

# Wyrowski VirtualLab Fusion Administrator's Manual

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VirtualLab Fusion 2023.2 (Build 2.30)  
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is developed by Wyrowski Photonics GmbH and  
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This document describes how VirtualLab Fusion is installed and how it can be updated. Questions which might occur during installation are being answered. Further the license model of VirtualLab Fusion is described and it is shown how the dongle, i. e. the license of VirtualLab Fusion can be updated.

For information about VirtualLab Fusion's user interface and the theoretical background see the User's Manual, which can be accessed via the VirtualLab folder in the Windows start menu / start screen or directly from within VirtualLab Fusion.

## 1 How to Install VirtualLab Fusion

### 1.1 System Requirements

- **Operating System:** Windows 10 (1607 or higher); Windows 11; Windows Server 2016 / 2019 / 2022. 64-bit edition required. Preview versions are not supported.
- **CPU:** Quad-core processor with at least 2.4 GHz, recommended at least octa-core processor with at least 3 GHz.
- **RAM:** 8 GB, recommended at least 32 GB.
- **Hard disk space:** 50 GB, recommended 250 GB SSD drive.
- **Display adapter:** Resolution 1920 × 1080 or higher, recommended 2 GB Video-RAM.
- **Interfaces:** USB-A port and internet.

VirtualLab Fusion is a software application for Windows operating systems. It is possible to run VirtualLab Fusion on Apple computers with OS X with an Intel CPU. You can install Windows on an extra partition with the help of the Apple Boot Camp software. So you will just need a Windows license. It is actually also possible to use a [Windows emulator](#) in OS X.

### 1.2 Installation Instructions

The automatic installation of VirtualLab Fusion is driven by InstallShield. If you are installing from a DVD and if the Windows™ AutoRun feature is enabled the installation wizard starts automatically after inserting the DVD. Otherwise, double click the file start.exe in the root directory of your installation medium.

After installation please check for updates using **Start > Update Information** from within VirtualLab Fusion. Or take a look at the [release history](#).

The installation requires administrative rights.

### 1.3 Network Installation

In the case that VirtualLab Fusion is used together with a (red) network dongle, it is necessary to install VirtualLab Fusion on the client and the dongle driver on the server. The dongle is connected to the server. Any client, that has a network connection to the server can run VirtualLab Fusion.

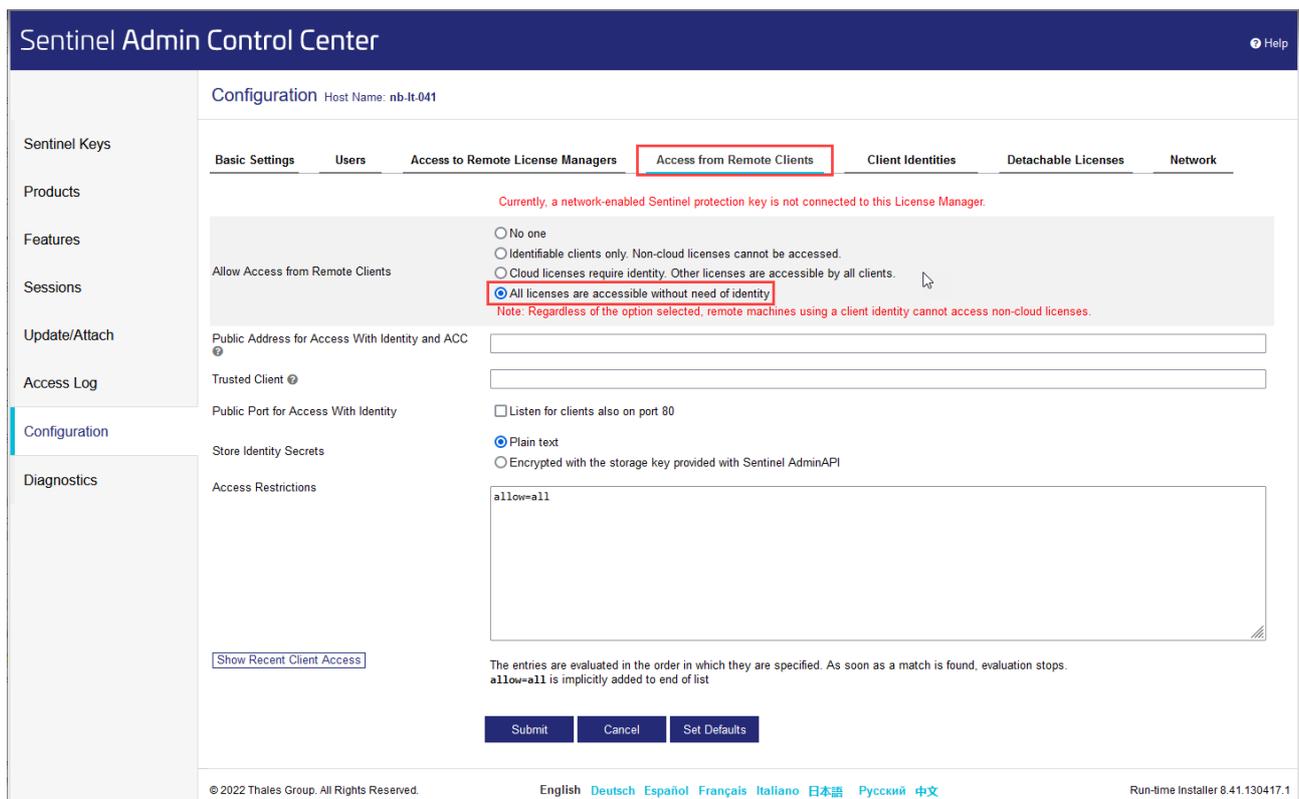
In order to run without further configuration (see below), it is required that the client finds the server (port 1947 udp) via broadcast. The number of clients that may run VirtualLab Fusion simultaneously is restricted by the number of VirtualLab Fusion licenses that have been purchased. That is, the license model works very similar to a floating license.

