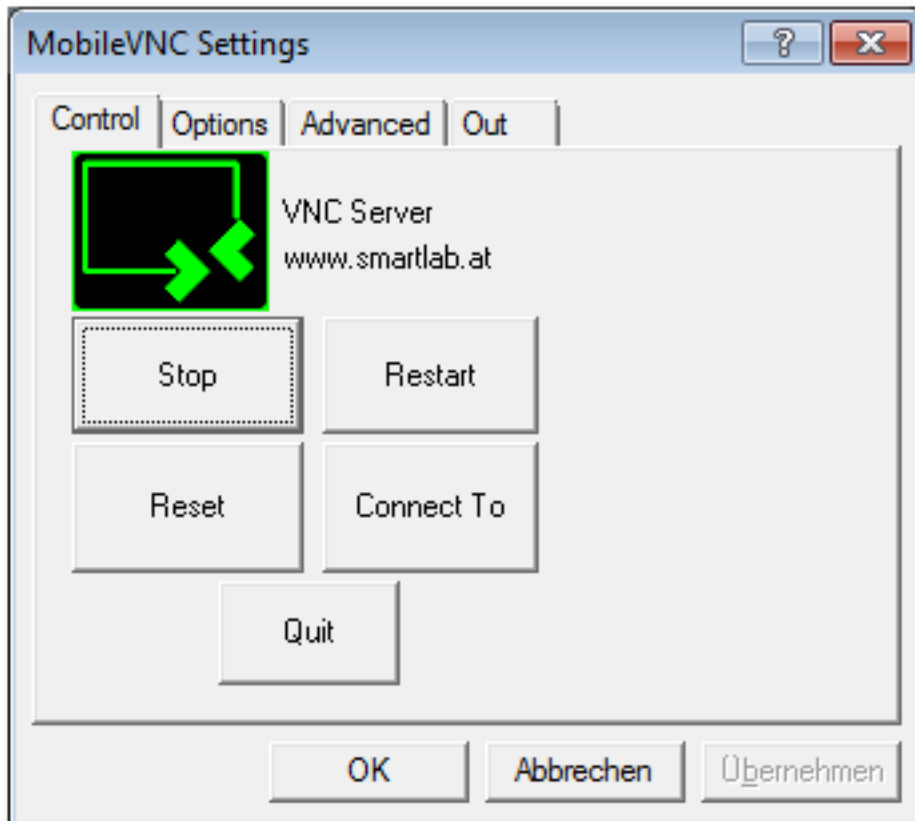

Figure 5: MobileVNC Control Tab

The Options-Tab

The Options-tab represents general VNC specific settings as it is shown in Figure 6.

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 = 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.
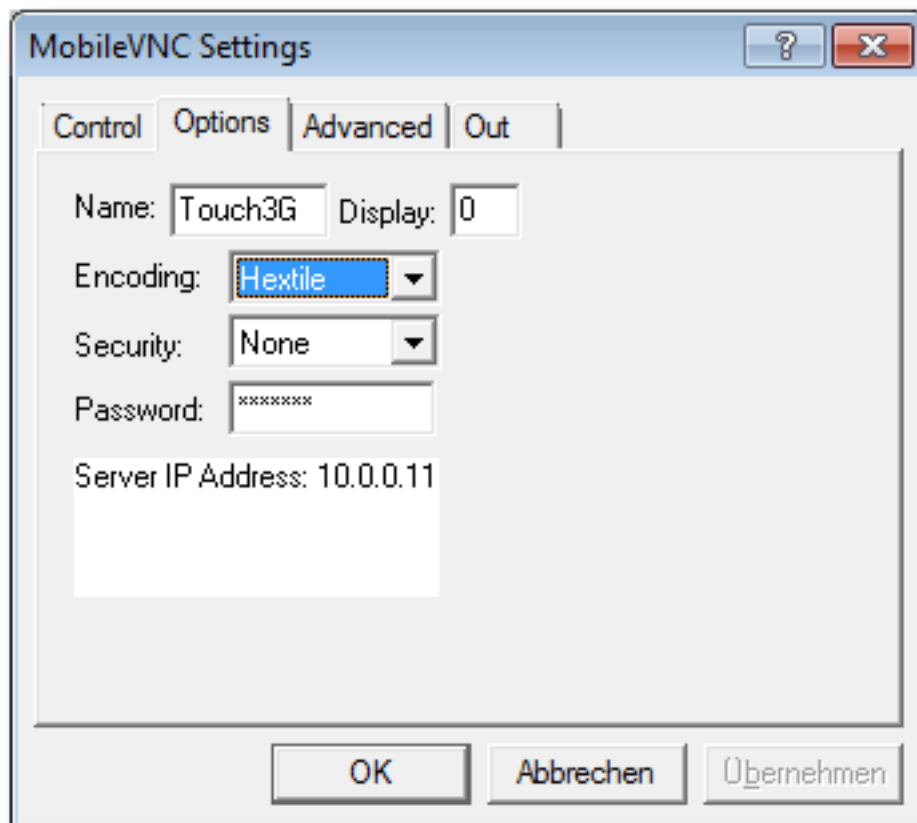

