T-Pro Device Controller - Advanced Installation & Troubleshooting Guide

⚠ **Document and Record Control**

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- This document is reviewed at least annually to ensure compliance where applicable to ISO/IEC 27001:2013,, and legislative requirements.

Contents

Introduction

T-Pro Device Controller enables the operating system to communicate with the browser using the loopback address of the machine through web sockets. Device Controller enables T-Pro applications to work with multiple pedals and handset microphones.

Minimum Requirements

The following operational systems have been successfully tested by T-Pro. Other configurations might be possible but would require testing.

Server	Version
Microsoft Windows Server	2008 / 2012 / 2016

| Client	Version
Microsoft Windows Home / Pro	10+

Standard Client Installation and Device Compatibility

See here 📄 T-Pro Device Controller - Installation Guide

Virtual Channel Installations

The virtual channel allows the Device Controller to pass commands from the local Windows client to the remote server via an RDP connection.

Virtual channel server

The server part of the Virtual Channel must be installed on the remote machine. To install TProVCServer, users can select the `"Virtual channel server installation"` checkbox.
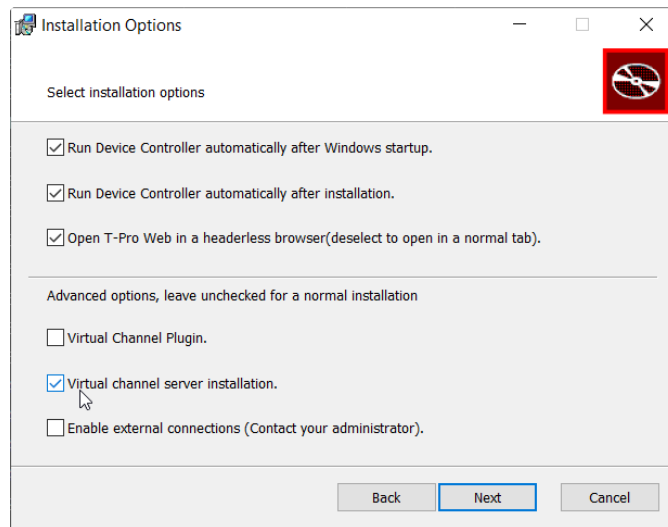
This option will add the TProVCServer.exe to the installation folder. T-Pro Device Controller will be able to start the server on the app startup.

Virtual channel plugin

The plugin part of the Virtual Channel must be installed on the local machine. To install TProVC-Plugin, users can select the `"Virtual Channel Plugin"` checkbox.
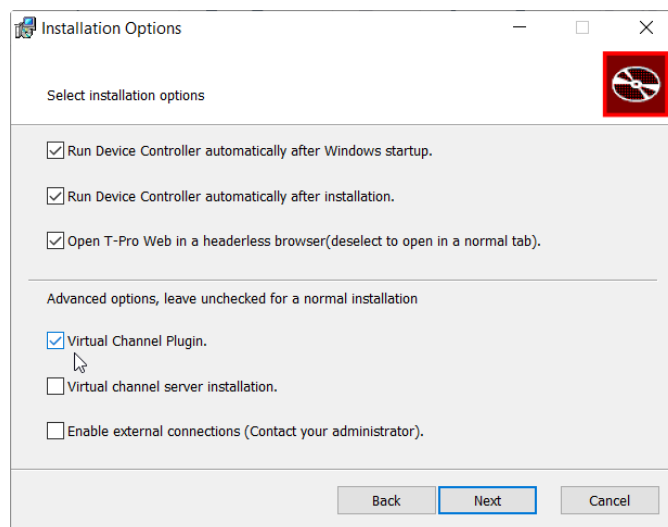
This option will add the TProVC-Plugin-x86.dll or TProVC-Plugin-x64.dll(depending on Windows bittness) to the installation folder and register the .dll files in the system. Also, the installation will add these registry values to the HKEY_LOCAL_MACHINE root folder:

- SOFTWARE\Microsoft\Terminal Server Client\Default\AddIns\TProVC-Plugin\Name

- `SOFTWARE\Microsoft\Terminal Server Client\Default\AddIns\TProVC-Plugin\ip`

- `SOFTWARE\Microsoft\Terminal Server Client\Default\AddIns\TProVC-Plugin\enabled`

User setup(optional starting from version 1.3.0.6)

To use the recorder with this feature, the user will need to have an AD username and an AD session username set in the EDIT ACCOUNT page.

The exact values can be random, as the Device Controller now tracks WIndows sessions regardless of AD information provided by the users.

