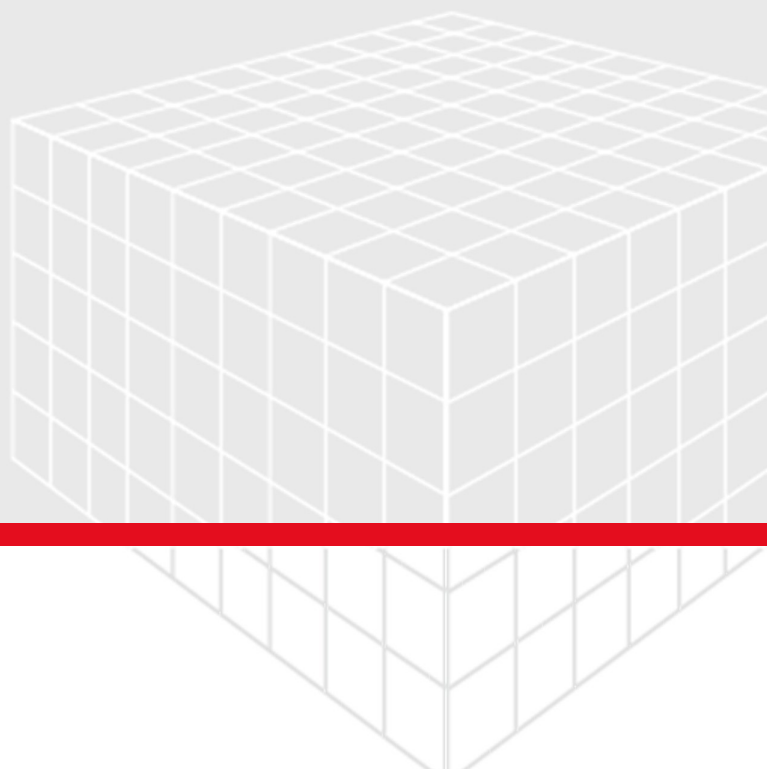


Job Queue

User Guide

GEODICT Release 2026

Published: June 2026



GEODICT

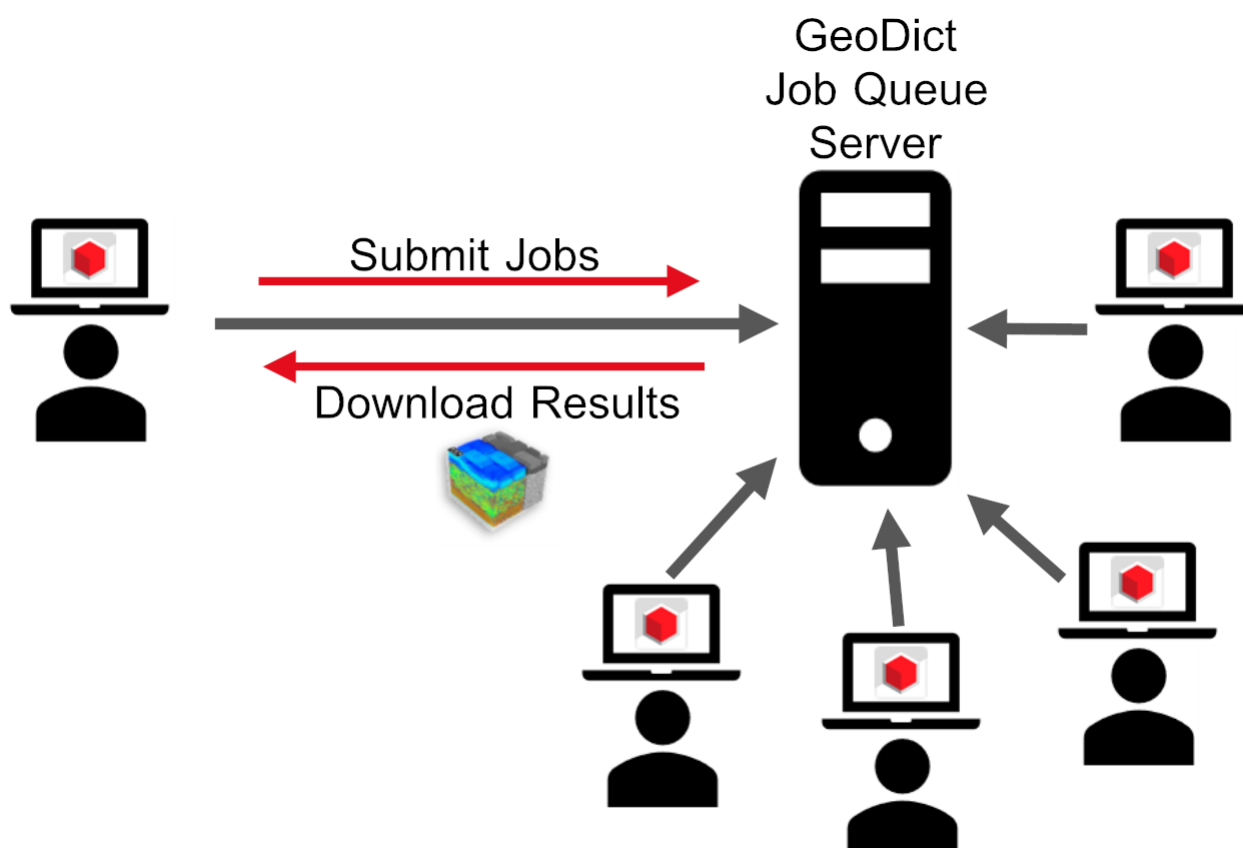
<https://doi.org/10.30423/userguide.geodict>

