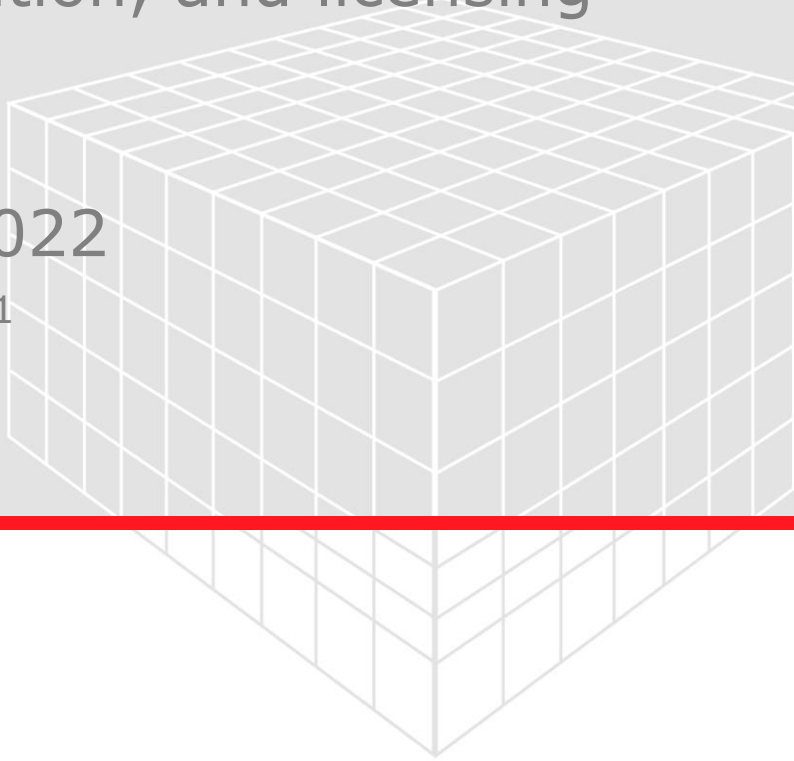
GeoDict®

Download, installation, and licensing



User Guide

GeoDict release 2022

Published: September 17, 2021
Reviewed: January 3, 2022
Reviewed: August 4, 2022

GeoDict

https://doi.org/10.30423/userguide.geodict2022

GeoDict 2022 download, installation, and licensing

System requirements and recommendations

The following are the minimum requirements and some recommendations. For up-to-date recommendations visit our web site at:

https://www.geodict.com/service-support/technical-support/system-requirements.html

- 8 GB of RAM (32 GB recommended)
- 4.8 GB of available hard-disk space
- 3D video card with a minimum of 1 GB of memory
  (Recommended is a 3D NVidia graphics card with at least 2 GB of memory, which additionally allows to use the GPU with a compute capability of at least 3.5 according to the lists given in https://developer.nvidia.com/cuda-gpus)
- 64 bit OS
  - Microsoft® Windows 7, 8 or 10
  - Linux (any linux distribution using glibc with version 2.17 or higher, e.g. RHEL 7.x, CentOS 7, openSUSE 15.1, ubuntu 18.04)
- OpenGL 2.0 or newer

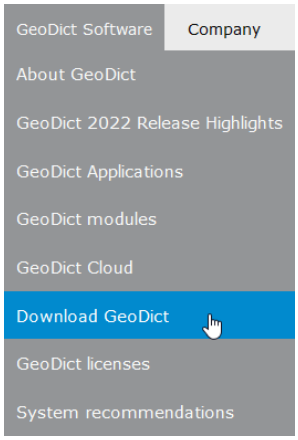
GeoDict's internal representation of the structure consists of rectangular 3D arrays of equal sized boxes, so-called volume elements or **voxels**. Approximately 32 million voxels can be visualized per GB of RAM.

The size of available RAM also determines the size of the largest structures handled by GeoDict's solvers.

When computing the properties of large structures, pay attention to the Task Manager to detect memory overflow. The Task Manager starts after clicking the right mouse button on the task bar of the computer. When the program uses unusually large amounts of memory, it is advisable to terminate the executable and review the settings for structure generation or property solvers.

Downloading and installing GeoDict 2022

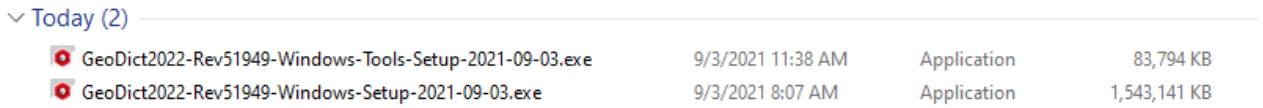
The necessary files to install GeoDict on your computer can be downloaded from GeoDict's web site (https://www.geodict.com) by opening the **Download GeoDict** page.



For each operating system, two packages are available for download:

- The GeoDict package contains the installer for GeoDict and all necessary files to run GeoDict.
- The GeoDict-Tools package contains open source tools which are licensed under the GNU Public License (GPL).

After downloading, two installers are available for installation



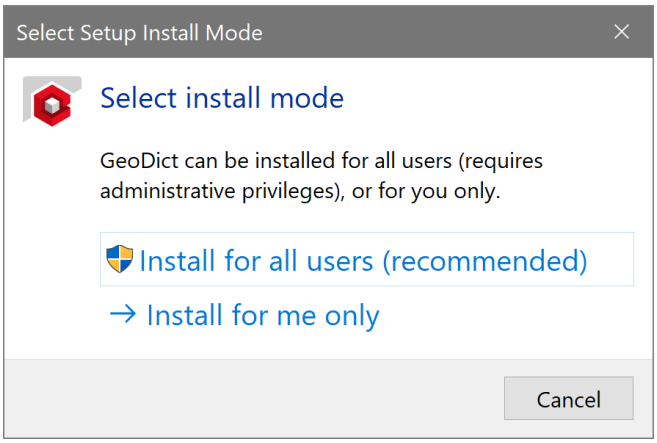
It is important to install GeoDict first. Afterwards, it is recommended but not absolutely required to install also the GeoDict-Tools package. The tools contain

- The MinGW compiler needed to compile UMATs in ElastoDict on Windows.
- x264, a free software library and application for encoding video streams into the H.264 or MPEG-4 AVC compression format.
- Notepad++, a text file editor for Windows.

Installation on Microsoft® Windows

GeoDict Installation

After starting the GeoDict installer, a pop-up window will ask you, if you want to install GeoDict with administrator privileges for all users, or if you want to install it in your user's directory.



Installation as Administrator

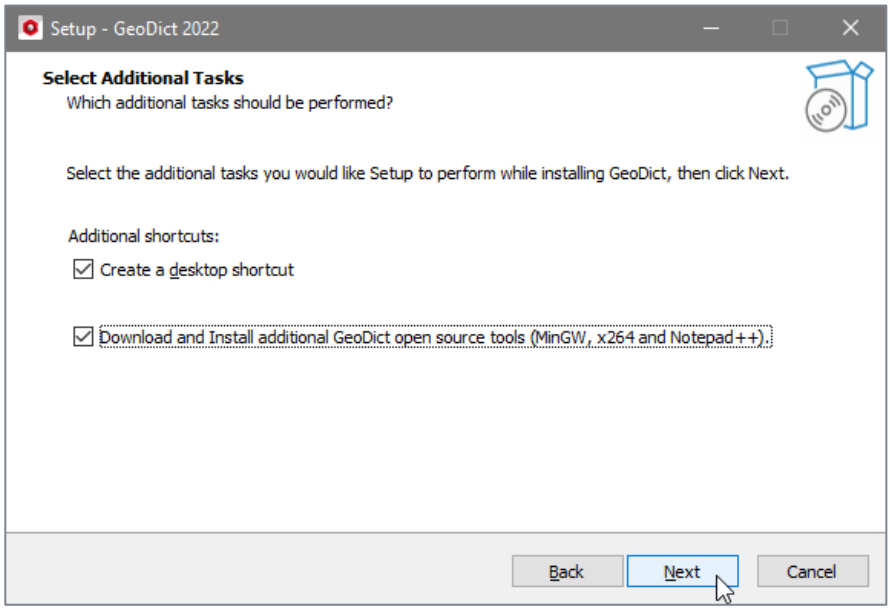
The installation wizard installs GeoDict by default in:

C:\Program Files\Math2Market GmbH\GeoDict 2022

and we recommended to use this folder for installation. Approximately 4.43 GB of hard disk space is needed for installation.

Follow the wizard through the installation steps.

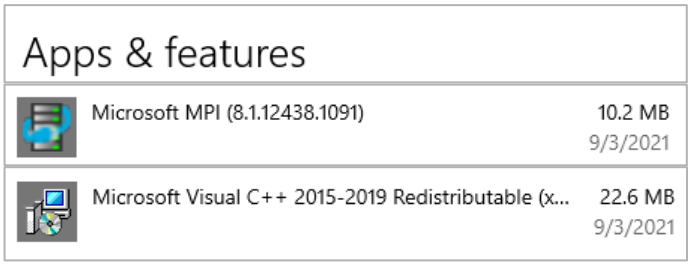
During the installation process, the wizard will ask you if you want to download and install additional open source tools required by GeoDict. If selected, the installer will automatically download and install the GeoDict-Tools package, too. In this case, it is not necessary to install the GeoDict-Tools package separately as described on page 4



During the GeoDict 2022 installation, two Microsoft redistributables are installed if they have not been previously installed by other programs.

Among them is **Microsoft MPI**, a Microsoft implementation of the Message Passing Interface standard for running parallel applications on the Windows platform. The Microsoft MPI redistributable (version 8.1.12438.1091) is installed into **C:\Program Files\Microsoft MPI**.

Also, the runtime library **Microsoft Visual C++ 2015-2019 Redistributable (x64)**, version 14.27.29016.0 is installed if it was not previously installed by another program.



Installation as User

The installation wizard installs GeoDict by default in:

C:\Users*username*\AppData\Local\Programs\Math2Market GmbH\GeoDict 2022\

Approximately 4.43 GB of hard disk space is needed for installation.

Follow the wizard through the installation steps.

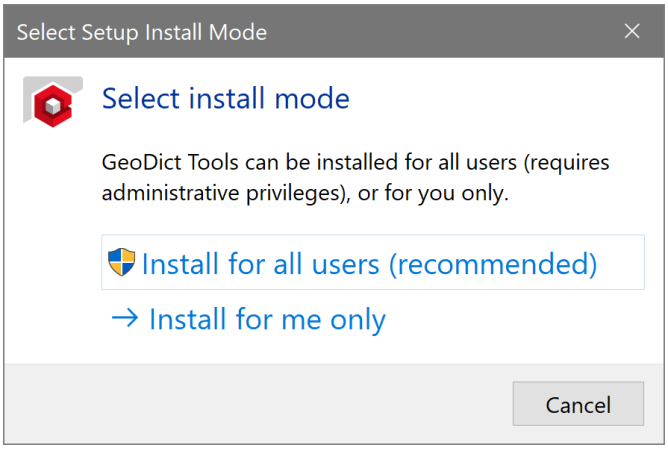
Without administrator privileges, the Microsoft redistributables cannot be installed. If they had been previously installed by other software products, it is not necessary to re-install them and GeoDict will use the installed Microsoft products.

