

GEOSYSTEMS License Tools

How-to-Use Guide

Software Version: 2.1

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1 GEOSYSTEMS Software - Quick Guide

The GEOSYSTEMS License Tools is the licensing administrator for all GEOSYSTEMS Software.

Setting up GEOSYSTEMS License Tools is done in one of two ways:

- For systems that host the licenses, this being either **Standalone Systems or Dedicated License Servers**, the GEOSYSTEMS License Tools must be installed, and the Windows service named *GEOSYSTEMS License Service* must be initialized.
- For systems that are **Clients** i.e., they receive their license from a licensing server. Only the GEOSYSTEMS License Tools need to be installed. There is no need to configure Windows service.

1.1 Installation Steps of GEOSYSTEMS Software

The installation of GEOSYSTEMS Software follows these steps:

1. Installing the GEOSYSTEMS Software by running the dedicated installer.
2. In most cases GEOSYSTEMS License Tools will be automatically installed with the software installer.
3. If the automatic install did not happen, or a Dedicated Licensing Server is being configured then GEOSYSTEMS License Tools must be installed manually through the dedicated installer.
4. Use the GEOSYSTEMS License Tools to retrieve your HostID. Use the HostID to apply for the GEOSYSTEMS license file. (Standalone systems or Dedicated License Servers).
5. Once you have received the license file, install the license using the GEOSYSTEMS License Tools. (Standalone systems or Dedicated License Servers)
6. Connect to the License Server using GEOSYSTEMS License Tools (Client System)
7. Run the GEOSYSTEMS Software.

1.2 Installation Prerequisites

For the GEOSYSTEMS License Tools installation, **full administration privileges are required**.

1.3 The GEOSYSTEMS Licensing – what must be installed where?

System Type	What needs to be installed and configured
Standalone Systems	<p>Install GEOSYSTEMS Software. This typically includes the GEOSYSTEMS License Tools. (If not, use the GEOSYSTEMS License Tools Installer separately)</p> <p>➔ Add the GEOSYSTEMS license file to the License Tools via <i>Add Local License</i> and make sure that the GEOSYSTEMS Windows Service starts up (check icon in lower right).</p>
Client(s) in a Network	<p>Install GEOSYSTEMS Software. This includes the GEOSYSTEMS License Tools (If not use the GEOSYSTEMS License Tools Installer separately)</p> <p>➔ Add the GEOSYSTEMS license file to the License Tools via <i>Add Remote License Server</i>.</p> <p>[For the Administrator: if necessary, open the required ports (Firewall) so the Client (the GEOSYSTEMS License Tools) can connect to retrieve the GEOSYSTEMS license file.]</p>
Remote License Server	<p>Install the GEOSYSTEMS License Tools</p> <p>➔ Add the GEOSYSTEMS license file to the License Tools via <i>Add Local License</i> and make sure that the GEOSYSTEMS Windows Service starts up.</p> <p>[For the Administrator: if necessary, open the required ports so the Client can connect to the Server to get the license file.]</p>

2 GEOSYSTEMS Licensing

GEOSYSTEMS has its own licensing for its software products.

It uses RLM from Reprise Soft, an equivalent licensing scheme to FlexNet, used by Hexagon.

Essentially the licensing consists of a Windows service providing the GEOSYSTEMS license. The tool to set up this service, is the GEOSYSTEMS License Tools, which must be installed on all systems where GEOSYSTEMS Software is supposed to run. In a client-server environment, it also needs to be installed on a License Server.

Note: Client Systems do not require the setup of Windows Service.

- **GEOSYSTEMS licenses can be floating (concurrent) or node-locked.**
- **Client-server configurations are supported.**
- **Hardware keys / dongles are not supported.**

2.1 License Setup on Standalone System or Dedicated License Server

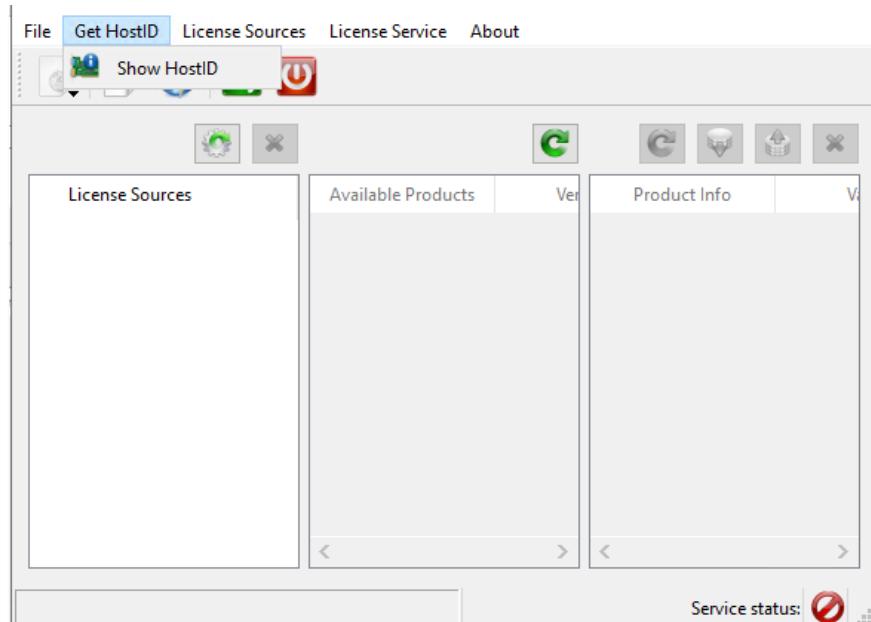
The following instructions are valid for the license setup on a standalone (local) system or on a dedicated (remote) license server.