Job Queue

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1 Job Queue

The **Job Queue** allows you to run a **Server** on a powerful machine where multiple users can submit computationally intensive simulations. These simulations, referred to as **Jobs**, are automatically queued and executed without requiring complex scripts or manual intervention. This setup ensures efficient resource management by preventing competition for CPU cores, RAM, or GeoDict licenses. Jobs can be configured to run either in parallel or sequentially. Additionally, you can set up a local Job Queue server on your own machine to process queued jobs overnight or during weekends.



A **GeoDict-Server** license is required to start a job queue server. The job queue server runs submitted jobs in separate GeoDict instances, similar to executing a macro in the command line. This process requires a **GeoDict-Base** license, as well as licenses for the modules and processes currently in use. Users who want to submit jobs need a GeoDict license for their local machine.



New in GeoDict 2026

- The Job Queue can now process [multiple jobs in parallel](#)^[28] to take full advantage of modern multi-core CPUs.
- Job Queue license requests can be [prioritized](#)^[29], preventing delays caused by other users.

Using the Job Queue

- [Setting up a Job Queue Server](#)⁵
Learn how to set up a job queue server.
- [Submitting Jobs](#)⁷
Understand how to send simulations to a job queue server.
- [Job Queue Dialogs](#)¹²
Discover all user interfaces of the job queue system.
- [Job Queue Server Settings](#)²⁸
Learn how to change the projects folder and the maximum number of parallel jobs.
- [Job Queue Server License Priority](#)²⁹
Understand how to enable license priority for Job Queue servers.
- [Job System Folder](#)³¹
Understand the file storage for the job queue system.



Join the conversation

Visit the Community on [GeoDict Forum](#) to be inspired and get answers to top questions.

Find illustrative application examples on the [website](#).

Our tutorials and seminar videos give you a first hands-on experience. They are collected in the [Learning Center](#).

Send your [Support Request](#) to our technical Support.

1.1 Setting up a Job Queue Server

The necessary steps to start a job queue server and allow access from client machines are explained below. You can either use the job queue server locally, or submit jobs to the server remotely from other client machines.

How to Set Up a Local Job Queue Server

1. To open the dialog for managing the server on your machine, navigate to **Cloud & Queue** → [Manage Job Queue Server](#)^[19] in the GeoDict menu bar.
2. In the [Jobs](#)^[19] tab of the dialog, click on **Start Server**. The server will start immediately, opening a [terminal window](#)^[20] in which it runs.
3. Optional: Jobs are executed sequentially by default, but you can enable parallel execution by increasing the maximum number of parallel jobs via the [Job Queue Settings](#)^[28].
4. You can now [submit jobs](#)^[7] to your local server by using the **Job Queue** button. Since the machine running the job queue server is always automatically listed as its client, no exchange of certificates is required.

How to Set Up a Remote Job Queue Server

In order to set up a remote **Job Queue Server**, the client and server must be configured to recognize each other. This process involves exchanging certificates between the server and the client. All necessary steps are described here.



Important! In order for the **Job Queue** to function across multiple machines, the machines must be on the same network and able to communicate with each other. Setting this up may require coordination with your IT department. The **client** and **server** machines must use the same major (e.g., GeoDict 2026) and minor (e.g., Service Pack 1) versions of GeoDict for the job queue to work. If the versions differ, a corresponding log message is printed.

On the machine running the server:

1. To open the dialog for managing the server on this machine, navigate to **Cloud & Queue** → [Manage Job Queue Server](#)^[19] in the GeoDict menu bar.
2. In this dialog, navigate to the [Clients](#)^[26] tab and click the [Export my Certificate](#)^[26] button. Then, select where you would like to save the server certificate.
3. Copy the server certificate to all the client machines from which you want to access the job queue server.
4. Collect certificates from all [client machines](#)^[6].

5. Go to the **Cloud & Queue** → [Manage Job Queue Server](#)^[19] → [Clients](#)^[26] tab and click on the [Add Clients...](#)^[27] button.
6. In the file browser, select all client certificates and click **Open**.
7. The **Registered Clients** list now shows all added clients.
8. Go to the [Jobs](#)^[19] tab and click **Start Server**. The server will start immediately, opening a [terminal window](#)^[20] in which it runs.
9. Optional: Jobs are executed sequentially by default, but you can enable parallel execution by increasing the maximum number of parallel jobs the [Job Queue Settings](#)^[28].
10. Registered client machines can now [submit jobs](#)^[7] to the job queue server.