Installation of GeoDict-Tools

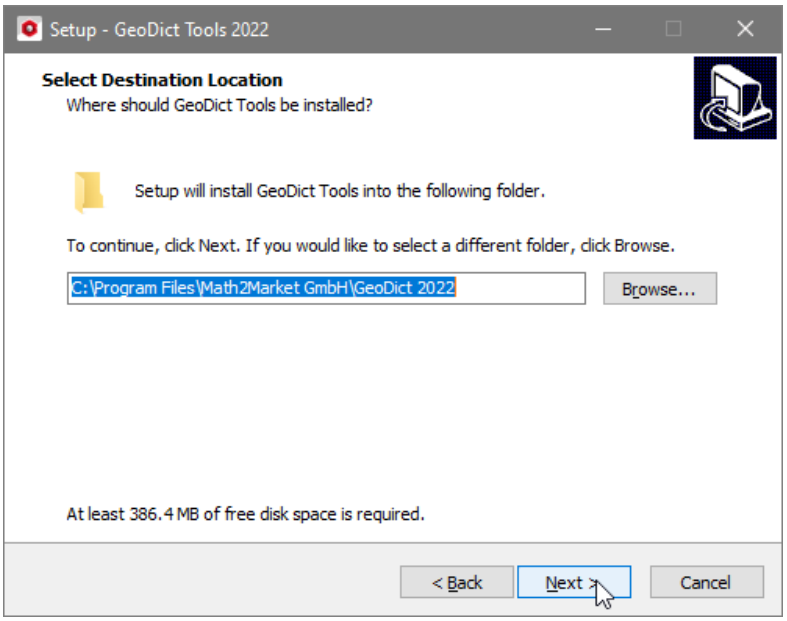
If the GeoDict-Tools have not already been installed during the installation of GeoDict, it is recommended to install them afterwards.

After starting the GeoDict-Tools installer, a pop-up window will ask you, if you want to install the GeoDict-Tools package with administrator privileges for all users, or if you want to install it in your user's directory.

Here, the same choice as during the GeoDict installation must be made. If you installed GeoDict for all users, you must install the tools for all users, too.

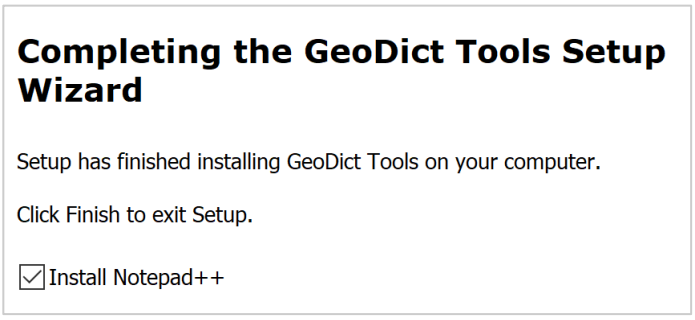


When asked to select the Destination Location, you must select the folder where GeoDict is already installed. The installer uses the same default locations as the GeoDict installer, so if you have not changed the installation folder during the GeoDict installation, you do not have to change anything here.



If the selected folders are not the same, a warning will appear.

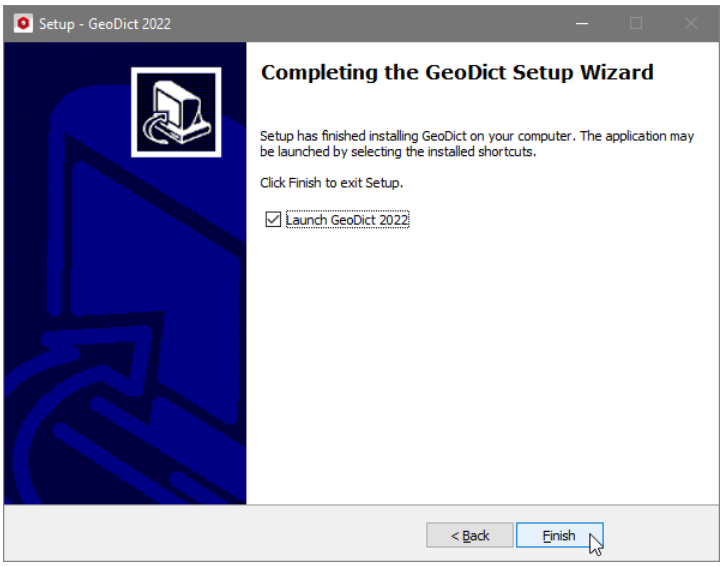
The wizard installs MinGW and x264 in the appropriate locations inside of the GeoDict installation folder. After the installation of those tools is finished, you will be asked if you want to additionally install Notepad++.



Leaving the button checked will launch the Notepad++ installation wizard (version 7.8.9, 64bit) By default, Notepad++ is installed in **C:\Program Files\Notepad++,** and we recommend to use this folder. It is not recommended to install Notepad++ into the GeoDict installation folder used before.

STARTING GEODICT

When the installation of GeoDict 2022 is completed, the Wizard suggests launching GeoDict.



If you do not un-check **Launch GeoDict 2022**, GeoDict 2022 launches now and the GeoDict GUI appears.

However, the program cannot run yet, and a dialog opens requesting a valid license to start. See pages 10ff. for instructions on requesting a license file for GeoDict2022 from Math2Market GmbH.

GeoDict needs to establish a TCP-connection to itself and this procedure might be blocked by some firewalls.

If GeoDict hangs at startup and the complete Graphical User Interface does not appear, check your firewall settings.

You should allow to connect to localhost on port 45161.

For more help, contact support(at)math2market.de.

The GeoDict software for Windows is now installed and ready for licensing.

Three shortcut icons have been saved to the computer desktop:

The **GeoDict 2022** icon is a shortcut to the GeoDict2022 edition located (by default) at C:\Program Files\Math2Market GmbH\GeoDict 2022.

The **GeoDexcel 2022** icon is a shortcut to the GeoDexcel spreadsheet, for the analysis and plotting of GeoDict results.

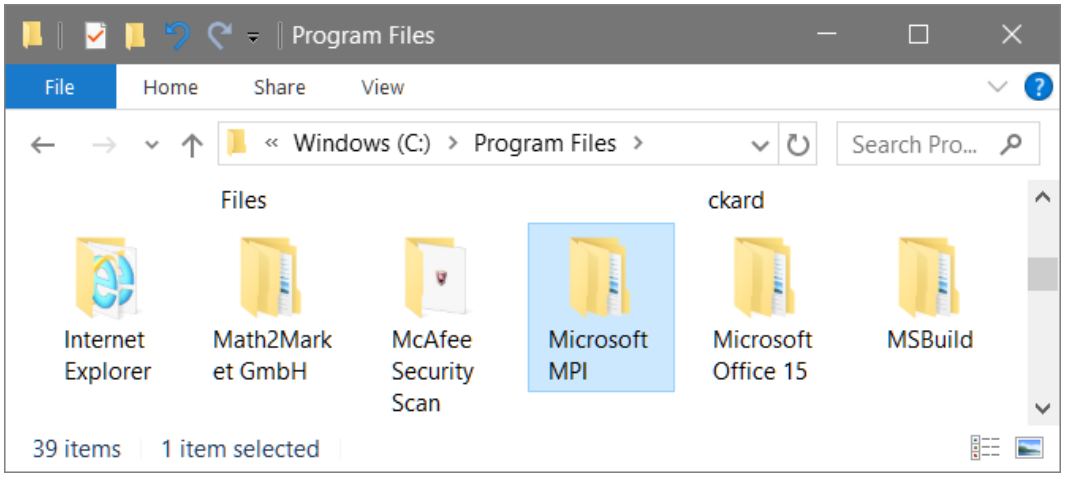
The **GeoLab 2022** icon is a shortcut to GeoLab, GeoDict's interface to Matlab®.

PARALLEL COMPUTING AND MPI FOR WINDOWS

GeoDict uses the MPI message passing interface protocol to run parallel computations in DiffuDict, ConductoDict, FlowDict, FilterDict-Media, FilterDict-Element, AddiDict, SatuDict and AcoustoDict.

GeoDict's parallel solvers use the MPI library from Microsoft.

If Microsoft MPI is not already installed, the Microsoft MPI redistributable is installed into **C:\Program Files\Microsoft MPI** during the installation of GeoDict2022 as indicated in page 3.



Installation on Linux

GeoDict Installation

GeoDict requires that the installed glibc library is version 2.17 or higher. To find out which version runs on your linux system, open a terminal and type in the command line

```
getconf GNU_LIBC_VERSION
```

and get (for example) glibc 2.19 as output. In this case you may install GeoDict. If the glibc version of your Linux system is 2.16 or lower, you cannot install GeoDict on this system.

After downloading the .tgz file, open a terminal, move the file to the folder where you want to install GeoDict and extract GeoDict by typing

```
tar -xzvf GeoDict2022-Rev51973-Linux-Setup-2021-09-05.tgz
```

The folder (**GeoDict2022-Rev51973-Linux-2021-09-05**) is created and contains all GeoDict files. The exact folder name and tar-file name depend on build version (here 51973) and date (here Sep 5th, 2021).

Launch GeoDict from the command line by starting

```
./geodict2022
```

from this installation folder or start it by browsing to the installation folder and clicking on the geodict2022 executable.

Optional: As administrator, create a link in /usr/local/bin to the geodict2022 executable in the installation folder, such that the program can easily be started by all users.

GeoDict for Linux is now installed and ready for licensing.

Should GeoDict 2022 not start properly after licensing, the most likely reason is a missing library on your machine. To identify the missing library, type

ldd geodict2022 > libraries.txt

in the GeoDict installation folder. Check whether one or more libraries are labelled as **Not found** and send the file **libraries.txt** by email to support@math2market.de.

Installation of GeoDict-Tools

After downloading the .tgz file, open a terminal, move the file to the folder where GeoDict was installed and extract GeoDict-Tools by typing

```
tar -xzvf GeoDict2022-Rev51973-Linux-Tools-Setup-2021-09-05.tgz
```

The content is unpacked into the folder

GeoDict2021-Rev51973-Linux-2021-09-05/Tools

and contains the x264 video encoder. The exact folder name and tar-file name depend on build version (here 51973) and date (here Sep 5th, 2021).

It is important that both GeoDict and GeoDict -Required Tools are unpacked in the same folder with the same build version number and date.

Parallel Computing and MPI for Linux

GeoDict uses the MPI message passing interface protocol to run parallel computations. The MPI interface and the required **mpiexec** executable can be provided through different packages from different vendors. Unfortunately, these packages are not compatible with each other.

The installation package of GeoDict 2021 contains solver executables for Mpich 3.2 and OpenMPI 1.10.7. This means that one of these three libraries must be installed.

It is NOT possible to use OpenMPI 1.10.6 or 1.10.8 instead of OpenMPI 1.10.7

To allow for an easy installation, the packages:

mpich-3.2.tar.gz

openmpi-1.10.7.tar.gz

and a shell script can be found in the GeoDict installation folder:

setupMPI.sh

To install the MPI libraries, simply run the setupMPI.sh script. The script will unpack, configure, make, and install the libraries. If the script is called without any command line argument, the libraries are installed locally in the GeoDict installation folder. If the script is called with the command line argument 'root':

setupMPI.sh root

the libraries are installed in /usr/local. For this, root privileges are required.

For more details on MPI and how to install it please refer to the High-Performance Computing handbook of the user guide.

LICENSING GEODICT

In general, GeoDict licenses can be node-locked or floating.

1. Node-locked license:
   - A node-locked license is bound to the computer from which the license request file (.glr) was generated.
2. Floating license:
   - A floating license allows to use the software everywhere in a local network.
   - To use a floating license, either the RLM license server or the OLicense Server must be installed before GeoDict can be used.