After GEOSYSTEMS License Tools have been successfully installed, a new program can be found in the Windows Start Menu: GEOSYSTEMS| License Tools.

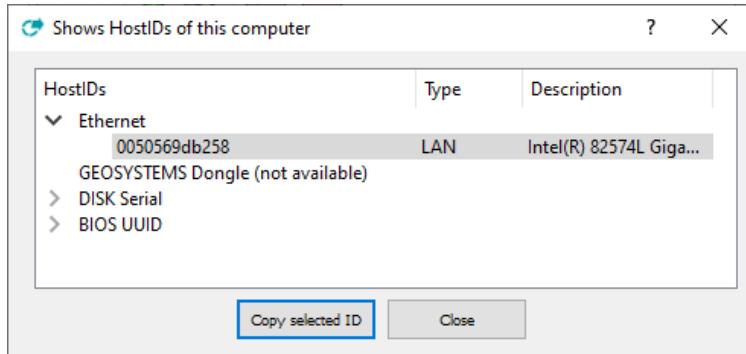
The GEOSYSTEMS License Tools can now be started.

Once again **full administration privileges are required.**

Select *Get HostID | Show HostID*:



HostIDs found on your system will be shown.

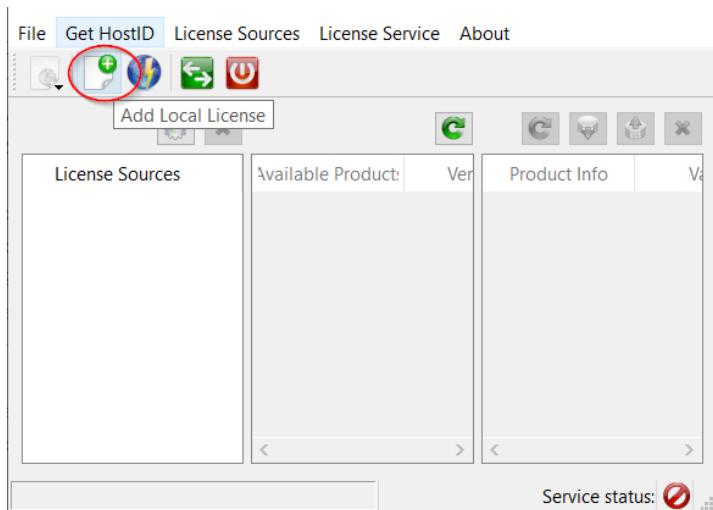


Select the ID whose usage is appropriate. **Using the local LAN (Ethernet) is recommended.**
Click on *Copy selected HostID* to save the ID in the clipboard.

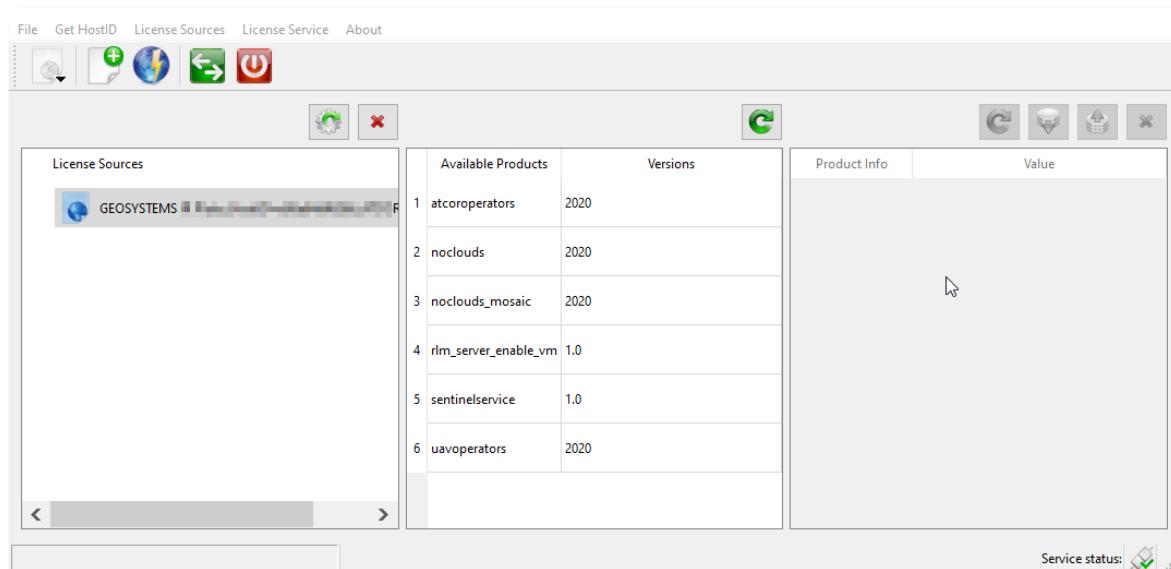
The HostID is specific to the Users hardware.

It must be sent to keycode@geosystems.de to request a GEOSYSTEMS license.