On all client machines:

1. In the menu bar, go to **Cloud & Queue** → [Setup Job Queue](#)^[17] to open the dialog that manages the registered servers for this client machine.
2. Click on the [Export my Certificate](#)^[18] button, then select where to save the client certificate.
3. Copy the client certificate to the machine running the job queue server.
4. Obtain the [server certificate](#)^[5].
5. Go to **Cloud & Queue** → [Setup Job Queue](#)^[17], then click on [Add Servers...](#)^[18].
6. In the file browser, select the server certificate and click **Open**.
7. The server is now shown in the **Registered Servers** list.
8. After the server is running and the client certificate has been added, jobs can be submitted from this machine.



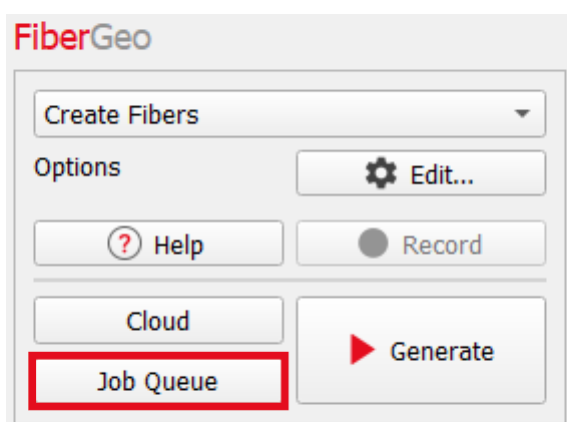
Warning! When the server grants access to a client, the client is granted permissions and may gain broad access to the server machine. For instance, Python scripts can be executed via GeoDict, which could potentially access sensitive resources. To maintain security, we strongly recommend setting up a dedicated "functional" user account on the server. This allows for better control and monitoring of client access. Never grant server access to unauthorized or unverified users. Doing so may pose a security risk.

1.2 Submitting Jobs

There are two types of **Jobs** that can be submitted to a job queue server: A single GeoDict command or a GeoPy Macro.

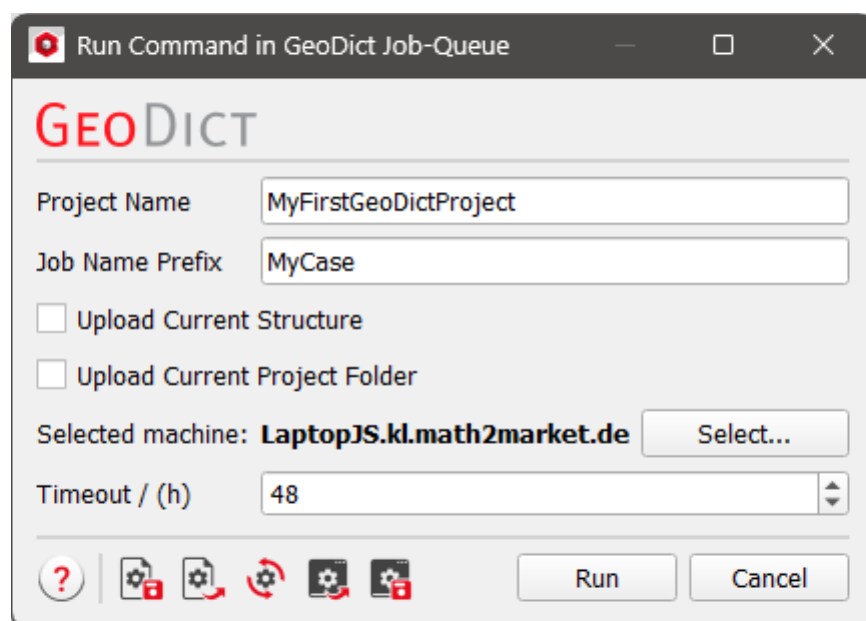
Submitting a Single GeoDict Command

Most GeoDict commands can be run in the job queue. To do so, select the desired module (e.g., FiberGeo). In the module section, select the desired functionality and edit the settings as you normally would do when running simulations locally. Instead of clicking the **Run/Generate** button to run the command locally, click the **Job Queue** button.