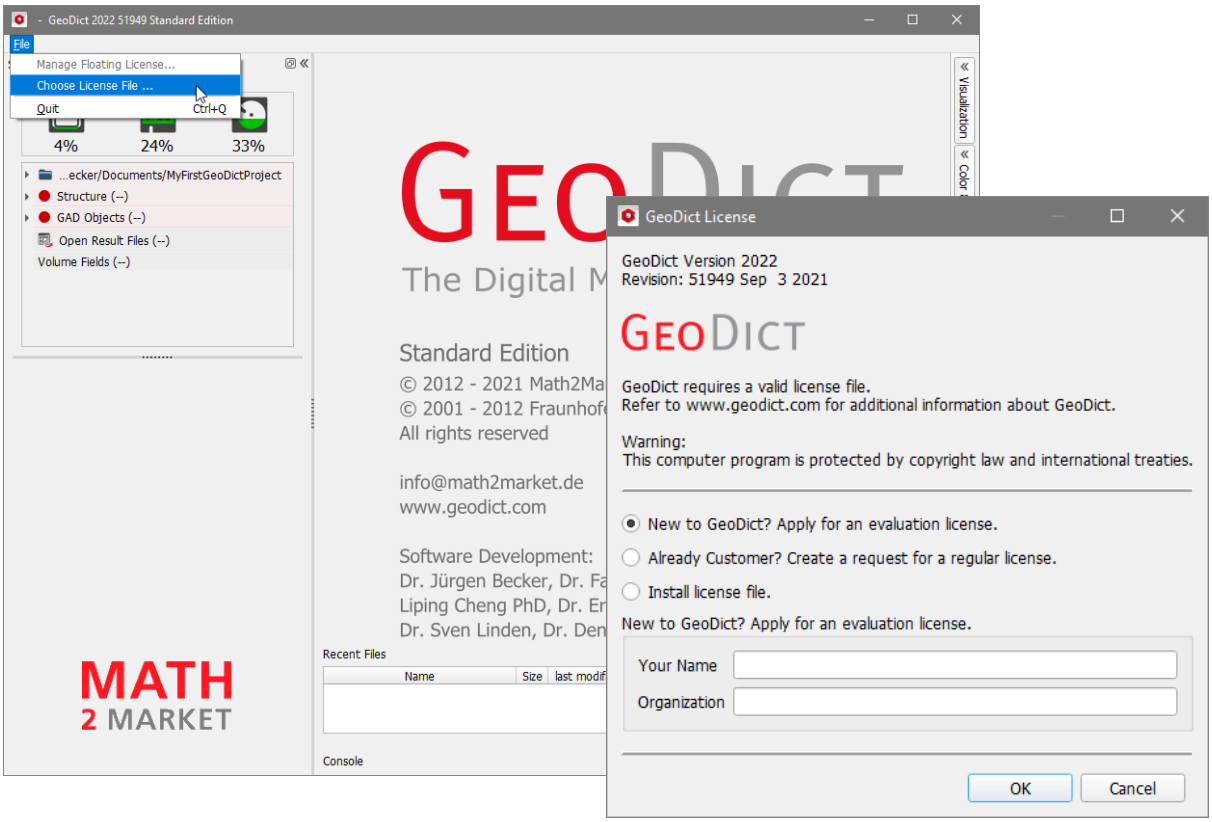
REQUESTING A NODE-LOCKED LICENSE

After downloading and installing GeoDict, the GeoDict GUI opens automatically and requests a valid license to start.

If the GeoDict GUI does not open (because you un-checked Launch GeoDict 2022 during the installation), double-click the GeoDict icon on your Windows desktop or, in Linux, call ./**geodict2022** from the installation folder.

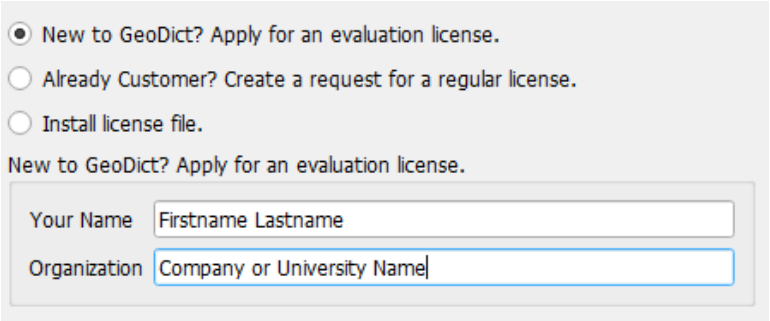
Then, in the Menu bar, select **File** → **Choose License File...**.

The **GeoDict License** dialog (that opens automatically after installation when Launch GeoDict 2022 was left checked during installation) opens now.



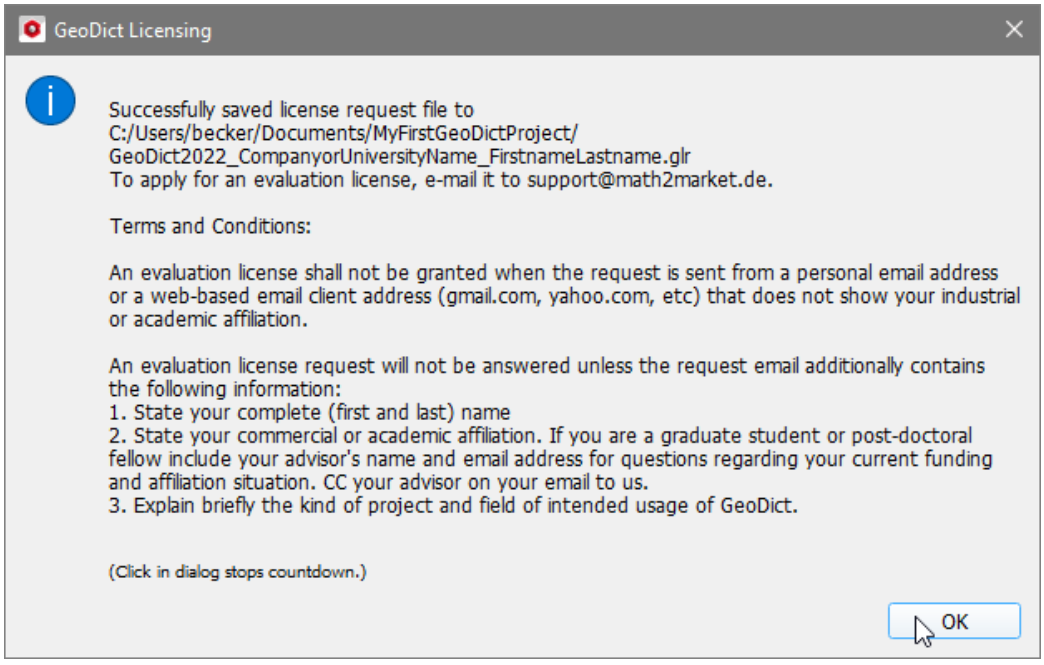
Check the option that describes your situation. If you are new to GeoDict or already a customer of Math2Market applying for or renewing a license, check one of these options. Tool tips will guide you through the procedure.

Type **Your Name** and the name of your **Organization** (Company, University, Institute, etc.), and then click **OK**.



This generates a .glr (GeoDict license request) file that is saved at the default location (/Documents/MyFirstGeoDictProject) or in a specified location.

The saved .glr file contains information that identifies the computer on which it was generated and that is needed to issue **a license file that is exclusive for the computer**. The license file cannot be used on a different computer.



Now, as indicated in this message:

1. Write an e-mail with the subject line **License request**, and
   a) If you are new to GeoDict, follow the instructions shown in the message and enter all the information needed in the body of the e-mail.
   b) If you are a customer of Math2Markt who is renewing the license or has contacted us otherwise and we have agreed to provide you with an evaluation license, there is no need to enter the complete information.
2. Attach the saved .glr (GeoDict license request) file to the e-mail (here: GeoDict2022_CompanyorUniversityName_FirstnameLastname.glr).
3. Send the e-mail to **support@math2market.de**

After a positive outcome of the application, a reply e-mail is sent containing an attached license file (*.glic). An evaluation license is valid for a limited time and only for the computer on which the GeoDict license request file was generated.

Install the license as described in the section *Installing a Node-Locked License* on page 20.

REQUESTING A FLOATING LICENSE (RLM)

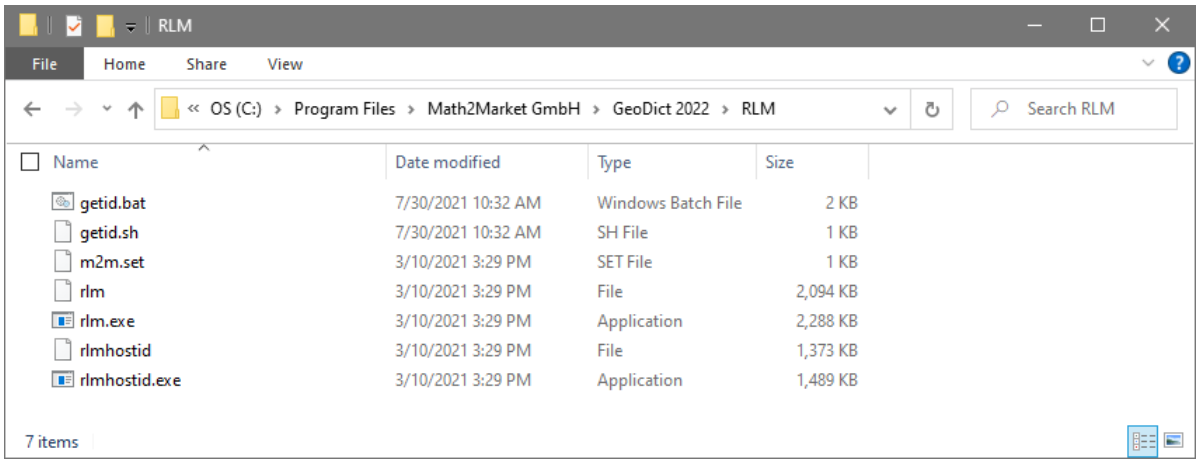
GeoDict uses RLM to manage floating licenses and, thus, a RLM server has to be installed to use GeoDict. RLM (Reprise License Manager) is a software licensing system from Reprise Software Inc. (www.reprisesoftware.com).

The operating system of the computer on which you install the RLM server is independent of the operating system under which GeoDict is installed. For example, you may run GeoDict on a Windows computer while the RLM server is installed on a Linux computer, and vice versa. The RLM server and GeoDict may be also installed on the same computer.

We do not recommend installing the RLM license server on a virtual machine. For security reasons, Math2Market's ISV server will not start on virtual license servers by default. Installation of the RLM license server on a virtual machine is possible but requires a special license from Math2Market. So please contact Math2Market if you intend to run the RLM server on a virtual machine.

SETUP OF A NEW RLM SERVER FOR GEODICT

The RLM server executables are deployed with GeoDict and can be found in the GeoDict installation folder:



To set up a new RLM license server, copy the whole RLM subfolder to the desired license server host. To create a license for this RLM server, Math2Market requires the following information about the server and its host:

- The IP address and hostname of the server.
- The IP port used by the license server (by default, the RLM license server will use the IP port 5053 for communication with GeoDict and 5054 for the web interface.)
- The host ID used by RLM to identify the server.

To collect this information automatically, you can run one of the scripts provided.

In Windows, run getid.bat:

```
PS C:\UserGuide\RLM> .\getid.bat
Please wait, gathering information...
Wrote hostid.txt. Please send this file to math2market to receive a GeoDict license for your RLM server.
PS C:\UserGuide\RLM>
```

In Linux, run getid.sh.

