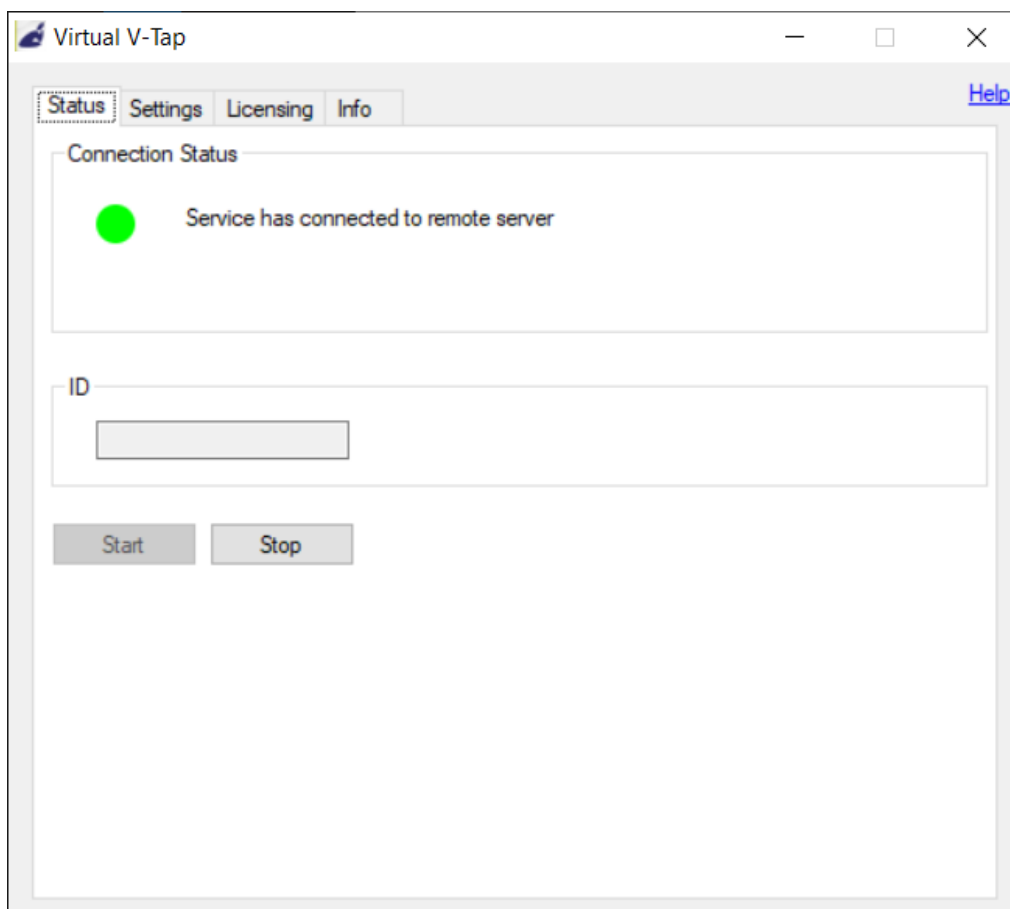# Virtual V-Tap

Manual

V1.4

Introduction

The Virtual V-Tap is software that can capture VoIP data internally on a PC, mainly meant to record telephone calls from a Soft Phone that is running on the same PC. The collected data is wrapped into a special tunnel-format and sent to an external server, which can be a Call Recorder Apresa (running on Linux) or the V-Archive software (running on a Windows PC). The Apresa recorder or V-Archive software can both interpret this format and make playable audio files from it, together with the original date, time and call number information.

After installation, the program runs as a service within Windows, named "**Virtual V-Tap**". The service is automatically started when Windows starts.

Note, that for this program to work, it is required that a packet capture driver, such as Winpcap for Windows 7/8 or Npcap for Windows 10/11, is installed on the PC running the Virtual V-Tap. The installer will detect the absence of this driver.

Status page

Connection Status
This shows if the Virtual V-Tap service is running and what status it has.

ID
The identifier of the Virtual V-Tap, based on the MAC address of one of the network interfaces of the PC. This identifier is shown in the Apresa or V-Archive software when the Virtual V-Tap has connected and may be used to configure options for the Virtual V-Tap there. In case a PC has multiple network interfaces, the used ID can be configured from the settings tab.