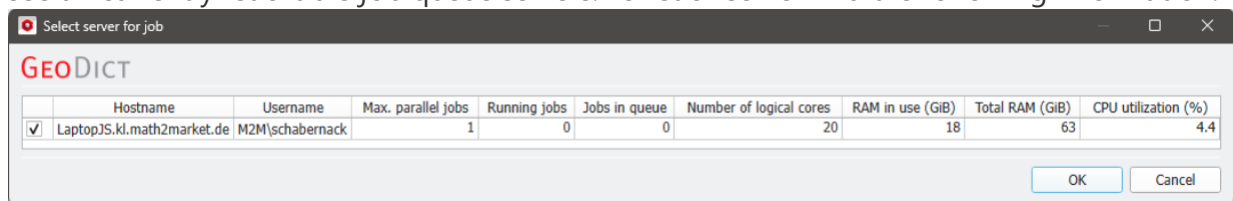


Run Command in GeoDict Job-Queue

The **Run Command in GeoDict Job-Queue** dialog opens, where you can define multiple settings:



- **Project Name:** This name allows you to group multiple simulations together by giving them a shared project name. The default name comes from the name of the project folder that is currently selected, e.g., *MyFirstGeoDictProject*.
- **Job Name Prefix:** This name serves to identify the specific simulation that is run. The default name depends on the chosen command, e.g., *FiberGeoCreate* for creating fibers using FiberGeo. If there are multiple jobs with the same job name prefix within one project, the name is extended by a running number (*-001, *-002, ...).
- **Upload Current Structure:** When this option is activated, the currently loaded structure in GeoDict is uploaded to the job queue server along with the job. This is necessary for modules that analyze structures or predict properties. This option is active by default when a structure is loaded in GeoDict.
- **Upload Current Project folder:** When this option is activated, the entire current project folder, along with the job, is uploaded to the job queue server. This is necessary if additional files in the project folder are required to run the computation. For example, this would be necessary to continue a FlowDict simulation from a previous result.
- **Selected machine:** Here, you can select the job queue server you want to use for the simulation. The last server used is selected by default. If only one server is available, it will be selected automatically. Click **Select** to open the **Select server for job** dialog. Here you can see all currently reachable job queue servers. For each server find the following information:

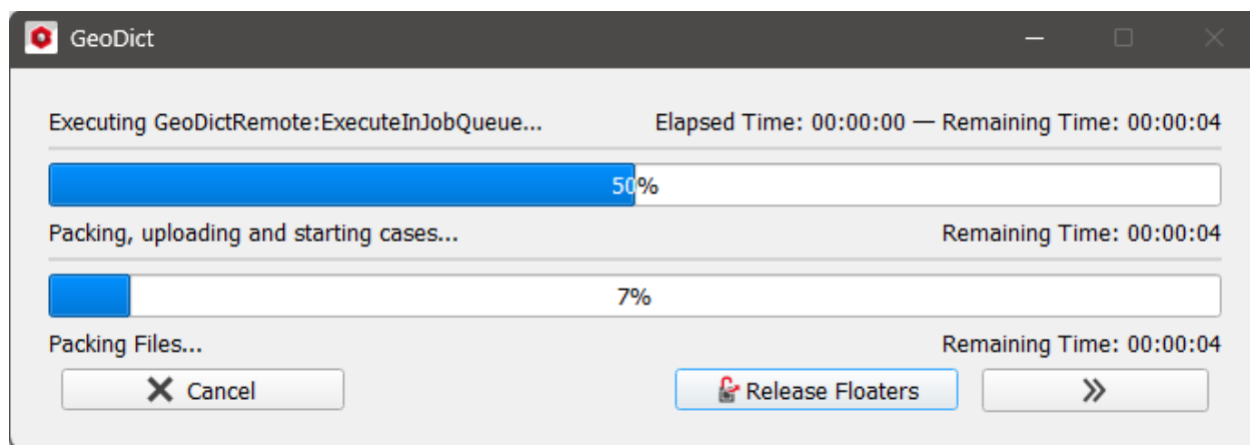


	Hostname	Username	Max. parallel jobs	Running jobs	Jobs in queue	Number of logical cores	RAM in use (GiB)	Total RAM (GiB)	CPU utilization (%)
☒	LaptopJS.kl.math2market.de	M2M\schabernack	1	0	0	20	18	63	4.4

- The **Hostname** of the machine.
- Your **Username** on this machine.
- The number of **Max. parallel jobs** that is allowed to run simultaneously on this server. The server admin can change this value via the [Job Queue Settings](#)²⁸.
- The number of currently **Running jobs**.
- The number of **Jobs in queue** waiting to be started.
- The available **Number of logical cores** and **Total RAM** together with their current usage **CPU utilization** and **RAM in use**.
- **Timeout:** This option allows you to set a timeout for the job. After the defined number of hours, the job will be terminated automatically. If you do not want to set a timeout, set this value to **0**, and the simulation will run until it finishes, is terminated, or crashes. Setting a timeout helps prevent the job queue server from becoming blocked by jobs that encounter convergence problems, for example.