[Fig. 1](#) shows the typical error message that appears if the network dongle is not found by the client which is supposed to run VirtualLab Fusion.



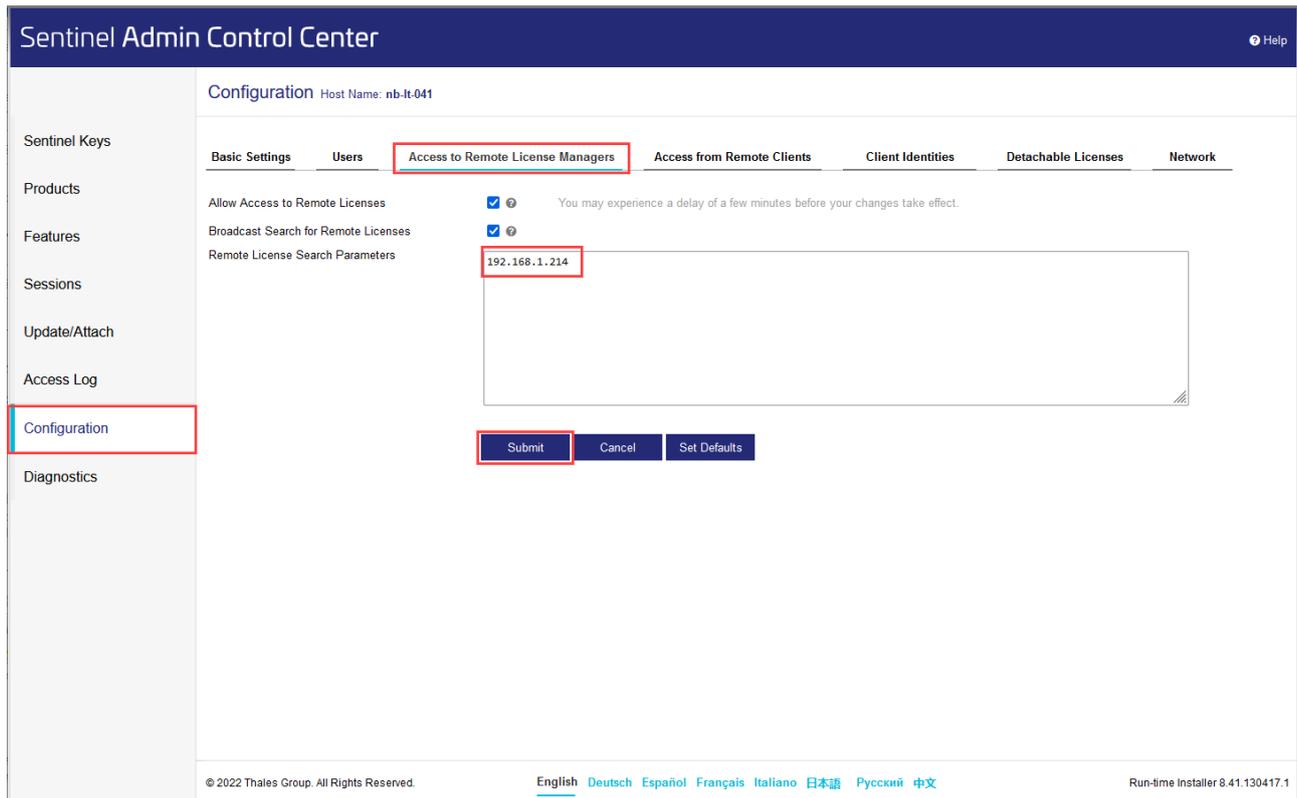
**Figure 1.** Error message if the network dongle is not found.