Start/Stop
Used to start and stop the connection to the Server. Also starts and stops the recording function of the Virtual V-Tap !

Settings page

Destination
Settings to configure which server he Virtual V-Tap should send the captured data.
Server Address: IP address or hostname of the server.
Server Port: Network port on which the server should receive the data. The default port is 2016

Encryption
The captured data may be send in an encrypted format over the network to the receiving server.
Use encryption: Turns the encryption on or off.
Password: Password used for encryption of the tunnel data. The same password must be configured on the Apresa or in the V-Archive software to correctly receive the data.

Filters
To reduce the amount of data send to the server, packets may be filtered with these options:
IP Filter: This filter acts as a white-list for IP addresses. One or more IP addresses can be entered, separated by comma's or a plus sign, like "192.168.0.12+192.168.0.55". Also, an IP range can be set by defining a mask with the "/bits" notation behind the address, like "192.168.0.0/24". When this field is left empty or on 0, then all IP addresses are taken for recording.
TCP/SIP Port Filter: Filters the VoIP protocol packets based on the source and destination ports. Packets that do not pass the filter are discarded. A filter can consist of a single port, e.g. "5060". This will only let packets with received or send from port 5060 through the filter. It is also possible to specify a port range by separating two ports with a "-", e.g. "5060-5080". This will take all packets with destination or source port larger or equal to 5060 and smaller or equal to 5080. It is possible to combine multiple ports/port ranges by separating them with "+", e.g. "5060+6000-7000". This combines a filter on port 5060 and a port range 6000-7000. The value 0 disables the filter and takes all TCP/UDP ports for recording. The default value 5060 is the port number used for the SIP protocol.
**UDP/RTP Port Filter:** Similar to the TCP port filter, but used for UDP/RTP packets containing the VoIP audio stream. The default is set to 0, that will take all ports, as RTP data is usually send over UDP and does not use a pre-defined port number.
Broadcast Filter: If this setting is enabled, all redundant broadcast packets are discarded. The default setting is on.

Application
ID: The identifier used for the Virtual V-Tap is based on the MAC address of a network interface running the Virtual V-Tap software. In case a PC has multiple network interfaces, this setting controls which network interface is used to derive the ID from.

Disk buffer page
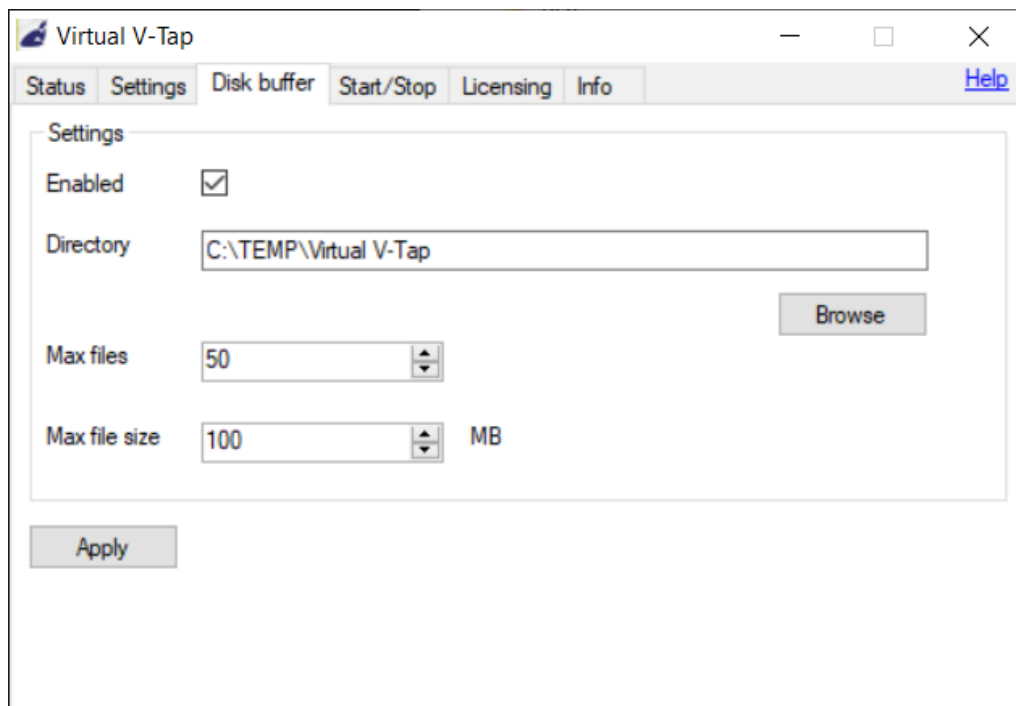
By default, the Virtual V-Tap will only buffer a small amount of VoIP data. This means that when the connection to the server is lost for a longer period of time, packets and therefore calls may be lost. Enabling the disk buffer will allow the Virtual V-Tap application to write the VoIP data to a storage device like a hard drive or SSD. When the connection to the server is lost, this data can still be written to the storage device and can then be send when the connection is restored at a later time. Additionally, the files created by this function can also be manually imported by the V-Archive software.