Performing connection

The connection between the plugin and the server will be set automatically when the user connects to the server via RDP and Device Controller is running in both the local machine and server. When the connection is established, a Windows notification will be shown:
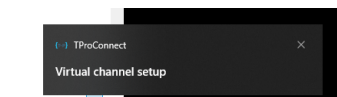
Command Line Driven Installation
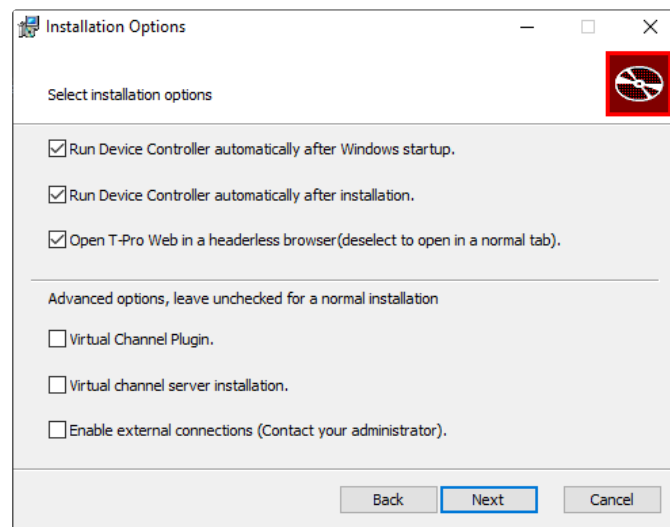
Default MSI installation parameters

`/quiet` - run the installation without any UI, if no additional parameters are supplied, the installation will be completed with the default configuration.

`/log [filename]` - run the installation with log output to the supplied file name

Installation options

The default app configuration is as follows:

- `Run Device Controller automatically after Windows startup.` is enabled
- `Run Device Controller automatically after installation.` is enabled
- `Open T-Pro Web in a headerless browser(deselect to open in a normal tab).` is enabled
- `Virtual Channel Plugin` is disabled
- `Virtual channel server installation` is disabled
- `Enable external connections` is disabled

Option parameters

- `RUNATWINDOWSSTARTUP=0` - Disable `Run Device Controller automatically after Windows startup.` Options: omit or set to 1 to enable
- `RUNAFTERINSTALL=0` - Disable `Run Device Controller automatically after installation.` Options: omit or set to 1 to enable
- `HEADLESS=0` - Disable `Open T-Pro Web in a headerless browser(deselect to open in a normal tab).` Options: omit or set to 1 to enable
- `VIRTUALCHANNELPLUGIN=1` - Enables `Virtual Channel Plugin.` Options: omit or set to 0 to disable
- `VIRTUALCHANNELSERVERINSTALL=1` - Enables `Virtual channel server installation.` Options: omit or set to 0 to disable
- `ENABLEEXTERNALCONNECTIONS=1` - Enables `Enable external connections (Contact your administrator).` Options: omit or set to 0 to disable

Note: If the value was set to 1 by default, changing it to 0 will not affect the UI, but the installer logic will function as described above(this is due to how WiX Checkboxes handle the values, if **any** value is supplied, the checkbox is checked by default).

For example: if you supplied the `RUNAFTERINSTALL=0` parameter, the `Run Device Controller automatically after installation.` checkbox will still be checked, but the application will not start after the installation.

Sys Admin Troubleshooting Steps

Logs and temp file audio file storage

Starting from Device Controller v1.3.0, the local Windows users will no longer have write permissions for the application installation folder. Because of this security measure log, temp file and audio file storage location have been changed to use the local user folder: C:\Users\ [userName]\T-Pro Device Controller.

RDP connections

The main way to use the Device Controller with a remote desktop is to install the application with the Virtual Channel options enabled.

Alternatively, if the Virtual channel is not working or is unsupported by the operation system, you can install the app with `Enable external connections (Contact your administrator)`. If this is required, additional configuration will be needed, see below).

To make remote-enabled installations as robust as possible, please configure as follows:

Client-side:

- Check the `Enable external connections (Contact your administrator)` checkbox
- Check the `Virtual Channel Plugin` checkbox

Server-side:

- Check the `Virtual channel server installation` checkbox.

This will ensure that in case of a Virtual Channel failure to connect, the application will be able to connect using an external connection(Web Socket).

Note: In case of device connection issues, please restart the RDP connection and re-plug the device before attempting to connect again.

Enable external connections (Contact your administrator) installation option.

This setting should only be used on the client side of the RDP-enabled setup.