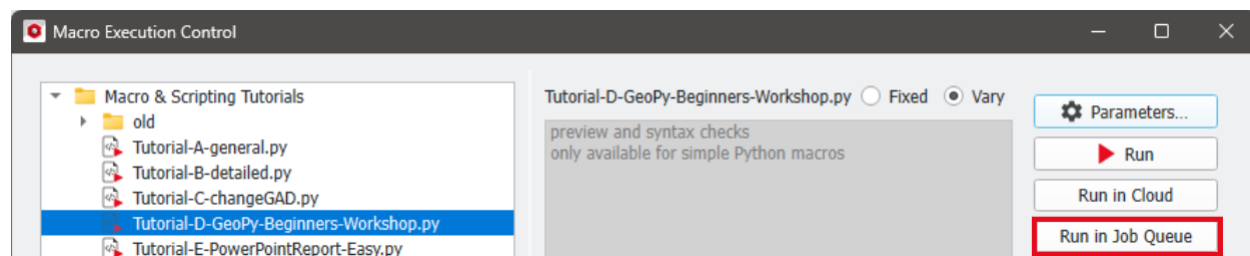
After defining all settings, click on **Run** to send the job to the server. A dialog showing the progress of **Packing, uploading and starting** the job is displayed. For each job a python macro, based on the selected command and its settings is created and then executed on the

job queue server. After the upload of the job is completed the [Job Queue Projects](#)¹² dialog opens automatically. There, you can see the current status of the job and download the results of completed jobs.

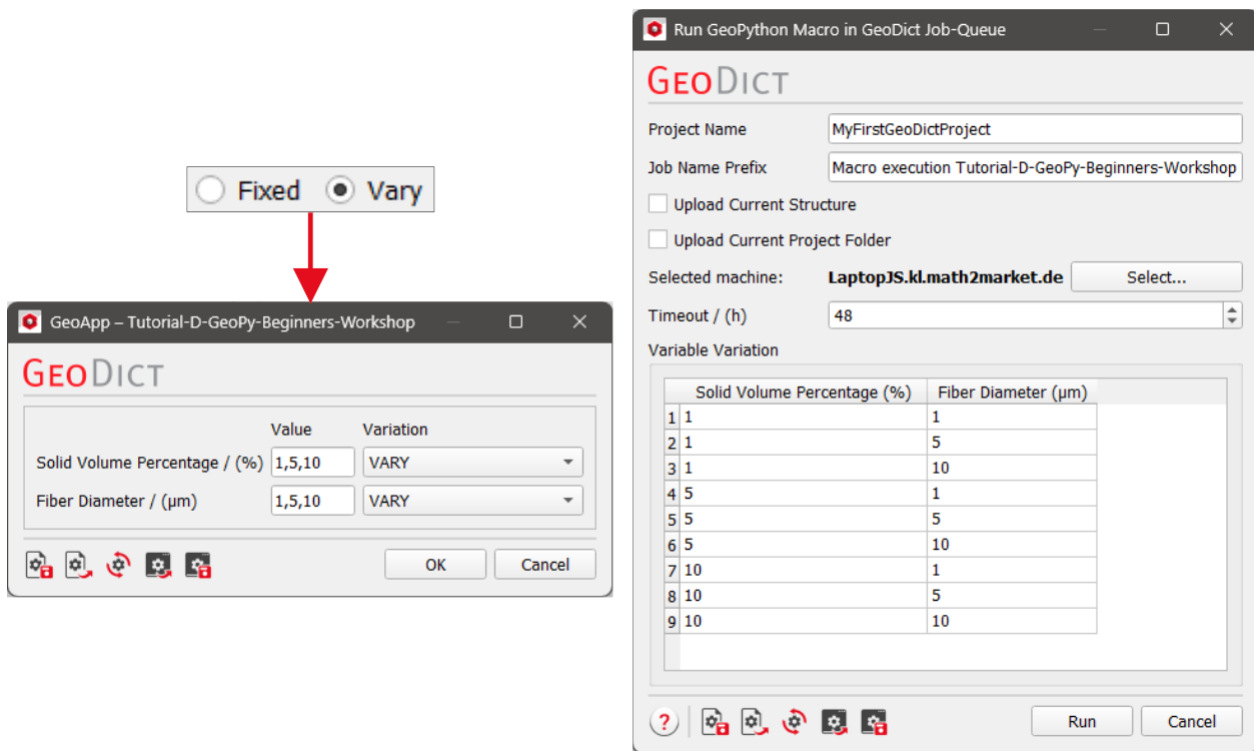


Submitting a GeoPy Macro

You can also run GeoPython macros and scripts on a job queue server. To do so, open the **Macro Execution Control** dialog, select your macro, and click **Run in Job Queue**. This is especially useful for macros where parameters can be varied by selecting **Vary**. Define multiple values for the corresponding parameters. Then, for each parameter combination of the variation a single job is created and queued on the server.



After clicking on **Run in Job Queue** the **Run GeoPython Macro in GeoDict Job-Queue** dialog opens, which is very similar to the dialog for [running a single command](#)⁷.