Such a problem typically occurs if broadcast is not allowed in the network. If such a broadcast is not allowed or addresses cannot be resolved, the license manager at the server and at the client have to be configured manually as follows. The Server configuration can be done by opening [http://localhost:1947/\\_int\\_/config\\_from.html](http://localhost:1947/_int_/config_from.html) via a browser (→Fig. 2).



**Figure 2.** Configuration of the license server at the server.

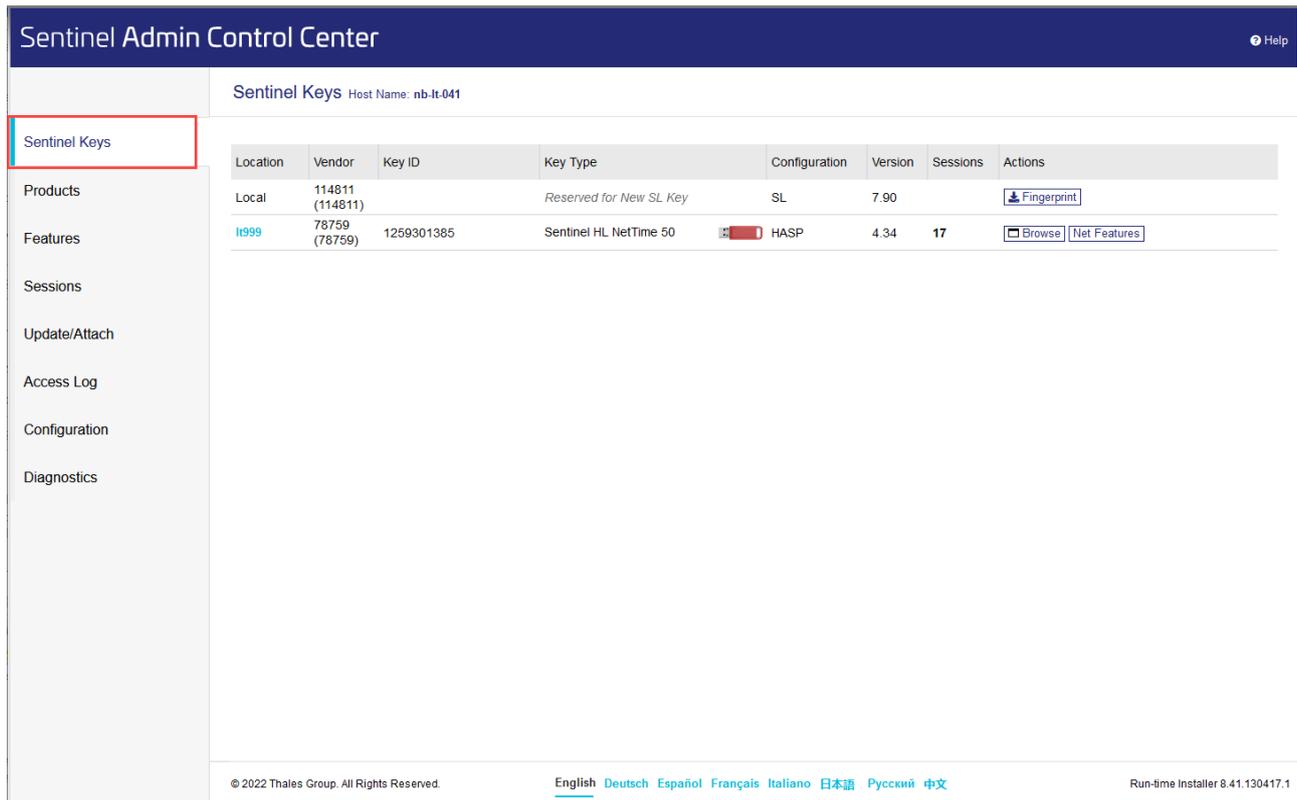
On the Server Machine, select *Configuration* on the left menu, then select the tab *Access from Remote Clients*. Here you have to ensure that the check box *All licenses are accessible without need of identity* is checked. Next, you have to configure the client machine. For that purpose, [http://localhost:1947/\\_int\\_/config\\_to.html](http://localhost:1947/_int_/config_to.html) has to be opened on the client (→Fig. 3).