Figure 6: MobileVNC Options Tab

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 7.

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 MobileVNC 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 MobileVNC. 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.
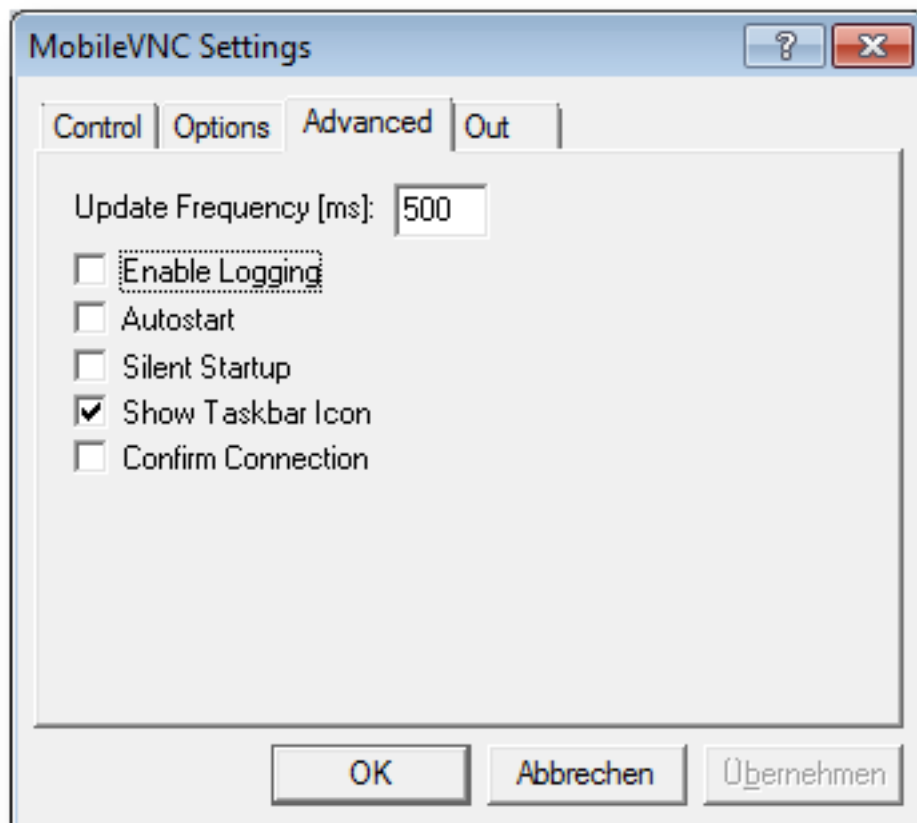

Figure 7: MobileVNC Advanced Options Tab

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 8.