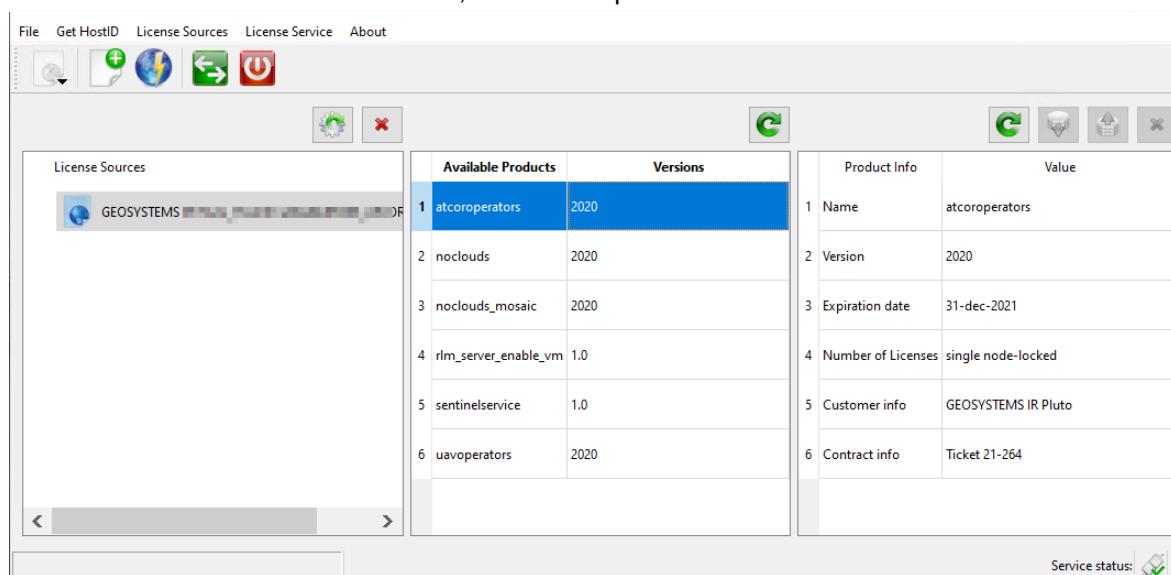
After receiving the unique for every HostID GEOSYSTEMS License file (*.lic), import the local license using *Add local License* button.



After selection of the correct .lic file, the license is imported, and the GEOSYSTEMS license service will start automatically.

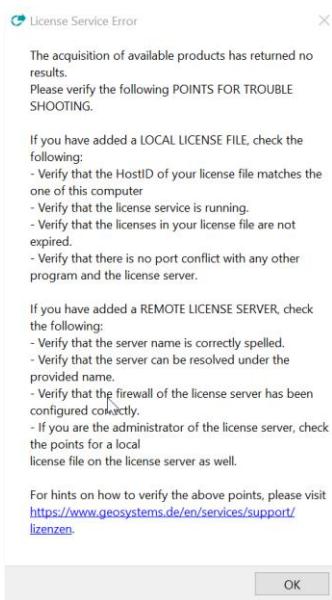


To retrieve detailed license information, click on the product name:



→ Now the GEOSYSTEMS License Tools can be closed. The Windows GEOSYSTEMS license service is started. The local copy of your **GEOSYSTEMS Software** is licensed and can be used.

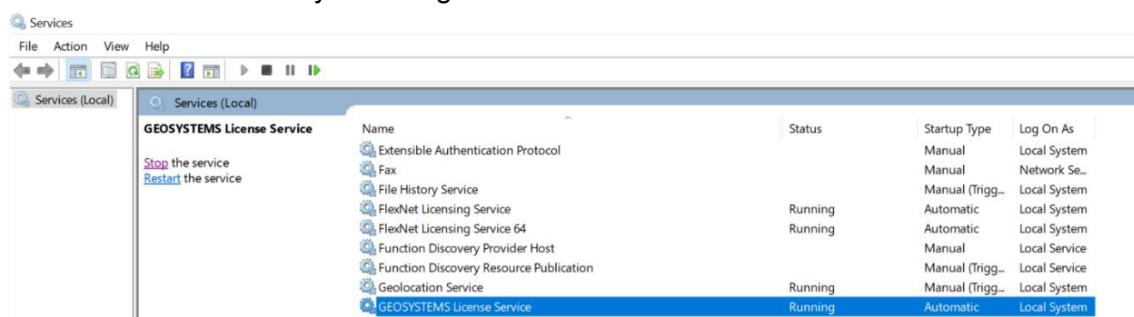
In case the license cannot be found or is invalid, an Error Message is displayed with first hints where to look for probable reasons.



OK

2.1.1 Windows Service

This can be controlled by checking the windows services:

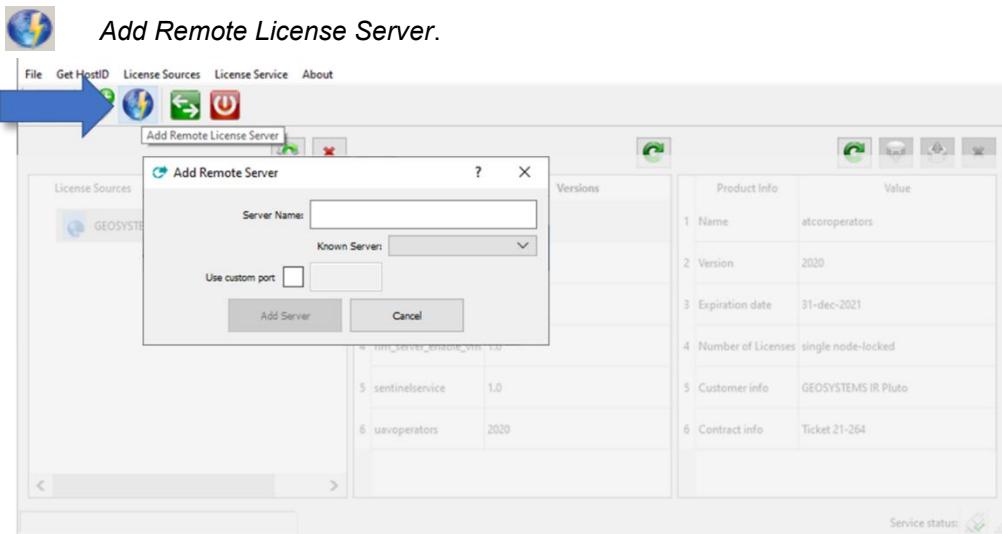


2.2 License Setup on a Client

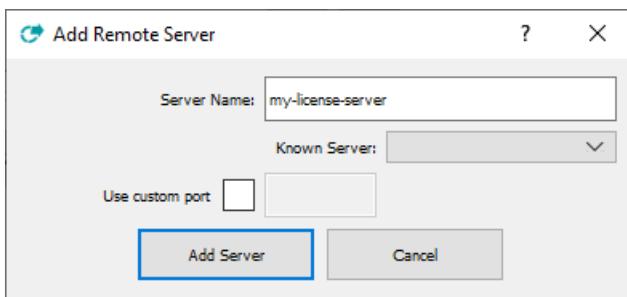
Both – license server and client - must be visible within the network. Start the GEOSYSTEMS License Tools (located in the Start Menu: GEOSYSTEMS).

Full administration privileges are required.

Once the license source, on a dedicated (remote) license server, has been fully established, the client can connect to it via the GEOSYSTEMS License Tools (see below). If there are problems setting up the license server, please consult 2.1.

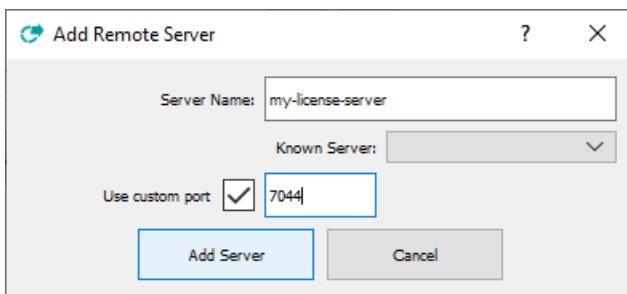


To do this, enter the server's name or IP address of the license server in the following menu:



If the server's name has been entered already it is available in the pull-down menu *Known Server*.

In case the **RLM daemon's port** has been changed (see chapter 3.1.1) it is also required to set this new port number in the *Add Remote Server* menu:

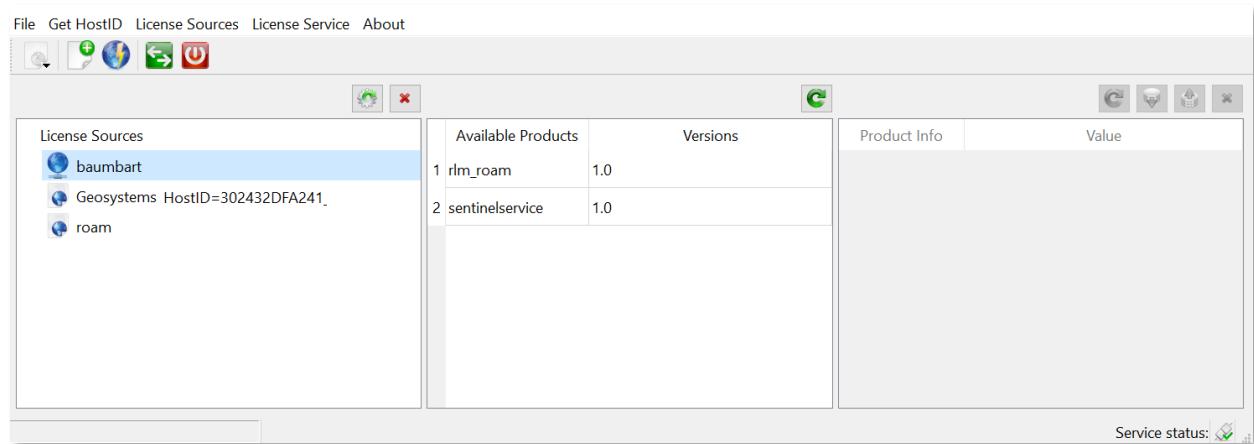


If the license from your license server is visible, you are ready to use the software on the client machine.

If the license remains unavailable, please check Chapter 3.1

Please note: In this case a local Windows service is not necessary, and the service status (lower right) shows *License Server not installed*





➔ Now the GEOSYSTEMS License Tools can be closed. The local copy of the **GEOSYSTEMS Software** receives its license from the License Server and can be used.

3 Advanced Configuration

3.1 Ports and Firewall Configuration

This section is meant for system administrators or experienced users only.

3.1.1 Port for the RLM Daemon (License Server Port)

The default port used for the RLM daemon on the **License Server** is port **5053**. If it is not available, the RML Daemon (rlm.exe) will not start up at all and the License service cannot be started.

This can be seen in the log file:

```
01/17 14:12 (rlm) Port 5053 in use, waiting ...
```

In this case the GEOSYSTEMS License File (`_.lic`) will have to be edited, and another available port must be chosen manually.