**Figure 3.** Configuration of the license server at the client.

Select *Configuration* on the left menu, then select the tab *Access to Remote License Managers*. Here the checkboxes *Allow Access to Remote Licenses* and *Broadcast Search for Remote Licenses* should be checked. Further you may enter the name of the license server (e.g. server2) or the IP address in the textbox *Specify Search Parameters*. After changes, please press the *Submit* button.

After that, change to *HASP Keys* on the left menu and the network dongle should be displayed (↔Fig. 4).



**Figure 4.** Display of keys that are ready to use at the client.

## 1.4 Installed Files

The VirtualLab Fusion installation copies the required files, including documentation, into the installation directory (per default into C:\Program Files \Wyrowski VirtualLab Fusion). A folder with shortcuts is created in the Windows™ Start Menu / Start Screen. If not already installed by other programs, the following additional components will be installed:

- .NET Framework (version 4.8)
- C++ 2022 Redistributable
- Sentinel hardlock driver (not for the trial version)

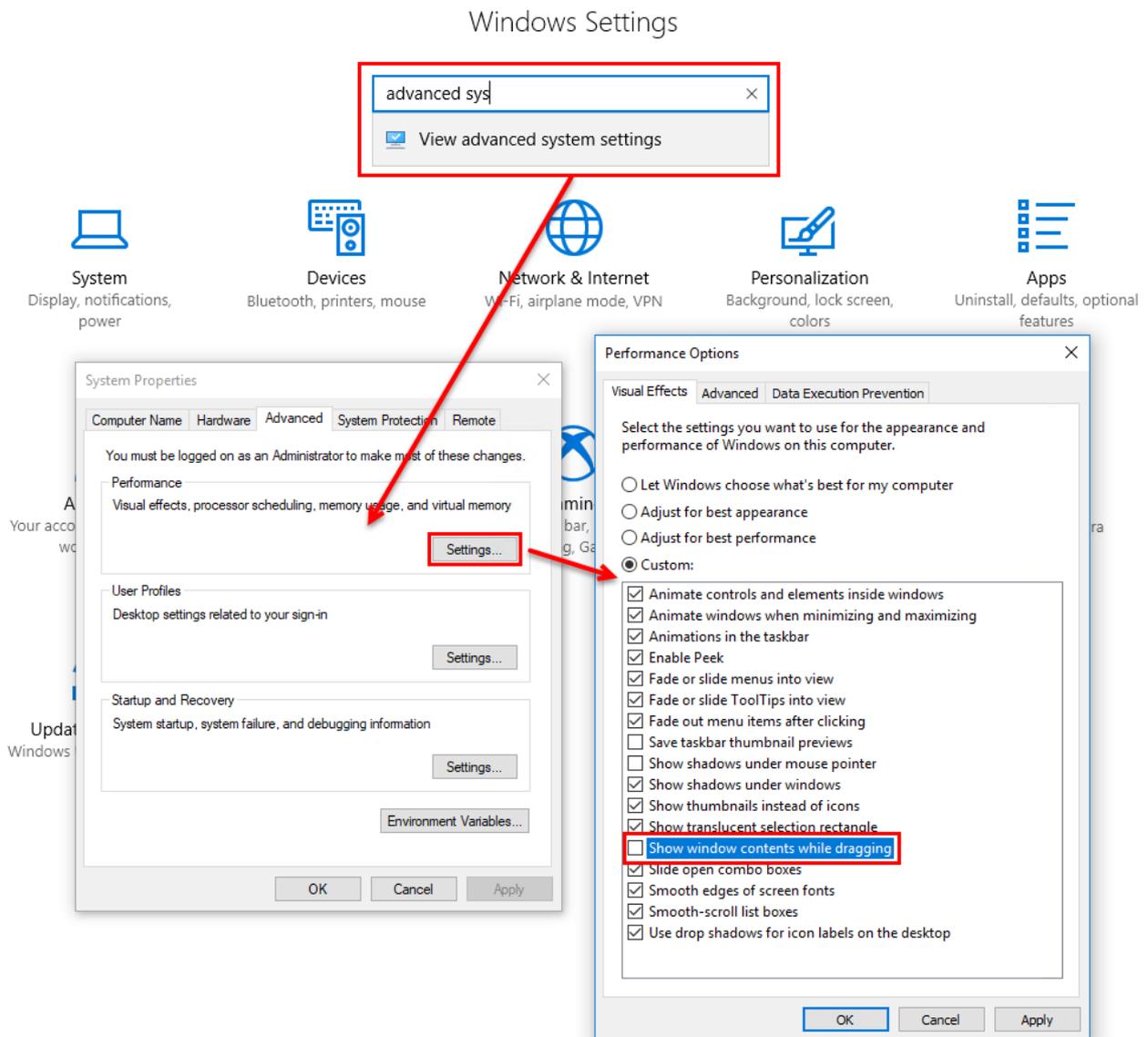
These files are also available in a folder “Support” below the installation directory.