- **Project Name:** This name allows you to group multiple simulations together by giving them a shared project name. The default name comes from the name of the currently selected project folder, e.g., *MyFirstGeoDictProject*.
- **Job Name Prefix:** This name serves to identify the specific computation that is run. The default name consists of *Macro execution* and the file name of the macro. This file name is extended by the parameter values, e.g., *Macro execution Tutorial-D-GeoPy-Beginners-Workshop gd_SVP=5 gd_FD=5*.
- **Upload Current Structure:** When this option is activated, the currently loaded structure in GeoDict is uploaded to the job queue server along with the job. This is necessary for modules that analyze structures or predict properties. This option is active by default when a structure is loaded in GeoDict.
- **Upload Current Project folder:** When this option is activated, the entire current project folder, along with the job, is uploaded to the job queue server. This is necessary if additional files in the project folder are required to run the computation. For example, this would be necessary to continue a FlowDict simulation from a previous result.
- **Selected machine:** Here, you can select the job queue server you want to use for the simulation. The last server used is selected by default. If only one server is available, it will be selected automatically. Click **Select** to open the **Select server for job** dialog. Here you can see all currently reachable job queue servers. For each server find the following information:

Select server for job

	Hostname	Username	Max. parallel jobs	Running jobs	Jobs in queue	Number of logical cores	RAM in use (GiB)	Total RAM (GiB)	CPU utilization (%)
☒	LaptopJS.kl.math2market.de	M2M\schabernack	1	0	0	20	18	63	4.4

Buttons: OK, Cancel

- The **Hostname** of the machine.
- Your **Username** on this machine.
- The number of **Max. parallel jobs** that is allowed to run simultaneously on this server. The server admin can change this value via the [Job Queue Settings](#)²⁸.
- The number of currently **Running jobs**.
- The number of **Jobs in queue** waiting to be started.
- The available **Number of logical cores** and **Total RAM** together with their current usage **CPU utilization** and **RAM in use**.
- **Timeout:** This option allows you to set a timeout for the job. After the defined number of hours, the job will be terminated automatically. If you do not want to set a timeout, set this value to **0**, and the simulation will run until it finishes, is terminated, or crashes. Setting a timeout helps prevent the job queue server from becoming blocked by jobs that encounter convergence problems, for example.
- **Variable Variation:** When a macro that uses **Vary** for the parameters is selected, a table containing the varied parameters and all of their combinations is displayed at the bottom of the dialog box. Each combination is submitted as an individual job; thus, nine jobs are submitted in the example shown.

1.3 Job Queue Dialogs

You can find all Job Queue functionalities under **Cloud & Queue** in the menu bar. Here, three dialog options are available:

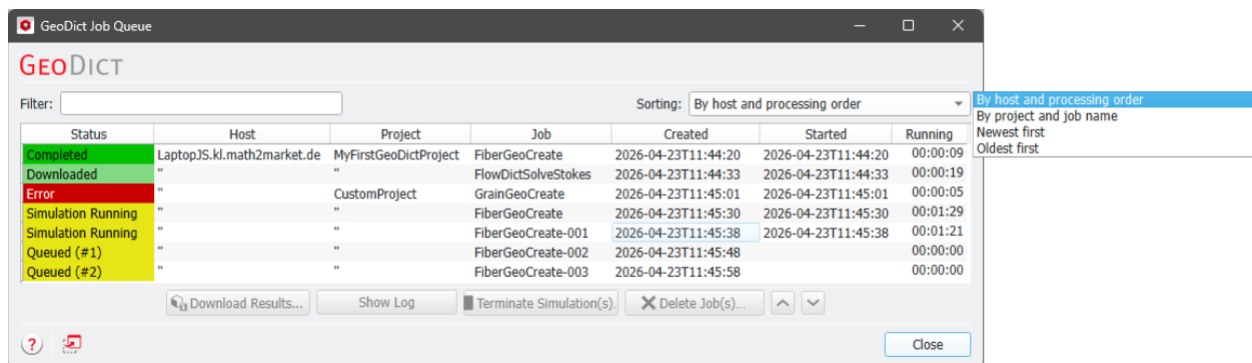


Understand the Job Queue dialogs

- [Job Queue Projects](#)¹²
View and manage your projects on job queue servers.
- [Setup Job Queue](#)¹⁷
Manage the job queue servers that you can connect to.
- [Manage Job Queue Server](#)¹⁹
Start and manage a job queue server on your machine.

1.3.1 Job Queue Projects

The **Job Queue Projects** dialog provides an overview over all your jobs currently located on all accessible and running job queue servers. This dialog only shows your jobs and does not show any jobs submitted by other clients. The overview updates automatically every few seconds.

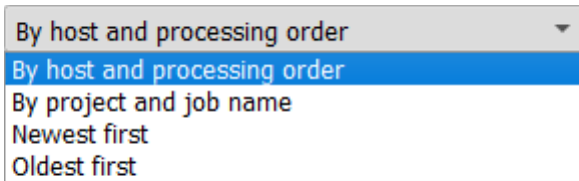


Filter

You can **Filter** the jobs shown by entering text or numbers in the **Filter** field at the top left of the dialog. This allows you to quickly find specific jobs in the list by entering **Job**, **Project** or **Host** names, a certain **Status**, or dates/times.

Sorting

You can select the **Sorting** of the currently displayed jobs at the top right. The default setting sorts the list by **Host** first, followed by **Processing Order**. You can also sort **By project and job name**, or by **Newest/Oldest**.