Enabled: Enables or disables the disk buffer.

Directory: The directory where the files containing the VoIP data are created.

Max files: The maximum number of files that are created.

Max file size: The maximum file size of a single file.

Note that when the maximum number of files is reached, the application will wrap around to the first file. If the data in the next file has already been send to the server, this file when then be erased and used again for storing the next data. This means the buffer will continue to function when the maximum number of files is reached. When the data in the next file has not been send to the server however, no more additional data will be stored. If this occurs, it is possible for calls to be lost. To avoid this, enough space should be allocated to the disk buffer with the max files and max file size options.

Start/Stop page
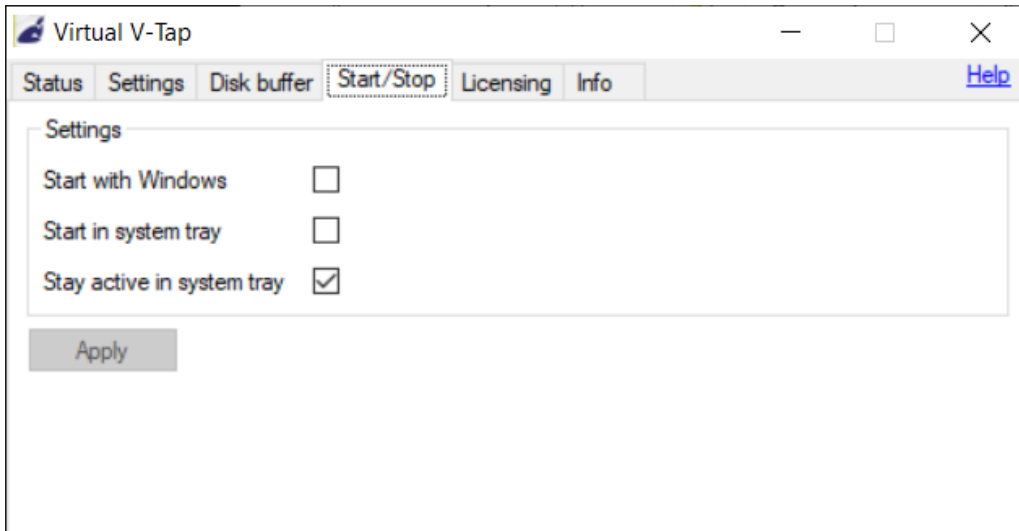
These options control the behaviour of the Virtual V-Tap user interface:

Start with Windows
Enabling this option will start the user interface when Windows starts. Note that the Virtual V-Tap service component that handles the actual capturing and sending of the VoIP data, will always start with Windows regardless of this option.

Start in system tray
Enabling this option means that the full interface is not brought up when the application launches, but that the application will only launch in the system tray

Stay active in system tray
Enabling this option means that when closing the user interface, it will remain active in the system tray instead. From here it may send notification messages when a change in the connection status occurs.