## 1.5 Recommended Windows Configuration

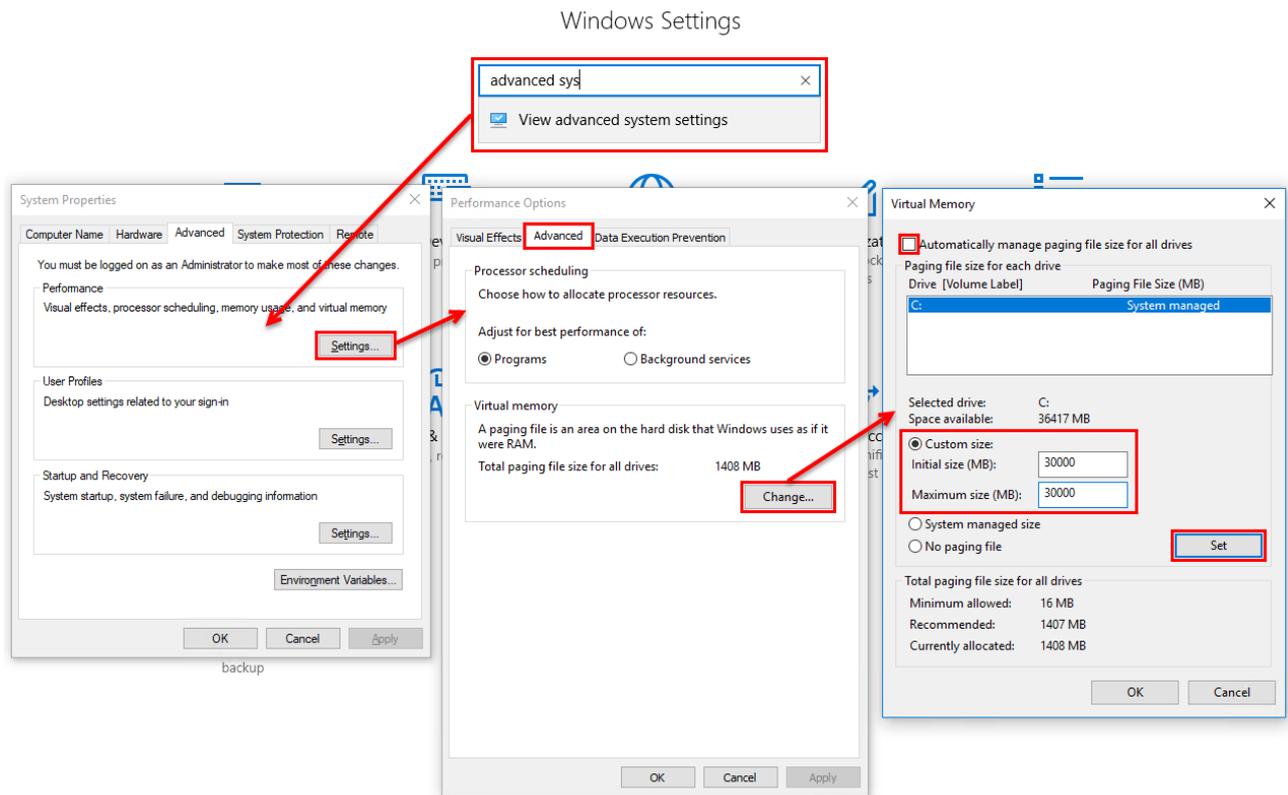
There are two advanced system settings of Windows which can increase performance of VirtualLab Fusion. Run the Windows Control Panel and open the *System and Security > System* applet to this end. Click on *Advanced system settings* and select the *Performance Settings* on the *Advanced* tab.