Jobs Table

Status

The **Status** column provides information about the current processing stage of your job. The **Status** can be one of the following:

- **Queued:** This job is currently in the queue. The position in the queue is given in brackets after the **Queued** status.
- **Simulation Running:** This job is currently running on a job queue server.
- **Completed:** This job has been successfully completed and the results can now be downloaded.
- **Downloaded:** This job has run successfully and the results have been downloaded. You can download the results again if necessary.
- **Error:** There are multiple possible causes of this status:
 - The computation failed, and the error message can be found in the [log file](#)^[15].
 - You [terminated](#)^[16] this job.
 - The job has reached the defined [timeout](#)^[7] limit.



Note! Even if the job ends with an **Error** status due to failure, termination, or timeout, partial results may still be available for download.

Host

The **Host** column shows you the name of the job queue server to which the job was submitted.

Project

The **Project** column displays the [project name](#)^[8] you defined.

Job

The **Job** column displays the [job name](#) you defined. If the job name is duplicated, it is followed by a number.

Created

The **Created** column shows you the date and time the job was created and submitted to the queue.

Started

The **Started** column shows when the job was started on the server. For jobs in the queue, this field is empty.

Running

The **Running** column shows the time that the job has been running, or is currently running.

Buttons

After selecting one or more jobs from the list, you can perform multiple actions using the buttons located at the bottom of the dialog:



Know how! You can select multiple jobs by either holding the **Ctrl** button and left-clicking on the jobs you want, or by left-clicking on one job, holding the **Shift** button, and then left-clicking on another job to select those jobs and any in between.

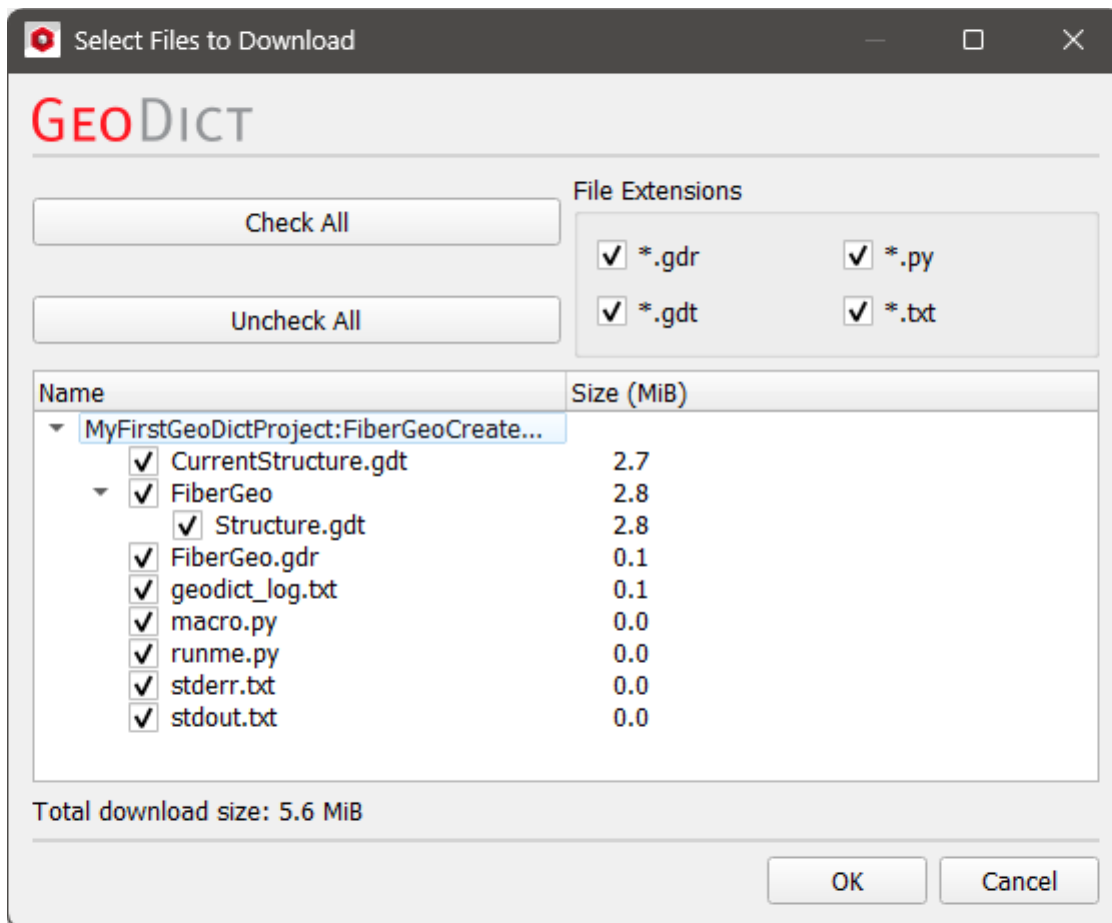
Download Results

Select one or more jobs and click **Download Results** to access their results. This will open the **Select Files to Download** dialog, where you can view all the files in the job folder for each selected job. Click the checkbox to activate (check) or deactivate (uncheck) the download for a file. At the top right all the file extensions contained in the job results are listed. Here, you can include or exclude all files of a certain format.