Example, e.g., changing port from 5053 to 7044:

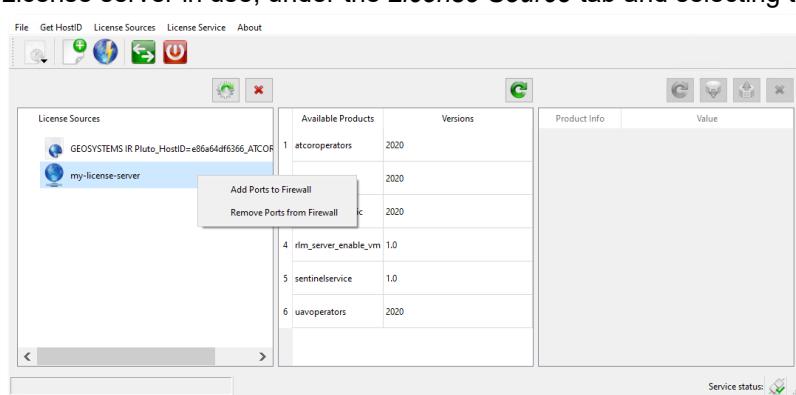
```
HOST localhost e86a64df6366 5053
ISV geosystems
LICENSE geosystems rlm_server_enable_vm 1.0 permanent single
hostid=e86a64df6366 issuer=GEOSYSTEMS customer="GEOSYSTEMS IR Pluto"
contract="Ticket 21-264" issued=17-may-2021 replace _ck=f51413d6fe
↓
HOST localhost e86a64df6366 7044
ISV geosystems
LICENSE geosystems rlm_server_enable_vm 1.0 permanent single
hostid=e86a64df6366 issuer=GEOSYSTEMS customer="GEOSYSTEMS IR Pluto"
contract="Ticket 21-264" issued=17-may-2021 replace _ck=f51413d6fe
```

Upon changing the port number, the service must be re-started:



- Stop License Service**
- Start License Service**

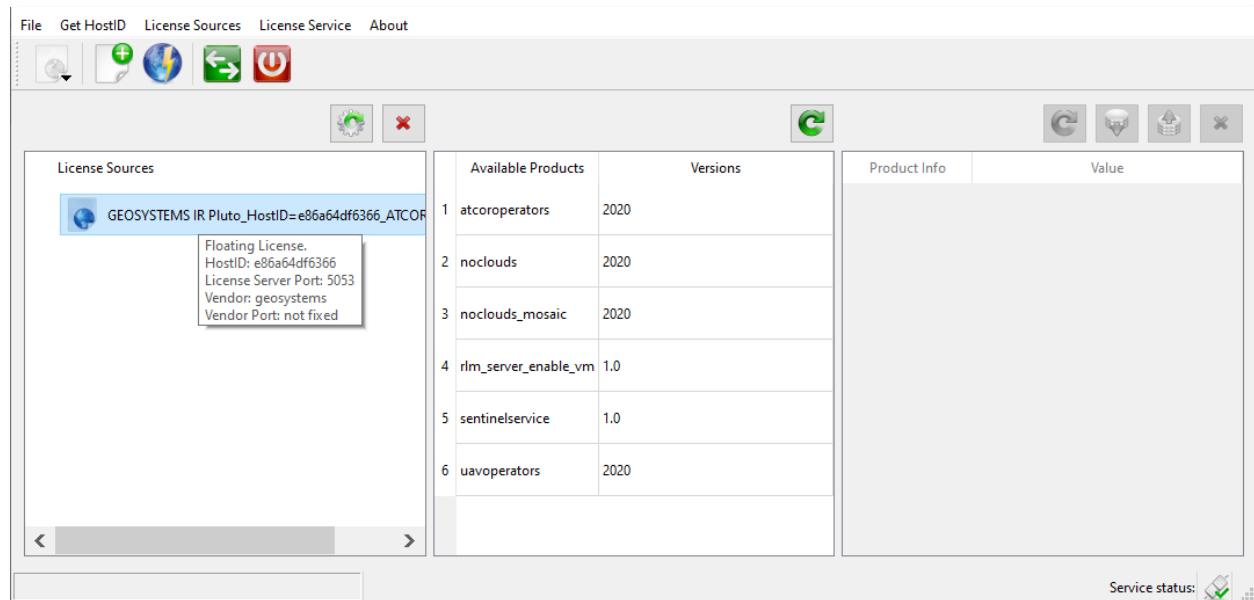
If a firewall is running: Additionally, the new port needs to be added to the firewall by right clicking the License server in use, under the *License Source* tab and selecting the option *Add Ports to Firewall*:



3.1.2 Port for the GEOSYSTEMS Vendor Daemon (Vendor Port) [for Administrators]

There is no default port which is used for the GEOSYSTEMS vendor daemon (ISV GEOSYSTEMS) on the License Server. It selects a different number whenever the program is started.

The bubble help over the *License Source* will show: Vendor Port: not fixed.



The random port automatically selected can be seen in the log file:

```
01/17 14:01 (rlm) Starting ISV servers:
01/17 14:01 (rlm)      ... GEOSYSTEMS on port 57831
```

In case the automatically selected port is not appropriate, e.g., as it is interfering with the firewall configuration in the network (check firewall settings), it is possible to set a custom port for the GEOSYSTEMS License Server in use by editing the GEOSYSTEMS license file on the server (.lic) with a new port. A port number of **24000** is recommended for the ISV GEOSYSTEMS vendor daemon.