The two recommended settings are:

1. Disable showing window contents while dragging. This improves performance if dragging or resizing view windows within VirtualLab Fusion which represent a large amount of data. ↔[Fig. 5](#).
2. Set the virtual memory to a fixed but large size (recommended 20 GB or more). This creates an empty swap file of the specified size; dynamic resizing of the swap file is very computationally intensive. ↔[Fig. 6](#).



**Figure 5.** How to access the performance options of Windows and how to disable showing window contents while dragging.



**Figure 6.** Recommended setting for the size of the swap file within the performance options of Windows.

## 1.6 Uninstall Instructions

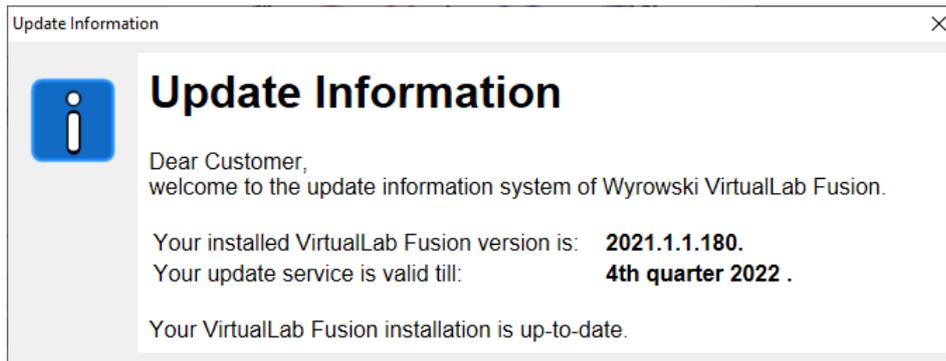
1. Run the Windows Control Panel.
2. Open the *Add/Remove Programs* applet from Control Panel.
3. Select the appropriate VirtualLab Fusion version from the list of applications that can be uninstalled by Windows.
4. Click on the Add/Remove button to uninstall VirtualLab Fusion.
5. Uninstall the other components mentioned in [Sec. 1.4](#) if you are sure that they are not used by other programs.

## 2 How to Update VirtualLab Fusion

To update VirtualLab Fusion different methods are available. On the one hand the support staff of LightTrans informs you about new updates by an email after each release.

Another method to get the most current version of VirtualLab Fusion is to use the ribbon item **Start > Update Information**. Clicking this ribbon item opens an URL within the standard web browser which informs you about the installed version and the available update service. The user is also informed about available updates, which can be downloaded directly.

**Fig. ??** shows the website which is opened by the ribbon item *Update Information*.



**Figure 7.** The internet page which informs the user about the installed version, the valid update service and whether new updates are available.

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### 3 The License Model of VirtualLab Fusion

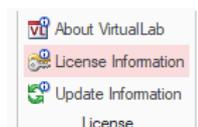
Except for the **trial version**, VirtualLab Fusion comes with an USB dongle which allows advanced license models including an automatic update service or network license models. A single place license comes with a black dongle. This dongle must be connected to the computer on which VirtualLab Fusion is started. If you have a **network license** you can connect the (red) dongle to any computer within your local network. Note that the hardlock drivers must be installed on that server. As long as the number of allowed licenses is not exceeded, any other computer within the local network can open VirtualLab Fusion then.

An **education license** is simply a special price-reduced network license for education purposes which requires an additional normal license.