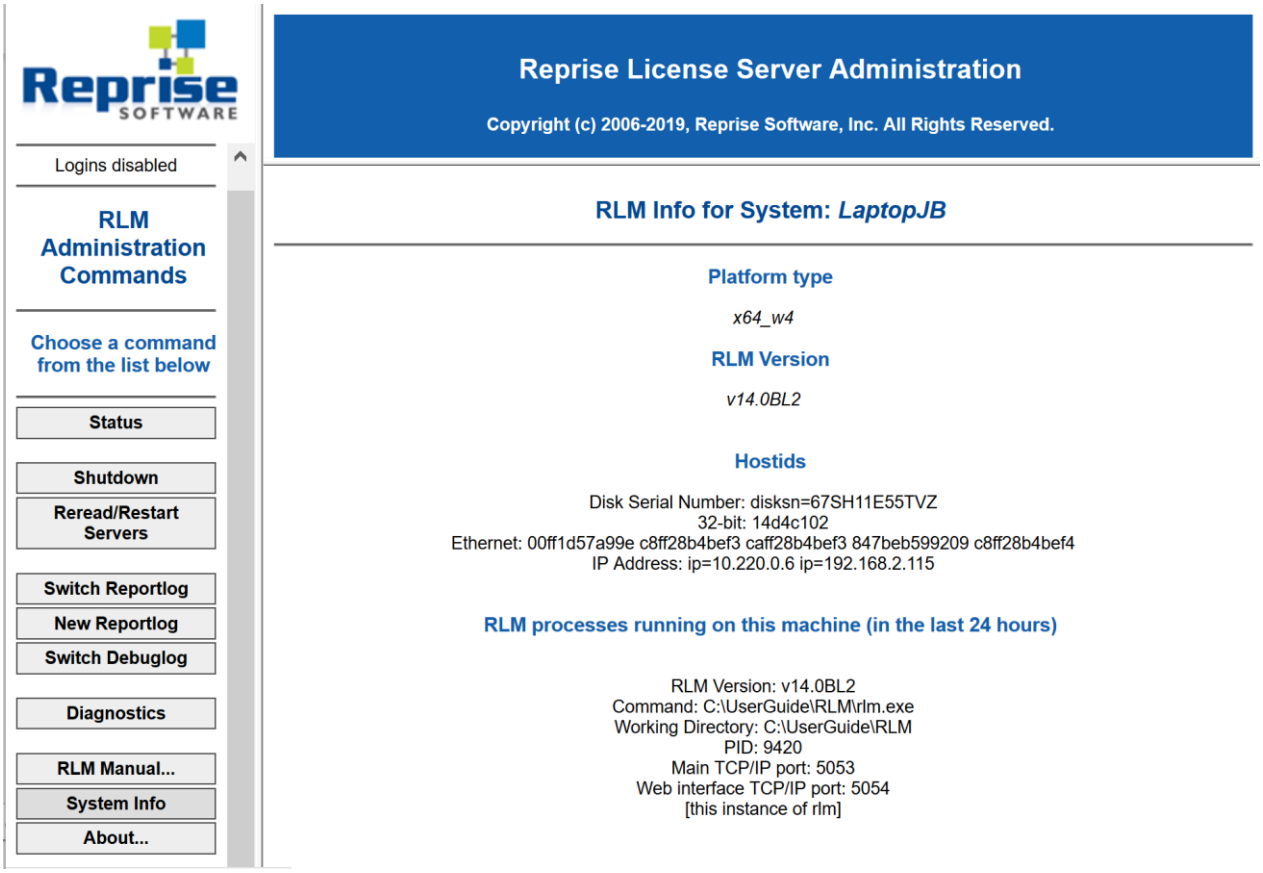
Both scripts will create a file named hostid.txt, containing the information required to create a floating license. Please send this file to support@math2market.de to receive a floating license.

A reply e-mail is sent containing two attached license files (*.glic and *.lic). Install the license files as described in the section *Installing a Floating License (RLM)* on page 23.

Adding the GeoDict license to a running RLM server

A RLM server may be used to manage software licenses of different vendors, so it is possible that you might want to use an already installed server to manage also your GeoDict licenses. This is possible if the RLM server is of version 14 or newer (V14.0 was released in Nov 2019).

In this case, the simplest way to collect the server information is to open the web interface of the RLM server, click on System Info, and make a screenshot of the web page shown:



Please send this screenshot to support@math2market.de to receive a floating license.

A reply e-mail is sent containing two attached license files (*.glic and *.lic). Install the license files as described in the section *Installing a Floating License (RLM)* on page 23.

REQUESTING A FLOATING LICENSE (OLICENSE)

As an alternative to RLM, GeoDict may use OLicense to manage floating licenses and, thus, an OLicense server can be installed to use GeoDict. OLicense is a software licensing system from Optimum GmbH.

The development of OLicense by Optimum GmbH has been stopped, and therefore future GeoDict versions will no longer support this license server and we recommend to use RLM instead.

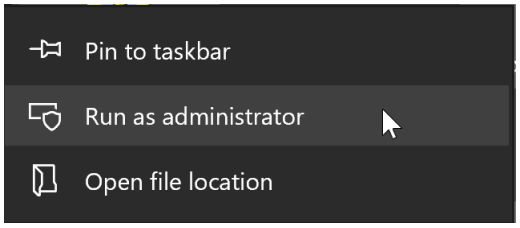
GeoDict 2022 still supports OLicense for compatibility with previous GeoDict versions. Up to version GeoDict 2020, OLicense was the only floating licensing system available in GeoDict and it is therefore required to use OLicense if an older version of GeoDict shall be used besides the new GeoDict 2022 version.

The operating system of the computer on which you install the OLicense server is independent of the operating system under which GeoDict is installed. For example, you may run GeoDict on a Windows OS computer while the OLicense server is installed on a Linux OS computer, and vice versa. The OLicense server and GeoDict may be also installed on the same computer.

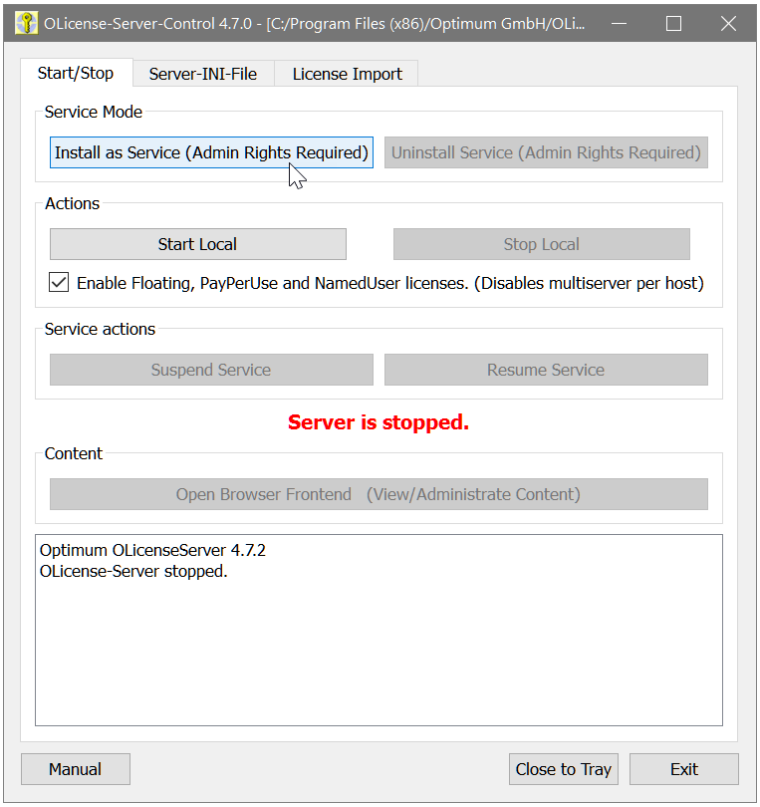
- Linux: download 4.7.2-Linux-x86-64 version of March 14th, 2014
- Windows: download 4.7.2 Win 32 version of March 14th, 2014

After downloading the OLicense server setup executable file on a Windows or Linux computer, follow the instructions of the wizard for the installation.

1. At the end of the installation, run the OLicense-Server-Control (Windows) as administrator (right click → More → Run as administrator) or start OLicenseServerCtrl.lin from the command line (Linux).

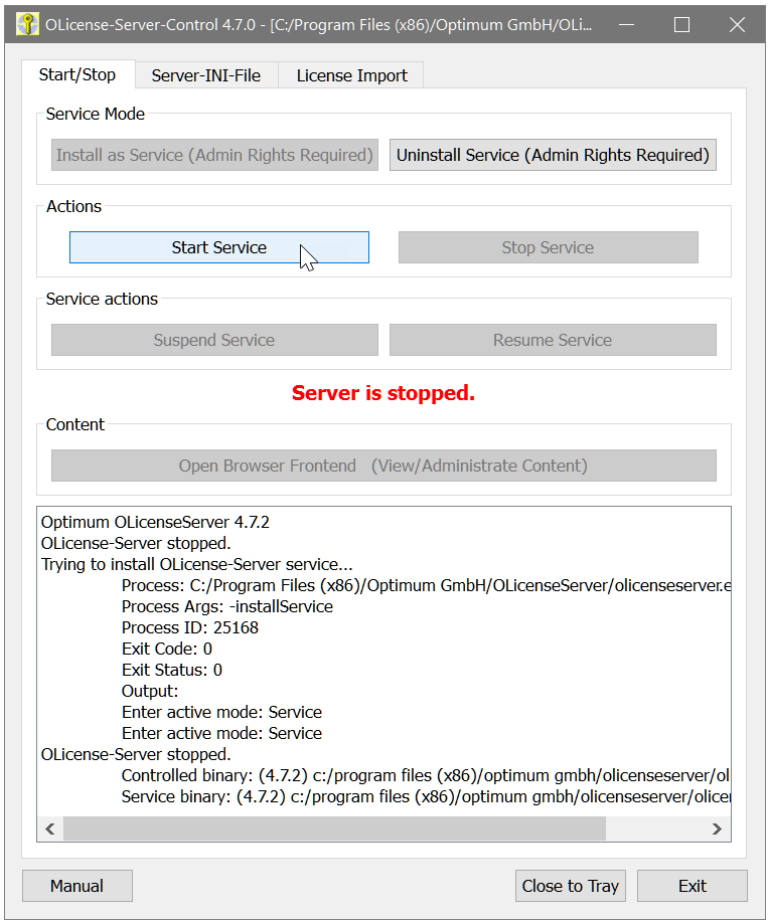


2. The OLicense-Server-Control dialog box opens. In the Service Mode panel, click **Install as Service** (Admin Rights Required).



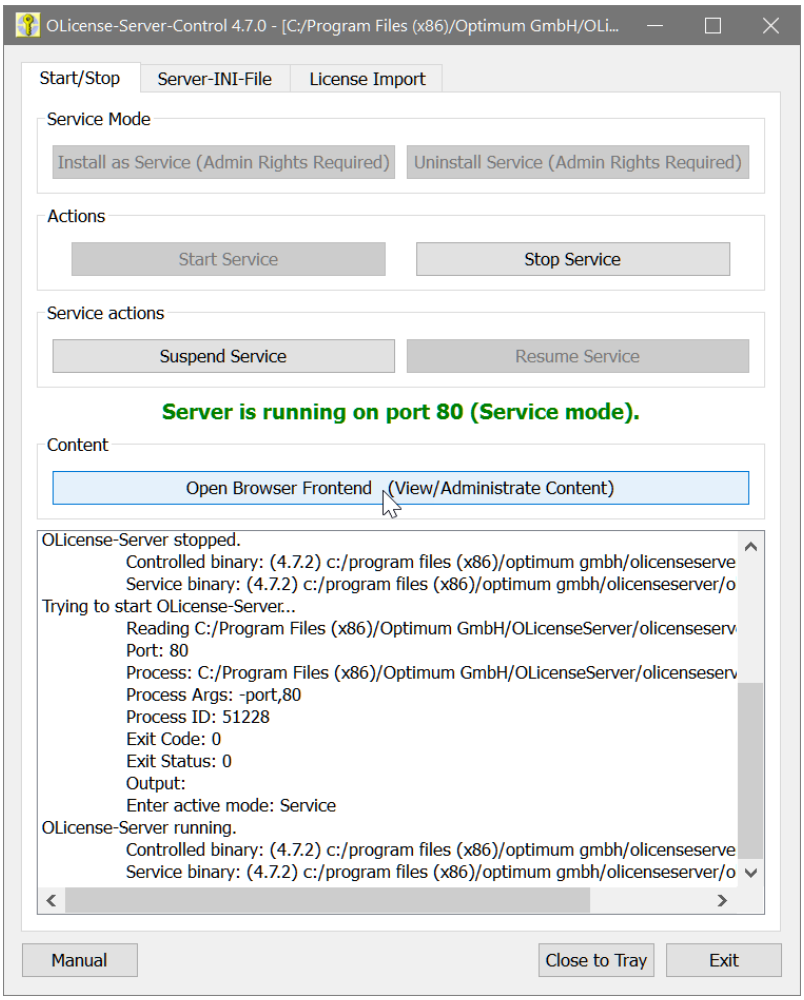
3. In the **Actions** panel, click **Start Service**.