Example:

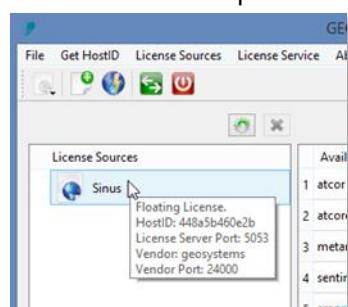
The part > port=24000 < must be added manually:

```
HOST localhost e86a64df6366 5053
ISV geosystems port=24000
LICENSE geosystems rlm_server_enable_vm 1.0 permanent single
hostid=e86a64df6366 issuer=GEOSYSTEMS customer="GEOSYSTEMS IR Pluto"
contract="Ticket 21-264" issued=17-may-2021 replace _ck=f51413d6fe
```

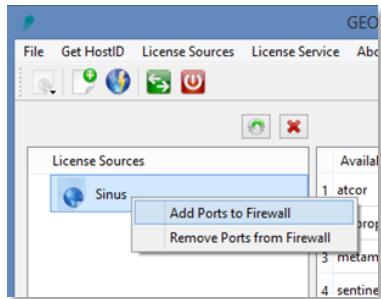
To make the License Server use the new port available the windows service needs to be re-started:

-  Stop License Service
-  Start License Service

Now the Bubble Help over the *License Source* will show: Vendor Port: 24000



If a firewall is running: Additionally, the new port needs to be added to the firewall of the license server by right clicking on the *License Source* and selecting the option *Add Ports to Firewall*:



3.1.3 Info about Ports (list the currently used ports)

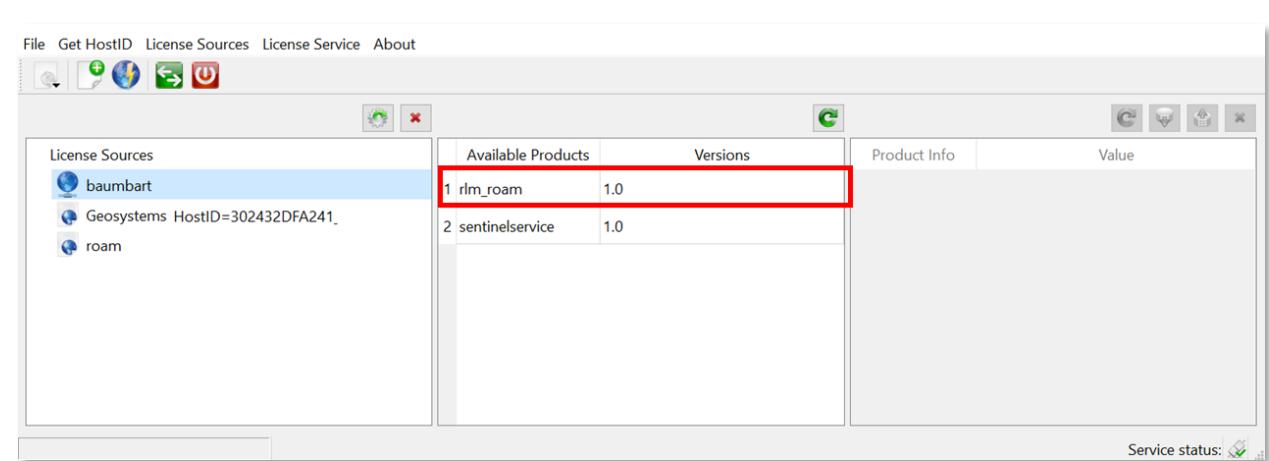
With the command `netstat -ano` (entered in the Command Prompt) it is possible to check which ports are currently in use on your system.

3.2 License Borrowing

The license borrowing mechanism allows the execution of GEOSYSTEMS software with centrally stored licenses, even if a connection to the license server is not possible. A typical scenario is if you are using a GEOSYSTEMS software outside of the company network.

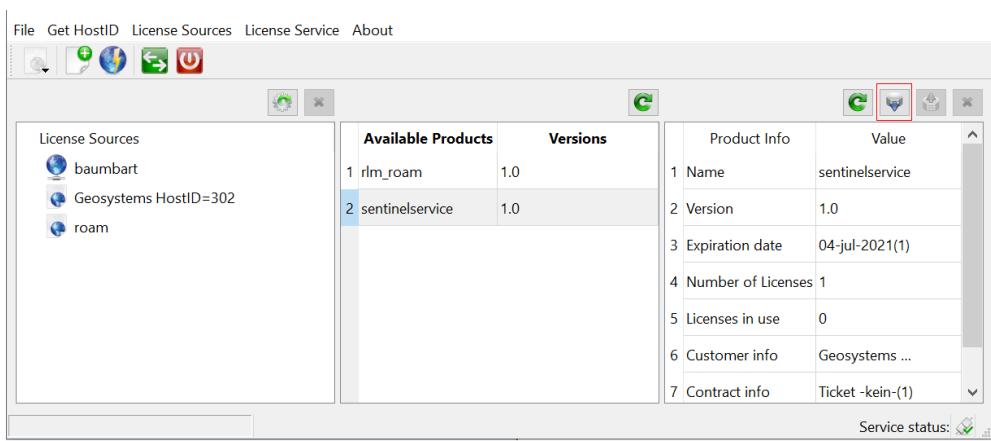
For the activation of the license borrowing mechanism, a dedicated license ('rlm_roam') is needed on the license server. If such a license has not been issued, please get into contact with GEOSYSTEMS support support@geosystems.de.