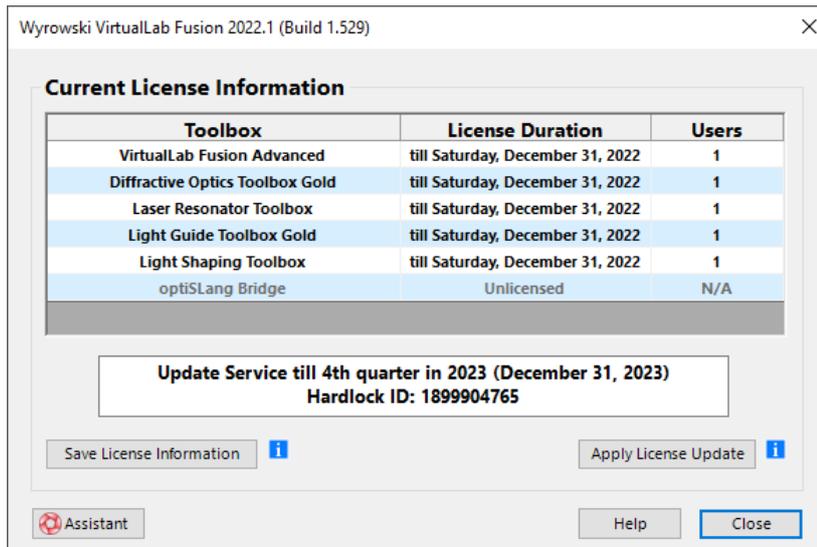
An **evaluation license** is time-limited and only intended for evaluation purposes.

#### 3.1 License Updates

The licenses of VirtualLab Fusion can be managed using an integrated dialog, which can be found at the **Start > License Information** ribbon item (→Fig. 8). Fig. 9 shows the dialog that displays the current license information that is stored in the USB dongle.



**Figure 8.** The License and Update ribbon items of VirtualLab Fusion.



**Figure 9.** The dongle dialog to manage the licensing of VirtualLab Fusion.

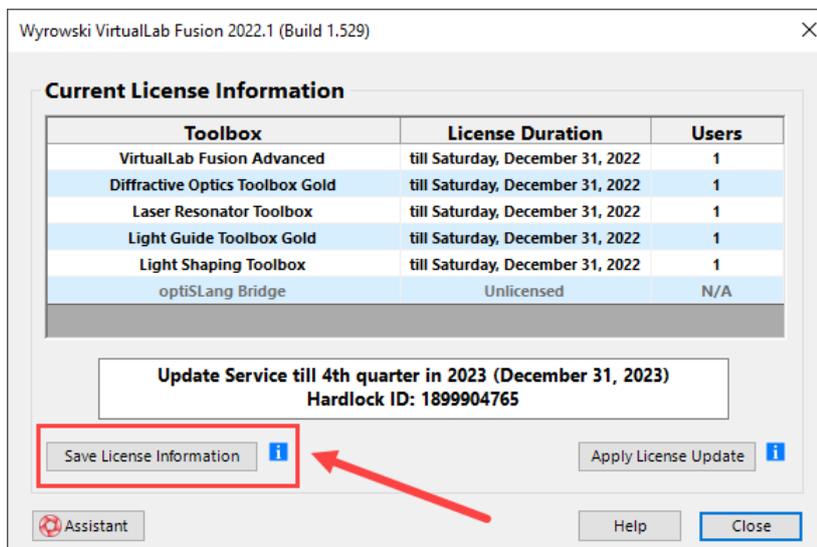
The current license status is displayed in the upper section of the dialog. Depending on the license model, the *License Duration* can be

- “Unlimited” or
- an expiration date until which the package can be used .

Also shown is the last quarter the update service is valid for, the number of users for each package and the internal Dongle ID.

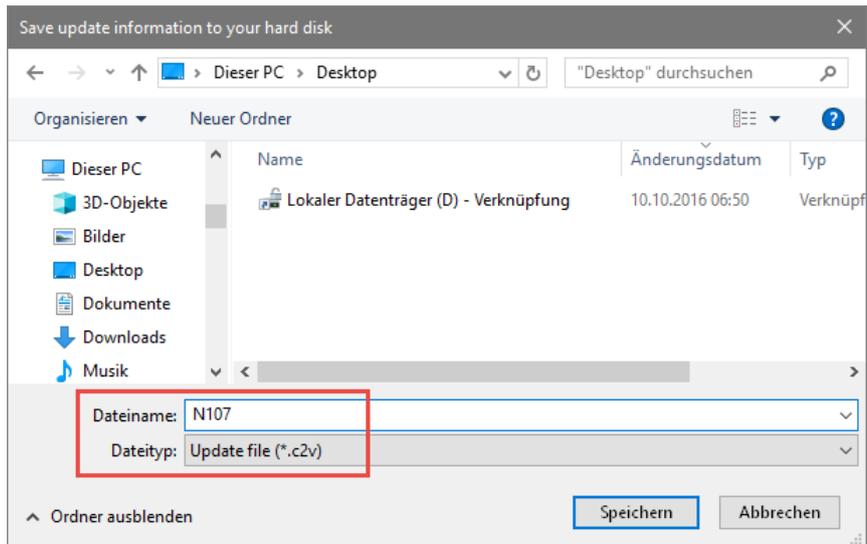
In the following we explain how licenses can be added or renewed.