When installing the Device Controller with the option 'Enable external connections (Contact your administrator).' enabled, the user must allow network access to the Device Controller. The following prompt will be displayed after the installation is complete and the app is started:
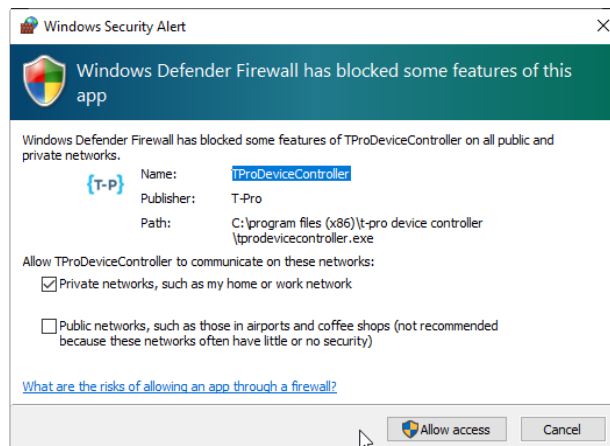
If the User does not have permission for these changes, the System Administrator must intervene at this step to allow access by clicking the prompt or adding these inbound Firewall rules for the Device Controller app to allow it to accept connections on TCP and UDP ports:
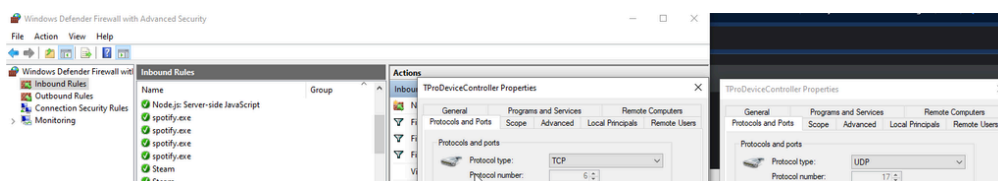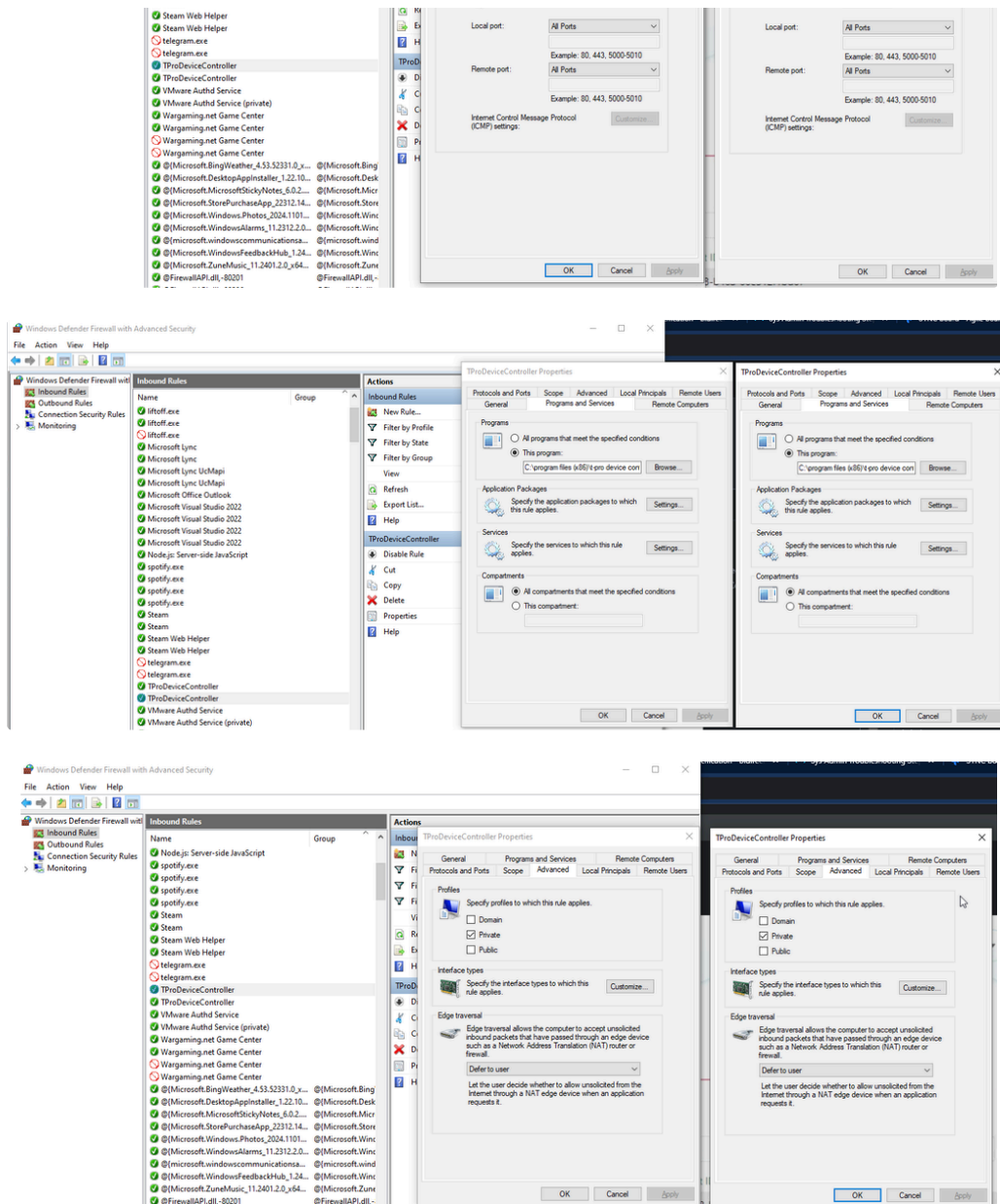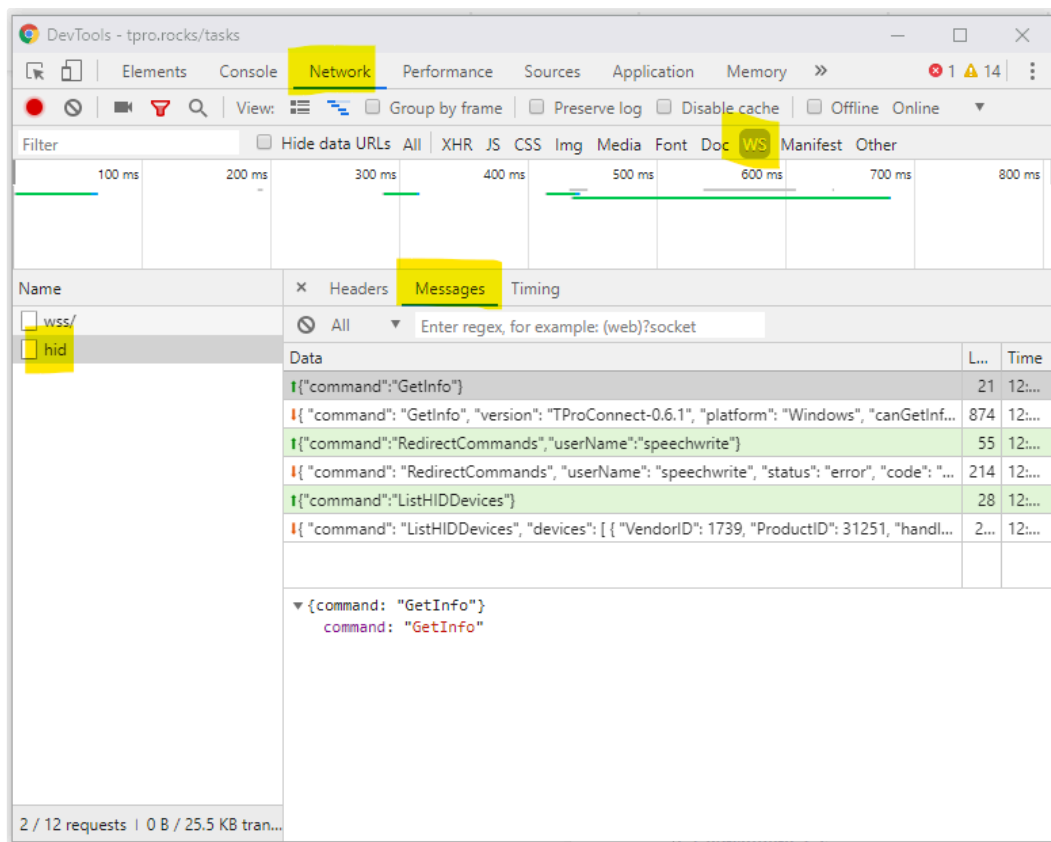
Note: this option and configuration will only work within a local network RDP connection. Allowing external connection through WAN is not secure.

Additional Troubleshooting

To check if the T-Pro app is connecting properly to T-Pro Device Controller, go to https://tpro.io using Google Chrome, press F12 (to open the developer console).

Dev tools window in Google Chrome browser

Follow the steps below to see IN/OUT messages in the developer console:

1. Click on the tab **Network**

2. filter by **WS**

3. select the name *hid*, and

4. click on the tab **Messages**.

Here, you will be able to see all communication between the browser and T-Pro Device Controller.

Retrieving the log file

The log files can provide useful information for troubleshooting.

1. Go to the following folder C:\Users\[YourUsername]\T-Pro Device Controller\Debug
2. Copy the files from the Debug folder and forward them to the support team.

Change History

Version	Date	Comment
Current Version (v. 1)	**Oct 21, 2024 15:42**	**Phelim May**