   The information on which port the server is running appears. By default, the server is running on port 80.



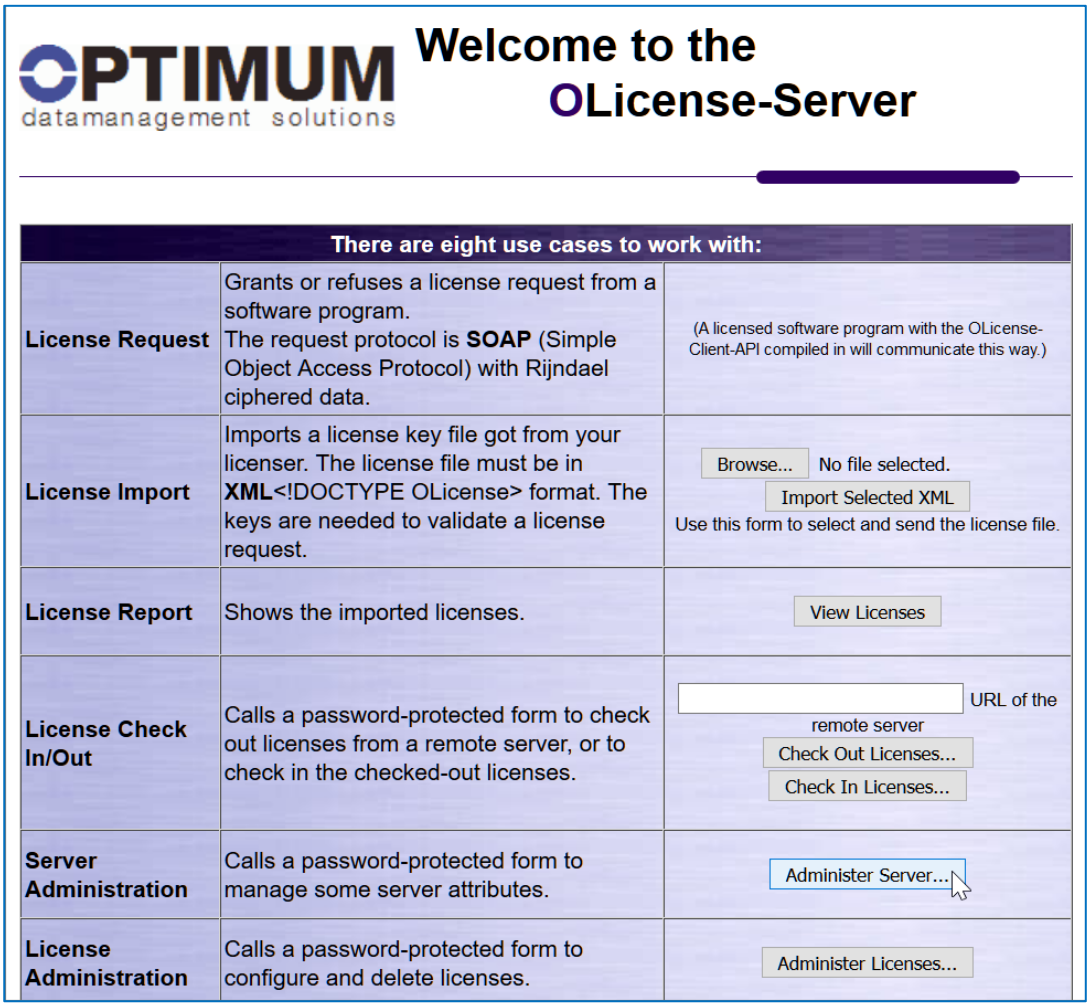
It is possible to change the used TCP/IP listening port by changing the corresponding line in the Server-INI-File tab. Afterwards, the server has to be restarted to use the new port number.

4. In the **Content** panel, click **Open Browser Frontend** (View/Administrate Content).

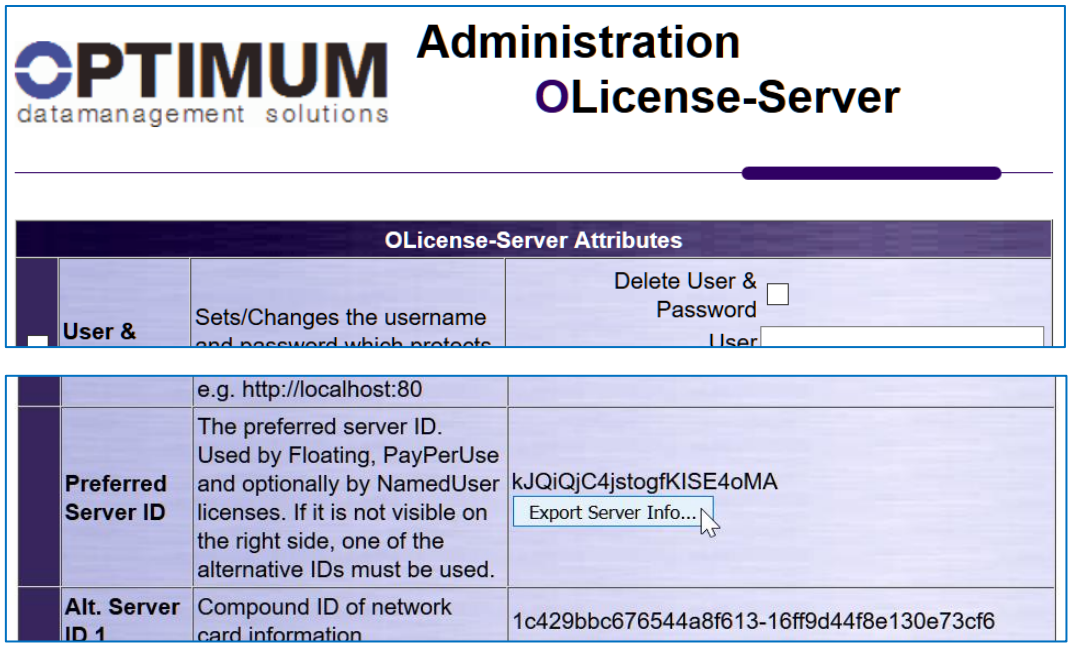


The OLicense-Server content is then shown in your computer's standard web browser.

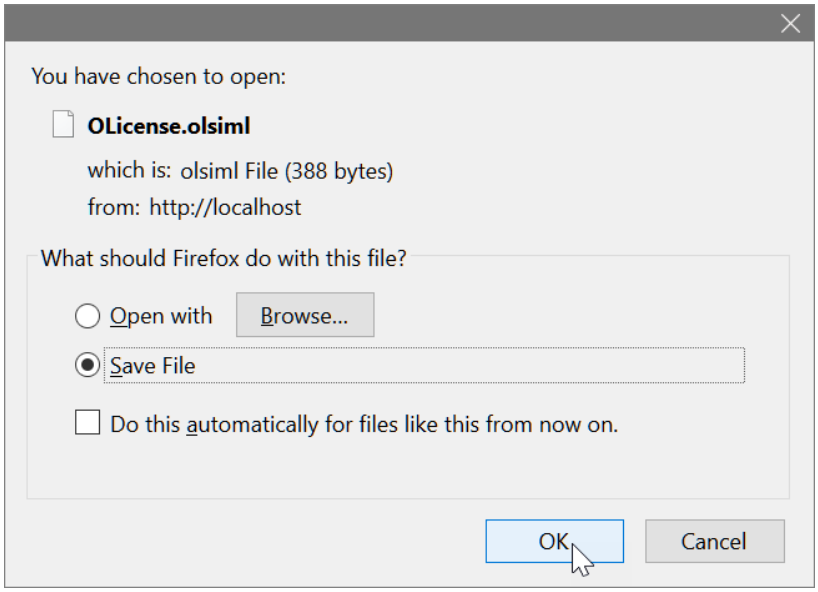
5. In the **Server Administration** row, click **Administer Server....**



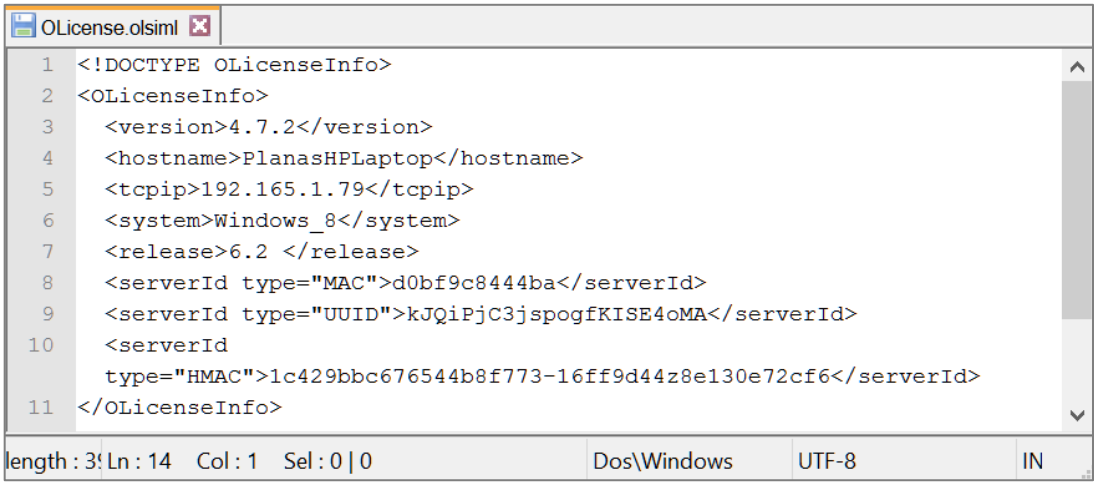
6. You will then be asked for a password. By default, no password is set, and you may simply leave the lines empty. Click **OK**.
7. In the Administration Olicense-Server page, under **OLicense-Server Attributes** page**,** scroll down to find the row **Preferred Server ID**. Click **Export Server Info...**.



This creates an OLicense.olsiml file, saved by clicking **OK**.



The OLicense.olsiml file is similar to the following when opened with a text editor:



As seen in page 17, the port number is shown in the line Server is running on port ... (Local mode).

Email the created and saved **OLicense.olsiml** file and the **port number** shown in the OLicense-Server-Control dialog box to **support@math2market.de** to request a floating license.

To install the floating license, see pages 26ff.

INSTALLING A NODE-LOCKED LICENSE

Having received a GeoDict license file (*.glic), you are ready to load and install the license and begin using GeoDict.

INSTALLATION AS USER

In Windows, double-click the GeoDict2022 icon that appeared on the desktop after installing GeoDict2022, or find and double click the executable **geodict2022.exe**.

In Linux, call ./**geodict2022** from the installation folder, or find and double click the executable.

The **GeoDict License** dialog box opens. This time, check **Install License file** and click **Find License...**.Tool tips guide you through the procedure.

In the opening **Select File** dialog box, navigate the path to the folder where you saved the received license file (e.g., .../GeoDict/GeoDictLicenses), and click **Open** to install the license.