4 Borrow License

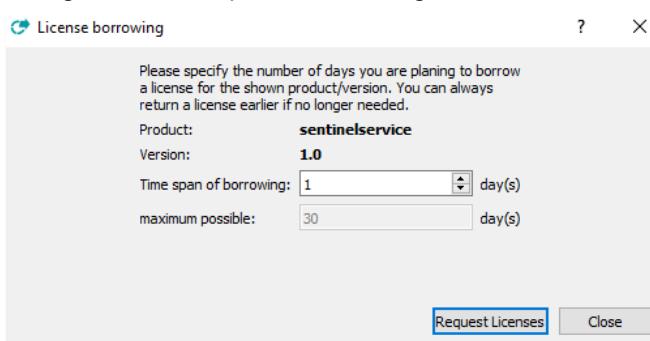


To borrow a license on a client the following steps are necessary. These steps must be executed for each product individually.

1. Make sure the client is connected to the License Server and the license server holds an active 'rlm_roam' license.
2. Under *Available Product* select the product which requires to be licensed via borrowing.
3. This will activate the button



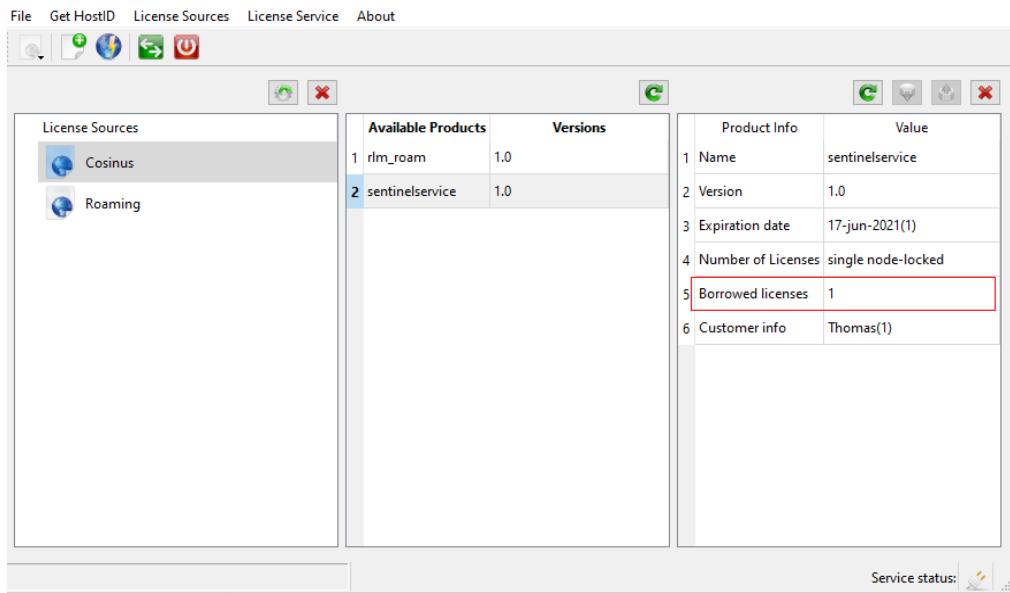
4. Selecting the button will open the following dialog which will enable license borrowing and the setting of the time span of borrowing for the selected software.



5. By clicking on *Request License* one license for the selected product will be issued for the requested time span to the client machine. This license will appear as *in use* on the server. Other

users of the license server will not be able to use it for the entire time span. Click on *Close* to finalize the borrowing.

6. After disconnecting from the license server, the license will nevertheless be available.



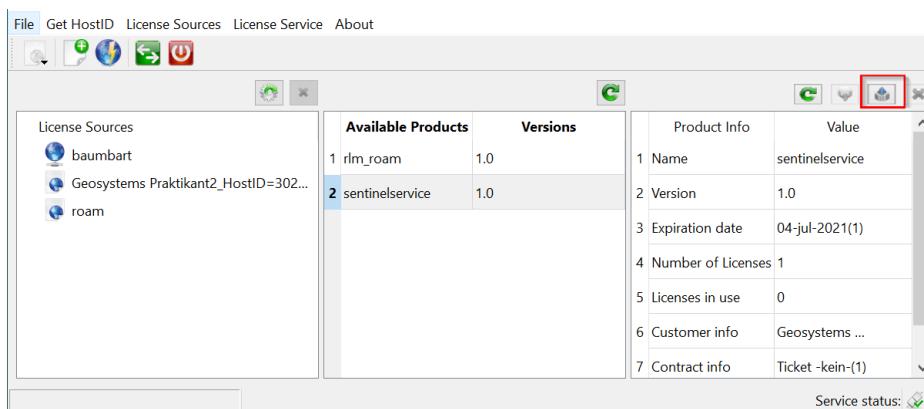
7. A borrowed license will be returned automatically as soon as the requested time span is over. No manual interaction is needed. This will also make the license available to others on the license server.

4.1.1 Return License

In case returning a borrowed license becomes necessary **before** the requested time span has elapsed, the following steps are necessary. These steps must be executed for each product individually.

1. Make sure the in use-client is again connected to the license server and the license server holds an active 'rlm_roam' license.
2. Select the product for which a license had been borrowed earlier.

This will make this button  available.