Licensing page

For the V-Archive software or Apresa software to record the calls, licenses are required. Separate licenses are avaible to record via an Apresa Server or PC running V-Archive. The active licenses section shows how many licenses are available for both. The licenses control how many calls can be recorded at once. If at any point there are more active calls than activated licenses, the extra calls will not be recorded.

License activation

Activated licenses are bound to a network interface. Which network interface the license is bound to can be configured. If at some point a network interface is removed, any licenses bound to this network interface can no longer be used.
To activate a license, input the key starting with "A-" in the box labeled A key, then press submit. This will generate a key starting with "B-" in the box label B-Key. This key needs to be activated on the Vidicode website at: http://www.vidicode.com/script/virtvtap_channels.php. The key returned from the website starting with "C-" needs to be copied to the box label C-Key.
Pressing the activate button will finalize the activation process and add to the active license count.

Info page
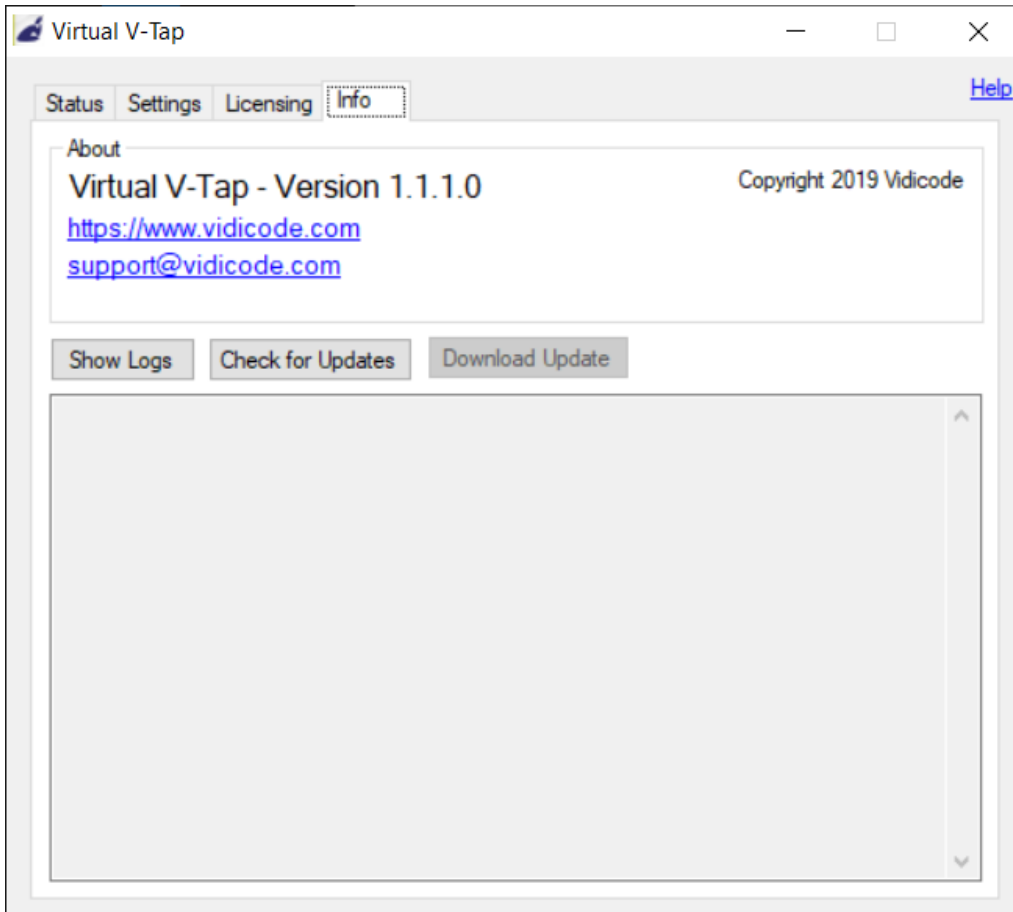
This page shows information about the currently installed version of the Virtual V-Tap software. This page can also be used to check updates and download and install them.

Show Logs
This button will open the folder with log files. When support is needed, it is useful to include the log files.

Check for updates
 This button will download the changelog and check if any software update is available.

Download update
When a software update is available, this button will download the update and install it. After installation the Virtual V-Tap is automatically started again.