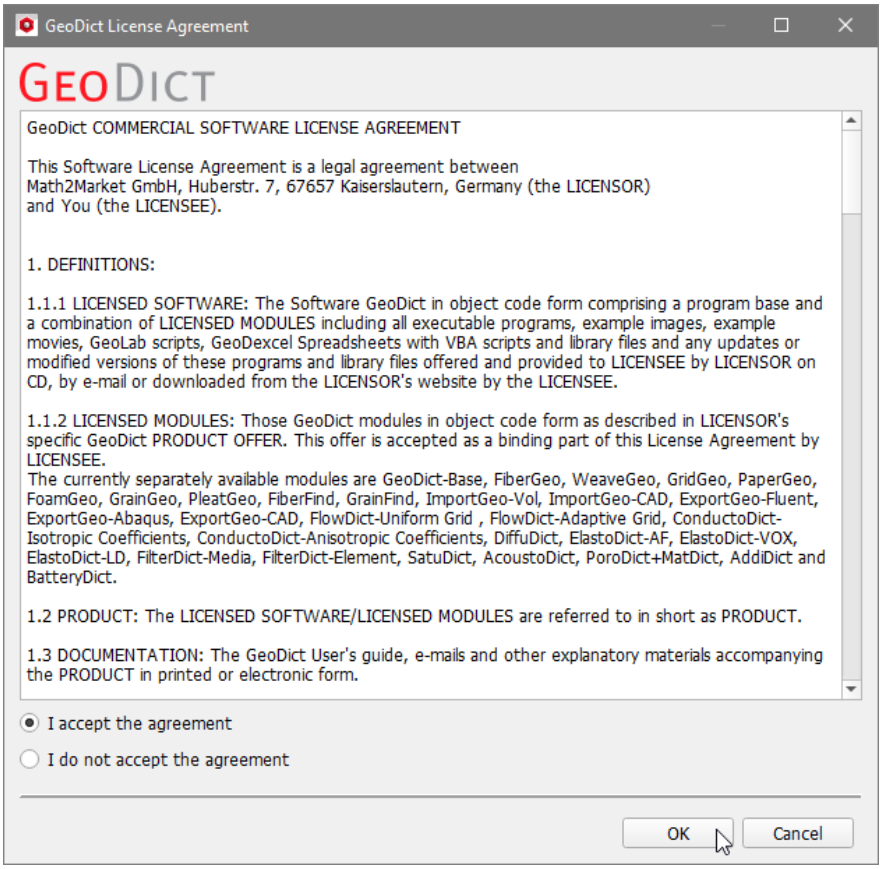
Back in the **GeoDict License** dialog box, keep **Set license as default** checked, so that GeoDict starts immediately when clicking its icon once the license is installed.

If checked, GeoDict will copy the license file into the users' home directory into the folder **C:\Users*username*\GeoDict2022\License**

If un-checked, it would be necessary to click **Find License...** and to repeat the process of finding the license every time you want to work with GeoDict.

After finding and loading the license, the license information is updated to reflect the **Status: Valid**, the license **Expiry Date**, the **Type** of license, the **License Owner**, its **Description**, the license **File Name**, and the path to the **Location** of the installed license.

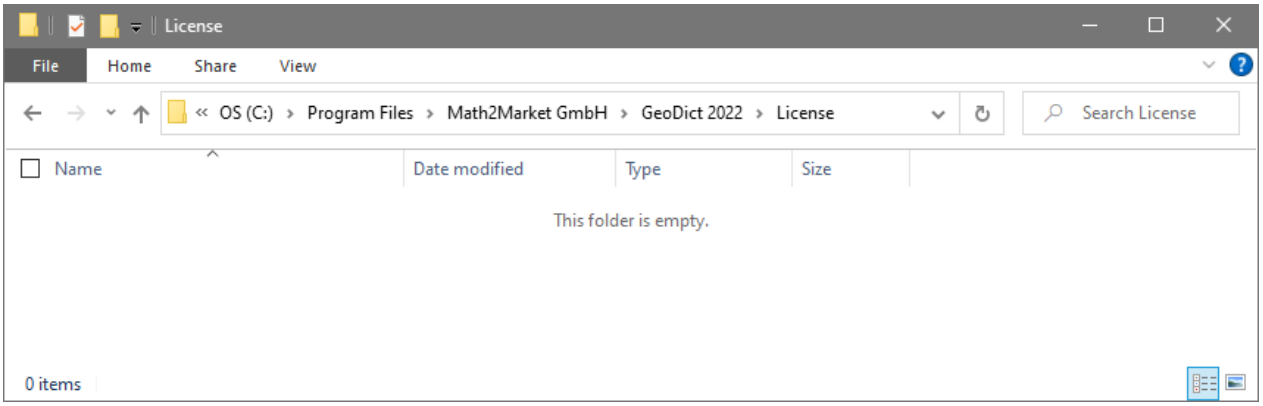
The **GeoDict License Agreement** appears.



After accepting and clicking **OK**, a message confirms that the license was installed successfully. Click **OK** to close the message. The complete GeoDict GUI appears automatically, and you are all set to work with GeoDict.

INSTALLATION AS ADMINISTRATOR

The GeoDict installation folder (**C:\Program Files\Math2Market GmbH\GeoDict 2022** by default) contains an empty folder **License**:



To install a GeoDict license for all users, put the received license into this folder. Afterwards, the license is automatically available for all users.

A user may override this behavior and manually select and install another license file as described in the previous section. If the user selects **Set license as default**, this manually selected license will be copied to his GeoDict settings folder

C:\Users*username*\GeoDict2022\License

Afterwards, this license will be used. Any license file in the installation folder will be ignored for as long as a valid license is present in the local users' settings folder.

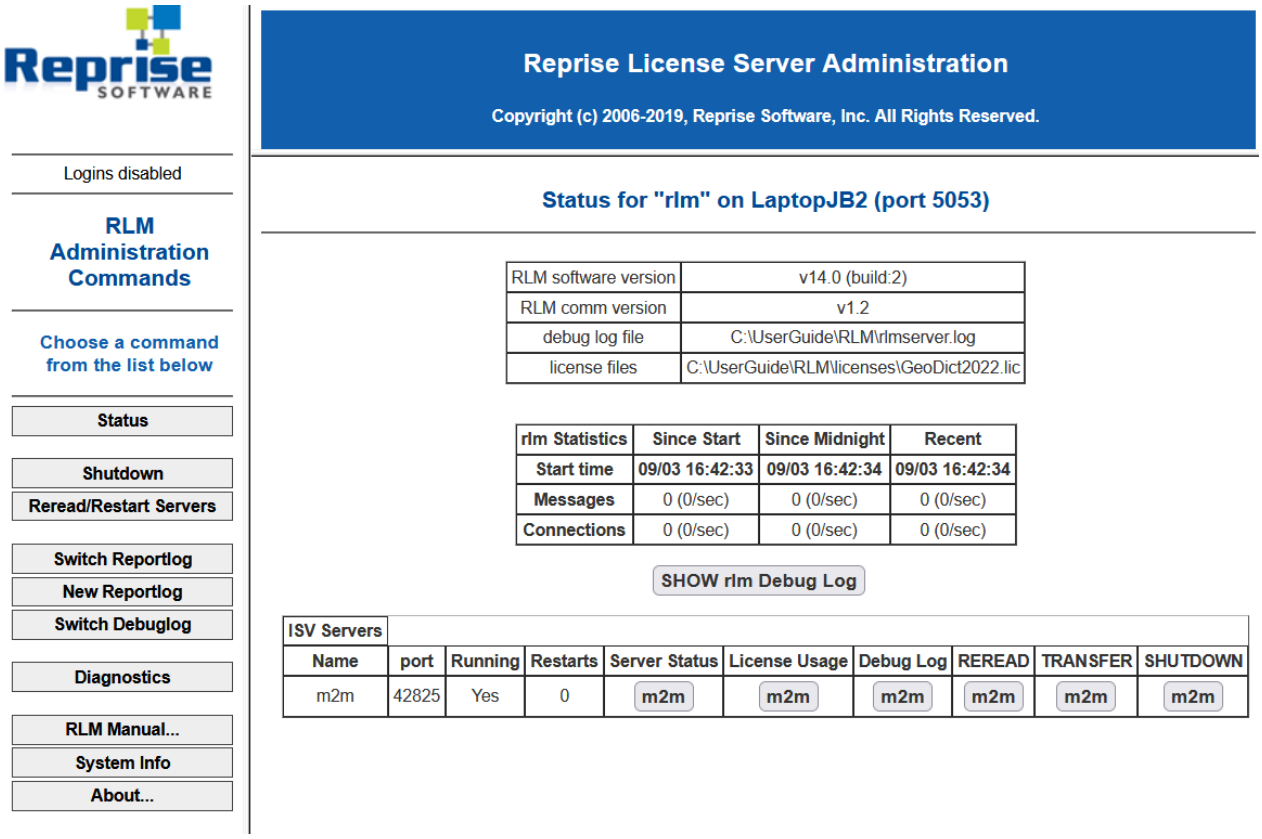
Installing a floating license (RLM)

After emailing the server information (either the hostid.txt file or a screenshot of the System Info page) to support(at)math2market.de, you will receive two license files from Math2Market: a *.glic license file, used to operate GeoDict, and a *.lic license file, used to operate the RLM Server.

Setup of a new RLM server for GeoDict

Copy the received *.lic file into the RLM folder that also contains the rlm executable and the ISV server file (m2m.set). Then, start the license server. The license is automatically found and imported in the server.

By default, the license server will use the IP ports 5053 (main RLM server) and 42825 (Math2Market ISV server) for communication with GeoDict and 5054 for the web interface. Therefore, you can access the web interface by typing localhost:5054 in your web browser.



Afterwards, install the .glic file for GeoDict as described for node-locked licenses in pages 20ff. The .glic file is an encrypted file. Besides other information, it contains the address (hostname or IP and port number) under which the GeoDict client will find the RLM license server. Therefore, it is not possible to change the address or port number of the RLM license server after installation (it is possible to change the port number of the ISV server, though).

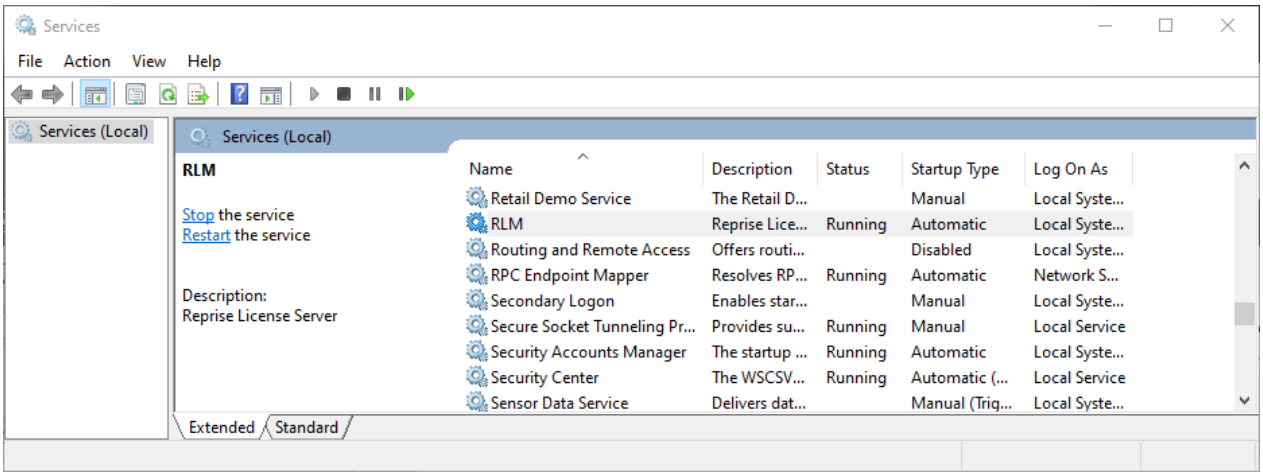
Bear in mind that, for the GeoDict floating license to work, the RLM server must be running and accessible from all computers where GeoDict will be used. That means, if the RLM server is behind a firewall, you have to open the specified TCP/IP ports (by default 5053, 5054 and 42825), such that GeoDict will be able to connect to the server.