After you have bought additional licenses we will ask you to send us your current license file. This file is obtained by pressing the button *Save License Information* (↔Fig. 10).



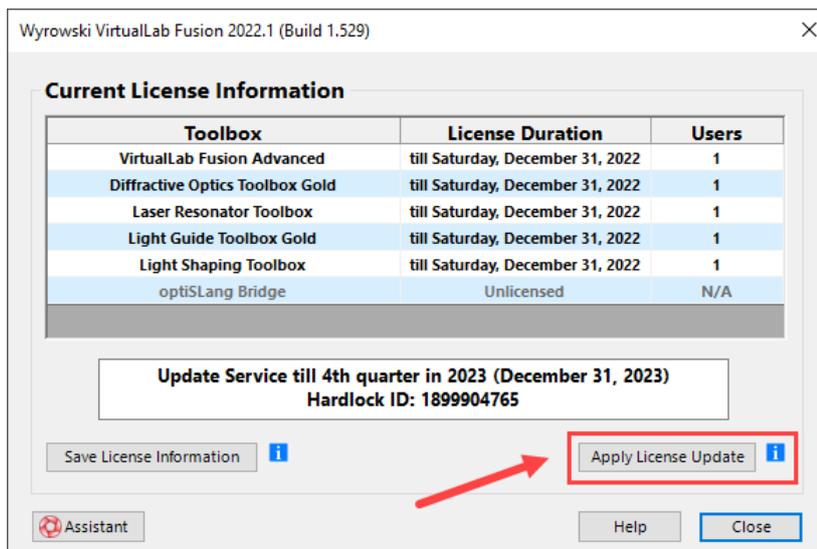
**Figure 10.** Press the button “Save License Information”.

Then a file dialog will be opened, where you can choose the destination for saving the license file (↔Fig. 11). The resulting file has the extension “c2v” and has to be sent by email or ftp to LightTrans.



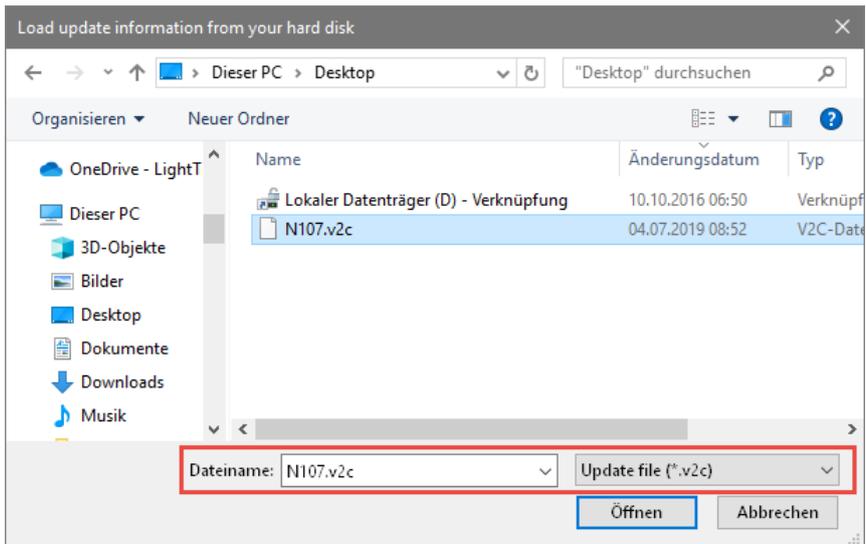
**Figure 11.** File dialog for saving the “c2v”.

You will receive the modified license file from us. In order to activate the new licenses, the file has to be opened by pressing the *Apply License Update* button (→Fig. 12) in the license information panel.



**Figure 12.** Press the button “Apply License Update”.

Thereby another file dialog is shown (→Fig. 13) and you have to select the received “v2c” file. After this step the license on the USB key is updated and the new license conditions are active for VirtualLab Fusion.



**Figure 13.** File dialog for applying the “v2c”.