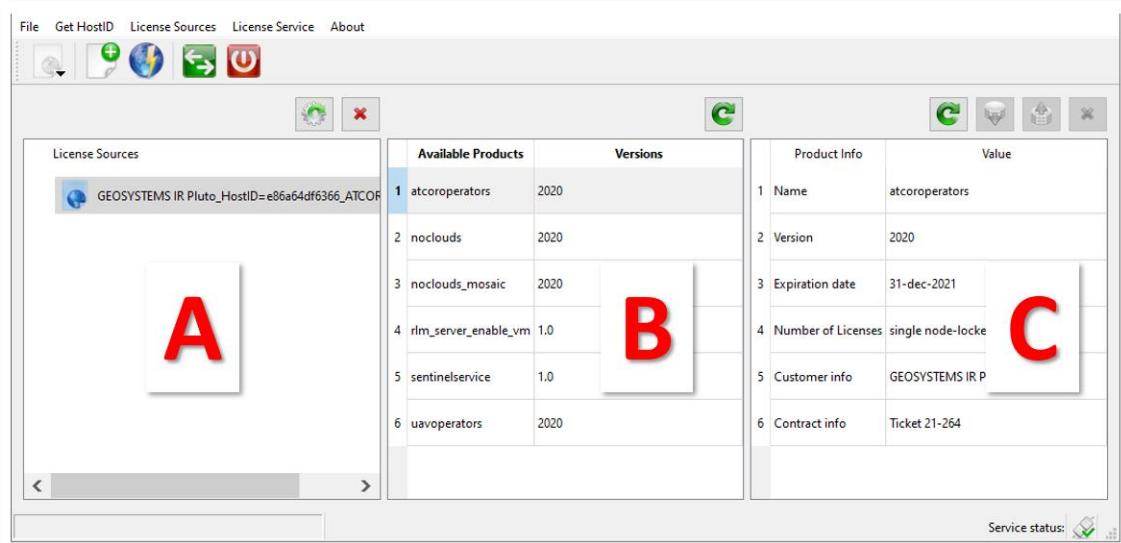
3. Click the button to return the borrowed license. The license server will make this license available to all other users.

In cases where it is impossible to establish a connection to the license server, it is possible to use this button to erase the license from your local system



Please note: This will not make the license available to others. The license will not be available to others until the requested time span has elapsed!

5 The GEOSYSTEMS Licensing Tool – Explanation of the GUI



- Section **A** displays the license source. A bubble help when pointing on the license source will display further information on e.g., the type, port, HostID.
- Section **B** displays the product and version.
- Section **C** displays the license details.

If no correct information is visible in one of the sections, use the refresh button 

Check License File

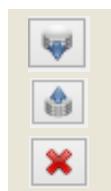
- Double-clicking the License source will open the license file in your standard editor.
- The license (.lic), once imported from its original location, is written to `C:\ProgramData\GEOSYSTEMS\Licenses`

Log File

- A log file is automatically created and written to `C:\ProgramData\GEOSYSTEMS\Licenses`.
- It can be opened by clicking on the  button from the GEOSYSTEMS License Tools.

Menu Buttons in the GEOSYSTEMS License Tools:

	Opens a Log-file in the standard editor
	Add a local license (on a standalone system on a dedicated license server)
	Add a remote license server (on a client)
	Start license service
	Stop license service
	Reread selected license service
	Delete selected license source
	Refresh contents of respective section

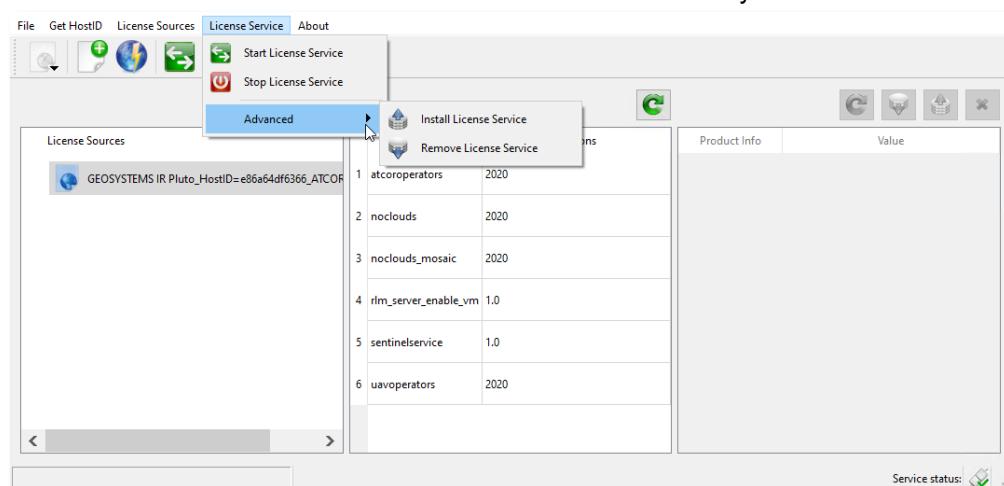


- Opens dialog for license borrowing. See section 3.2 for more information.
Only active when 'rlm_roam' license has been issued!
- Returns a borrowed license from local machine to server.
- Removes a borrowed license from the local system if a connection to the server cannot be established anymore.

A new service **GEOSYSTEMS License Service** is created and started automatically:

Service status:		The service has not started
Service status:		The service is running
Service status:		License service is not installed

The license service can also be **installed** or **removed** manually:



Contact:

GEOSYSTEMS GmbH
Support
Friedrichshafener Str. 1
82205 Gilching
GERMANY

T: +49 8105 39883-55
E: support@GEOSYSTEMS.de
www.geosystems.de