Typically, you might want to install RLM as a service that is automatically started when the computer is started.

For this, open a command shell as administrator and start rlm with the -install_service option, e.g. with

```
PS C:\UserGuide\RLM> ./rlm -install_service -dlog C:\UserGuide\RLM\rlmserver.log -c C:\UserGuide\RLM\licenses
PS C:\UserGuide\RLM>
```

Installing RLM as a service does not start RLM, services are started via the Windows Services control panel, and at boot time. When installing RLM as a service, you should make sure to use the -c option with a folder as argument, and not with a single license file. If used with an folder as argument, additional GeoDict licenses received later can simply be placed in the same folder without the need to restart the service.



For more details, please refer to the RLM License Administration Manual:

http://www.reprisesoftware.com/RLM_License_Administration.pdf

Adding the GeoDict license to a running RLM server

1. Copy the ISV server file named m2m.set from the GeoDict installation folder to a location where the RLM server will find it (e.g., besides the rlm.exe executable file).
2. Copy the received *.lic GeoDict license file to the same location.
3. Then, click on **Reread/Restart Servers** in the web interface to import the license.

By default, GeoDict will use the ISV server port 42825 and therefore, you have to additionally open this port, if the server is behind a firewall.

The port number used by the ISV server can be changed by the server administrator, please refer to the RLM License Administration manual.

INSTALLING A FLOATING LICENSE HOSTED BY M2M

Instead of using a RLM license server hosted by the user (or the user's company or organization), licenses may also be configured to use a license server hosted by M2M. This may be the case for

- evaluation licenses,
- licenses for pay-per-use licensing models,
- licenses for cloud computing,

Also, M2M may host floating licenses on their server upon customer request.

In this case, you will receive a single *.glic license files from Math2Market. Install the .glic file for GeoDict as described for node-locked licenses in pages 20ff. The .glic file is an encrypted file. Besides other information, it contains the address under which the GeoDict client will find M2M's license server and a specific key which identifies the user and gives him access to a specific license on the web server which is not accessible to other users.

Therefore, any firewall active on the computer or domain where GeoDict is installed, has to allow the geodict.exe executable to access both servers rlm1.math2market.de and rlm2.math2market.de through TCP/IP ports 5053 and 42825.

In this licensing model, GeoDict cannot run if there is no internet connection or if the communication between GeoDict and the license server is blocked in any way.

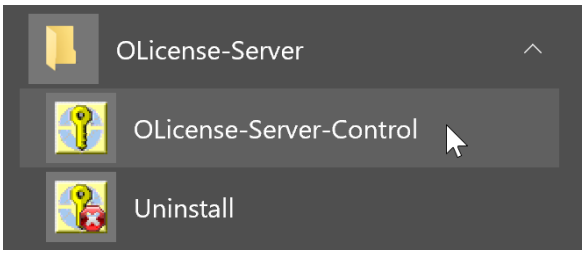
Be aware, that the license server logs the usage of each license, and can create detailed usage reports (as is a requirement to bill customers based on the usage of their license).

INSTALLING A FLOATING LICENSE (OLICENSE)

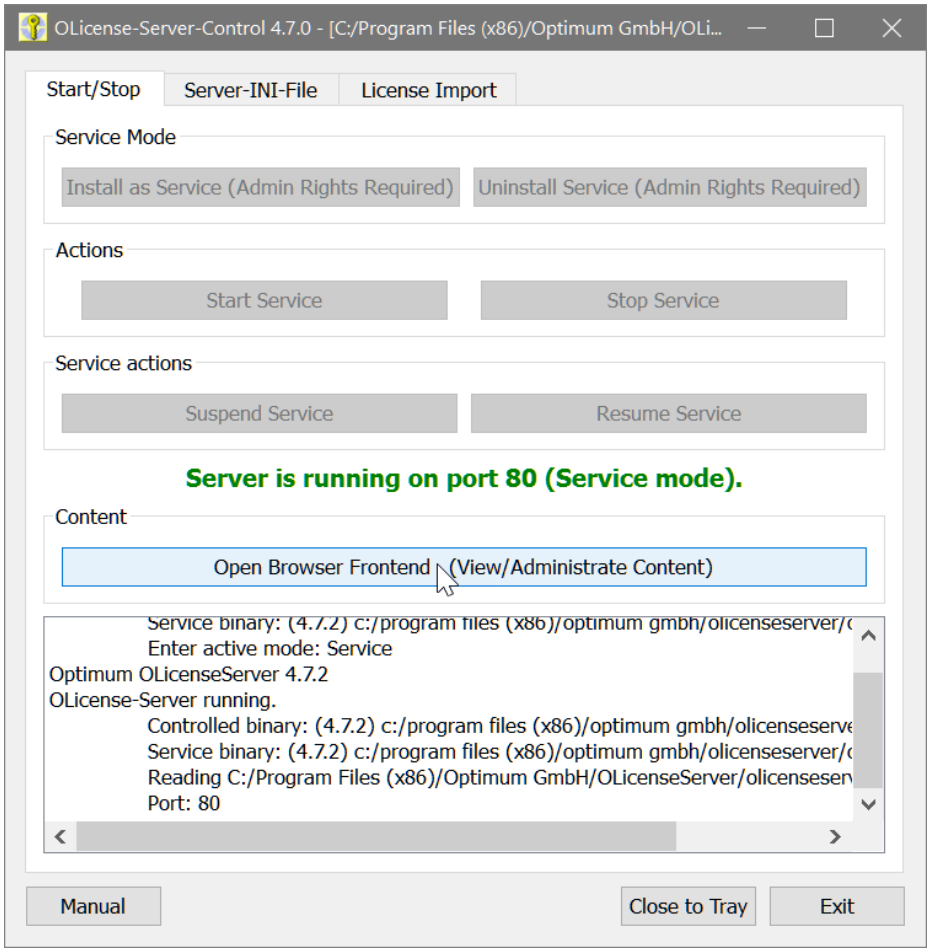
After emailing the Olicense.olsiml file to support(at)math2market, you will receive two license files from Math2Market: a .glic license file used to operate GeoDict, and a .olixml license file used to operate the OLicense-Server.

Proceed as follows to install the .olixml file on the license server:

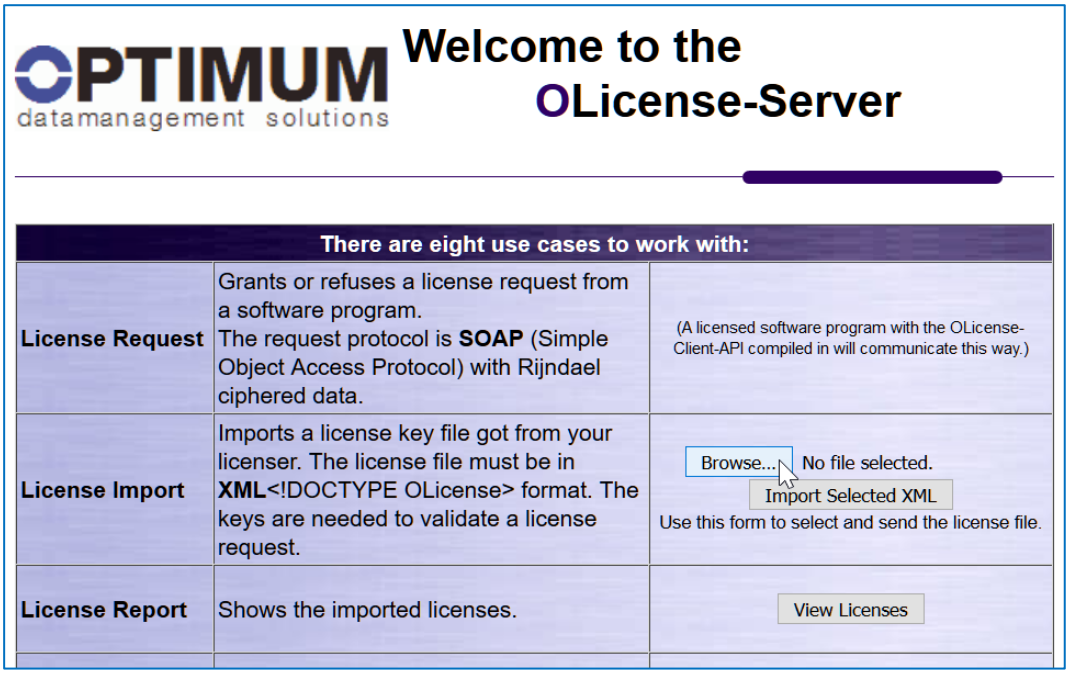
1. After receiving these license files, save them to your hard drive.
2. Start OLicenseServerCtrl.exe (Windows) or OLicenseServerCtrl.lin (Linux). The **OLicense-Server-Control** dialog opens.



3. Click **Open Browser Frontend** (View/Administrate Content) to open the OLicense-Server Home page in your standard web browser.



4. In the **License Import** row, click **Browse...** to find the .olixml license file that was sent to you and you saved on your hard drive.



5. When the path to the .olixml license file appears in the field, click **Import Selected XML**.

Afterwards, install the .glic file for GeoDict as described for node-locked licenses in pages 20ff.

Bear in mind that, for the GeoDict floating license to work, the OLicense Server must be running and accessible from all computers where GeoDict will be used.

That means, if the OLicense server is behind a firewall, you have to open the specified TCP/IP port, such that GeoDict will be able to connect to the server.

Using floating Licenses

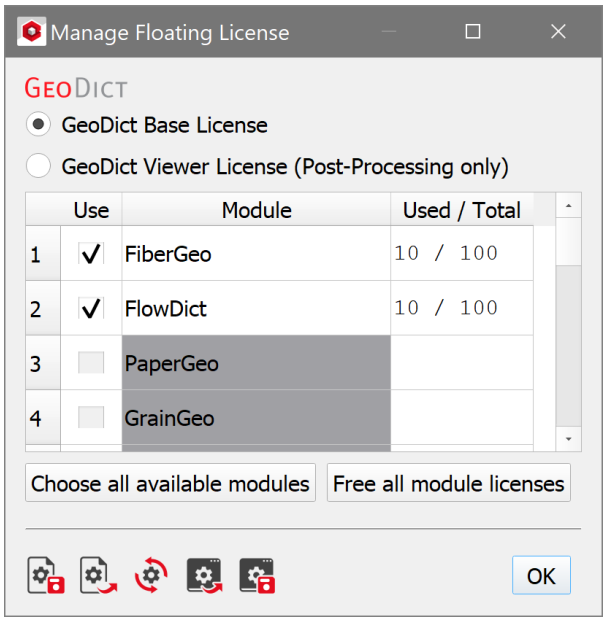
The delivered floating license contains individual licenses for GeoDict -Base and for each purchased GeoDict module. To run GeoDict, a user requires one GeoDict -Base license. To use a GeoDict module, one license of this module is needed.

When a floating license is installed, the **Manage Floating License** dialog appears:

In this dialog, you may choose between a **GeoDict Base License** and a **GeoDict Viewer License,** which allows only to visualize and post-process structures and result files.

When **GeoDict Base License** is selected, choose the modules you want to use.

By default, all modules for which a license is available are chosen. Uncheck all modules that you do not plan to use in this session. These modules will stay free for others to use. Click **OK** when you have made your choice.



You may open the **Manage Floating License** dialog anytime later and change your choice of modules. The dialog can be opened by choosing **File → Manage Floating License...** in the main menu.

A single license allows you to open multiple GeoDict user interfaces (GUI) in your session on the same computer.