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.
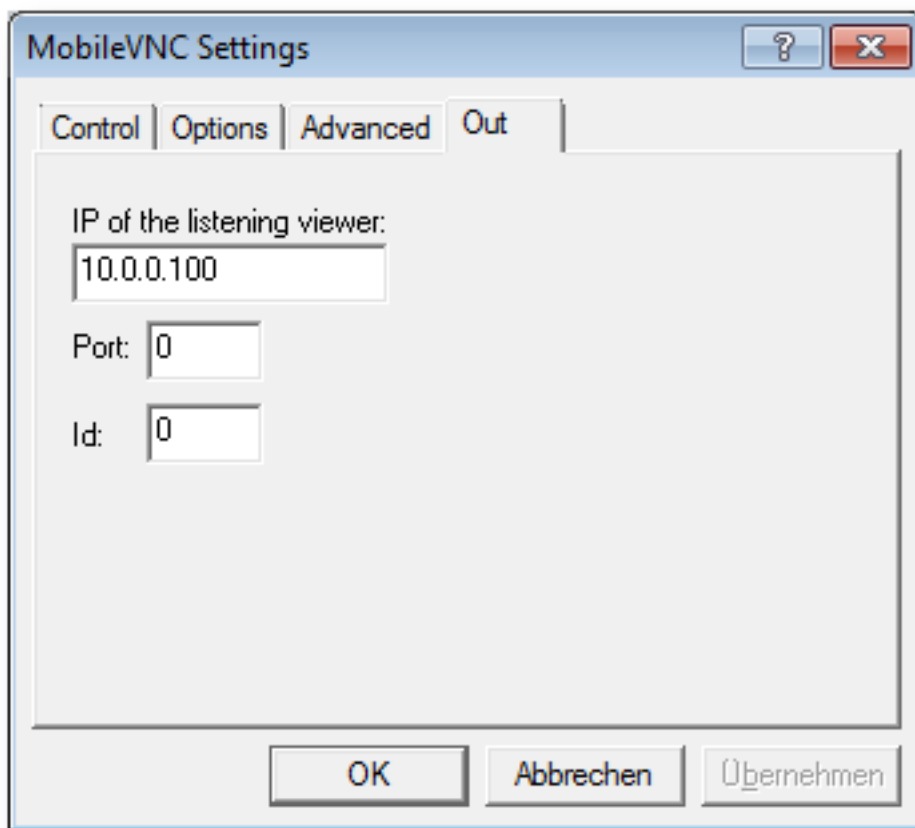

Figure 8: MobileVNC Out Tab

Configuration File and Command Line

The configuration file (MobileVNC.ini), which resides within the same local path as the MobileVNC.exe executable, stores all relevant configuration information. The file can be modified through the use of the configuration dialog, or it can be modified with a text editor.

Here is a sample configuration file for MobileVNC:

```
[PocketVNC]
Webroot =
Websockets =0
RepeaterId =1234
ViewerPort =5500
ViewerIP =192.168.100.34
Encoding =Hextile
Security =None
Confirm =0
Autostart =0
Icon =1
Silent =0
Logging =1
Frequency =100
Display =0
Password =default
Name =HTC_Touch
```

Following table explains the meaning of the available options:

Option	Meaning
Webroot	Path to your local folder in which you put the noVNC HTML5 VNC Viewer software. Only relevant if Websockets was set to 1.
Websockets	Enables the use of Websockets protocol in order to use the noVNC HTML5 VNC Viewer software. '0' means Websockets are disabled and '1' means enabled.
RepeaterId	A server identification number, only used in combination with the repeater software of UltraVNC.
ViewerPort	The port number of the listening viewer.
ViewerIP	The IP address of a listening viewer.
Encoding	Encoding either 'Hextile' or 'Raw'

Security	Security either 'None' or 'Pwd'
Confirm	User should be asked to confirm incoming connections either '0' or '1' as false or true.
Autostart	Autostart PocketVNC either '0' or '1' as false or true
Icon	Show Taskbar Icon either '0' or '1' as false or true
Silent	Not Show Config Dialog at Startup '0' or '1' as false or true
Logging	Logging either '0' or '1' as false or true
Frequency	Update Frequency in ms
Display	VNC Display number
Password	Password
Name	Name that appears on the VNC Viewer

MobileVNC additionally offers following command line option to connect to listening viewers:

Option	Semantics
/h	Connects to a listening viewer. The address of the listening viewer has to be defined within the PocketVNC.ini file.
/i "path"	Path to load and store the configuration ini file. Example: /i "\Documents and Settings\vnc.ini"