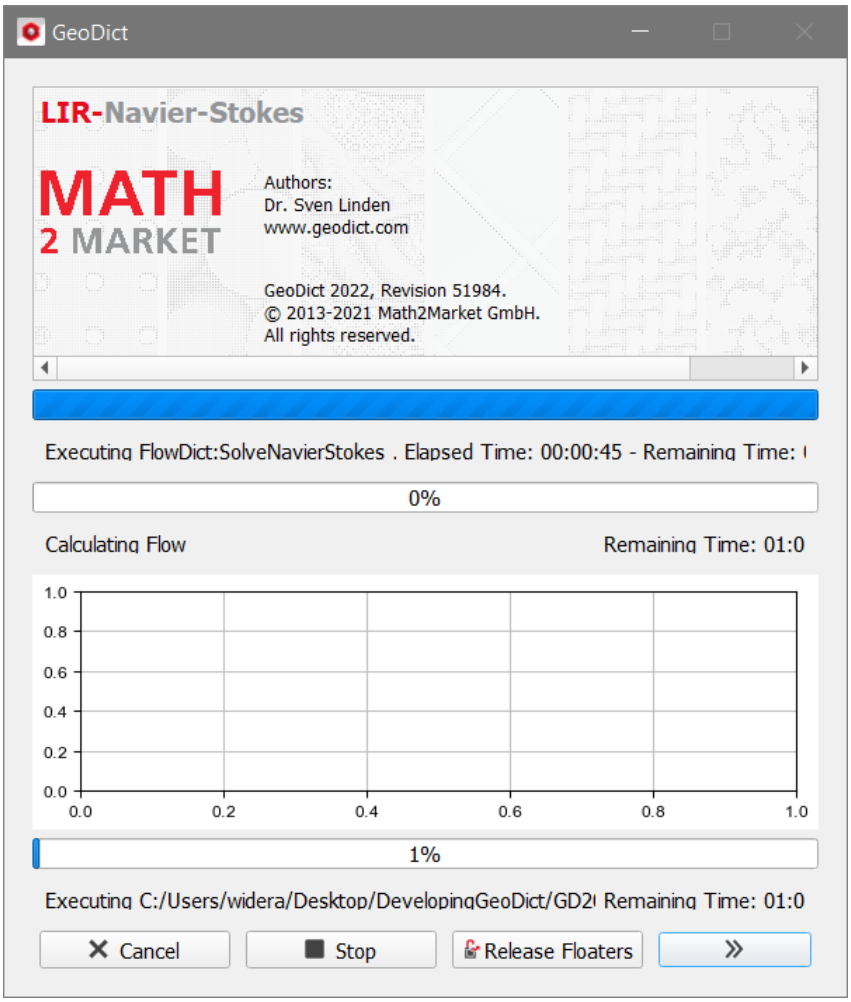
Releasing unused Floating Licenses

While GeoDict runs, a GeoDict Base license is always required. To have access to each module's section and settings dialogs, a license of the respective module is also required.

While a (parallel) computation runs, the respective number of licenses for the parallel processes are required. For example, a FlowDict computation using 8 parallel processes will require 8 "*FlowDict-Processes*" licenses. If the computation is started from the graphical user interface of GeoDict, the user interface is blocked during the computation. It is possible to free all module licenses except the needed one before starting the computation such that other users may take them as described above. However, this step is unconvenient to do and often forgotten.

Therefore, GeoDict 2022 offers the possibility to free all unused modules while a computation runs:

All progress bar windows contain a button **Release Floaters**. By clicking this button, all module licenses held by this instance of GeoDict will be freed.



Be aware that this means that after the computation has finished the respective module sections will no longer be available in this GeoDict instance and the user has to take them again through the **Manage Floating License** dialog as described above.

LICENSING ERROR MESSAGES

GeoDict may not recognize the license file and give one of the following error messages:

- **License error: corrupt**

Reason: the chosen file is not a GeoDict license file, or the license file has been modified. This might happen if GeoDict and your e-mail program are used on different operating systems, and a transfer program has changed line ends when saving or moving the .lic file.

Solution: Make sure that your license file is the original file delivered by Math2Market GmbH.

- **License error: expired** or

- **License error: license period has not started yet**

Reason: the license is used outside of its time period.

Solution: Contact support(at)math2market.de to receive a new license file.

- **License error: -1744 (Wrong GeoDict version or revision)**

Reason: this license is either valid for another version of GeoDict or you have to install a newer Service Pack of your current version.

Solution: Download the correct version of GeoDict for your license file.

- **License error: -1701 (or another number)**

Reason: Modifications to the computer hardware have resulted in the license file to become invalid for your computer. Node-locked license files are issued for a specific configuration.

Solution: Contact support(at)math2market.de with any questions and, if asked to do so, send a newly generated GeoDict License Request (.glr) file following the procedure outlined above in pages 10ff.

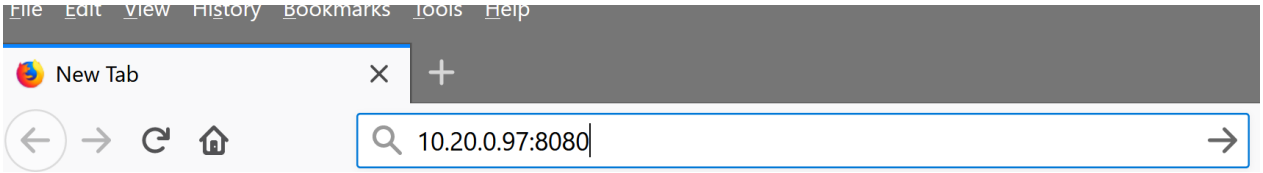
- **License invalid: Server Error: OlComm 454 Request cannot connect to target** or

- **License invalid: Server Error: OlComm 452 Request cannot find hostname**

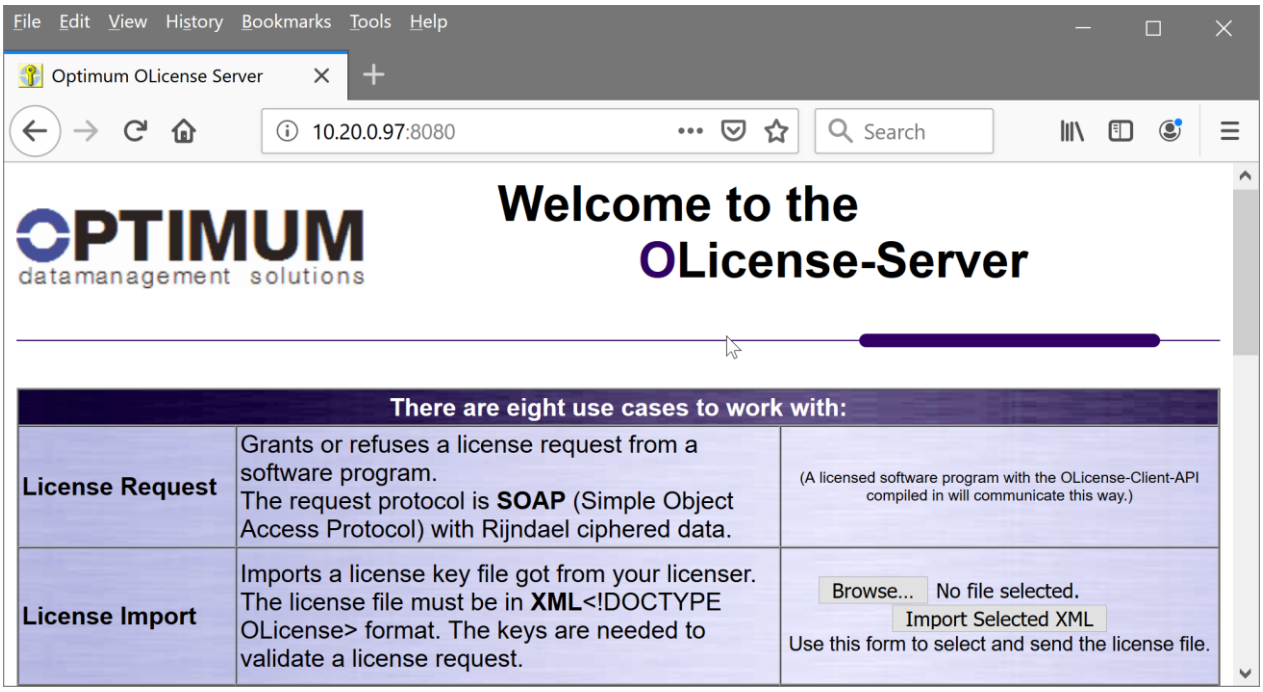
Reason: GeoDict cannot find or cannot connect to the floating license server.

Solution: Check whether the floating license server is set up correctly, by doing the following:

1. Open a web browser on the computer where GeoDict is installed
2. Enter the IP address (or hostname) and port number of the license server (use your own IP address and port number instead of 10.20.0.97:8080)



If the license server is reachable, the license server's web interface will appear:



If the web interface does not appear,

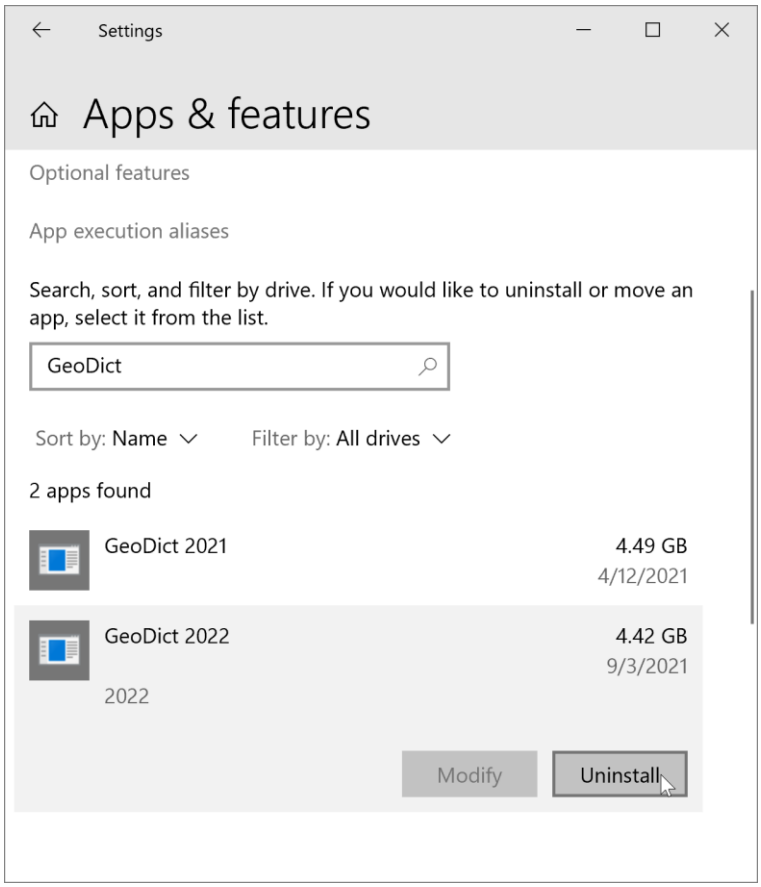
a. make sure that the license server is running in Service mode and
b. check if your firewall settings prevent access of the server.

If the web interface appears and GeoDict still does not run, most likely the server address encrypted in the .lic file is not correct (e.g., because the port number was changed after the license file was requested).

In this case, inform support(at)math2market.de about the correct server address and port number.

UN-INSTALLING GEODICT

Be logged on as administrator on the computer and find GeoDict 2022 in the list of installed applications.



Click **Uninstall** to remove GeoDict 2022 and its components. Files that remain in user-created folders may not be removed and should be removed manually if needed.

https://doi.org/10.30423/userguide.geodict2022

Technical documentation:

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