Note! By default, data and computational results are stored on the Job Queue server under `C:\Users\Username\GeoDict2026\JobSystem\projects`. How to change the location of this folder is described [here](#).

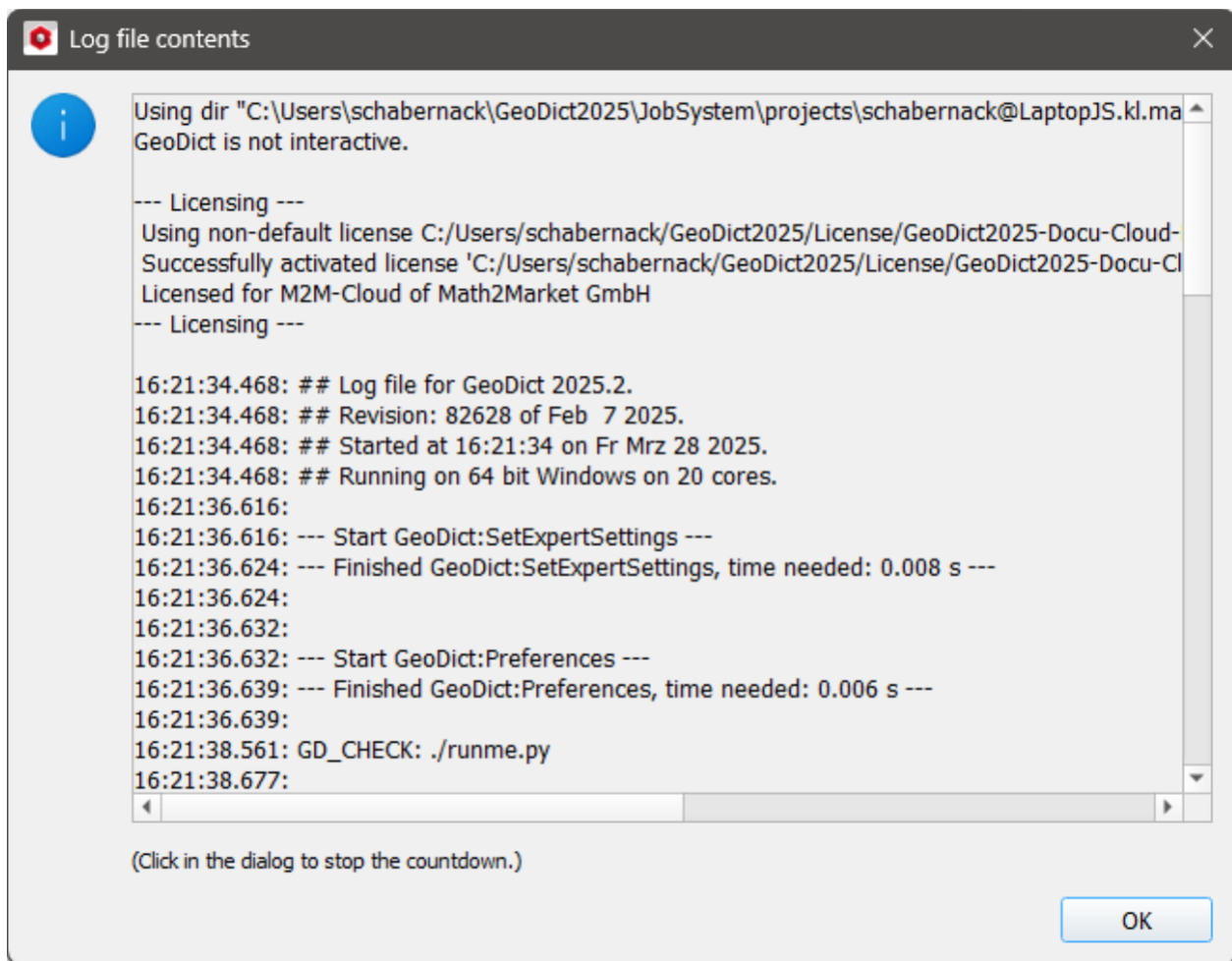
The job results contain the GeoDict result file (*.gdr) and the result folder created by the executed command or macro. The GeoDict log (geodict_log.txt), the macro created from the executed command (macro.py), the Python script that ran the command (runme.py), the standard error (stderr.txt), and the standard output (stdout.txt) are also available for download.



After clicking **OK**, the file browser will open automatically, allowing you to choose where to store the downloaded files on your machine. During the download, a folder for every [Project Name](#) is created within the selected location. Within each folder, a folder with the name [JobNamePrefix](#)@Hostname is created for all jobs belonging to this project. All chosen files and the result folder from this job are stored in this folder.

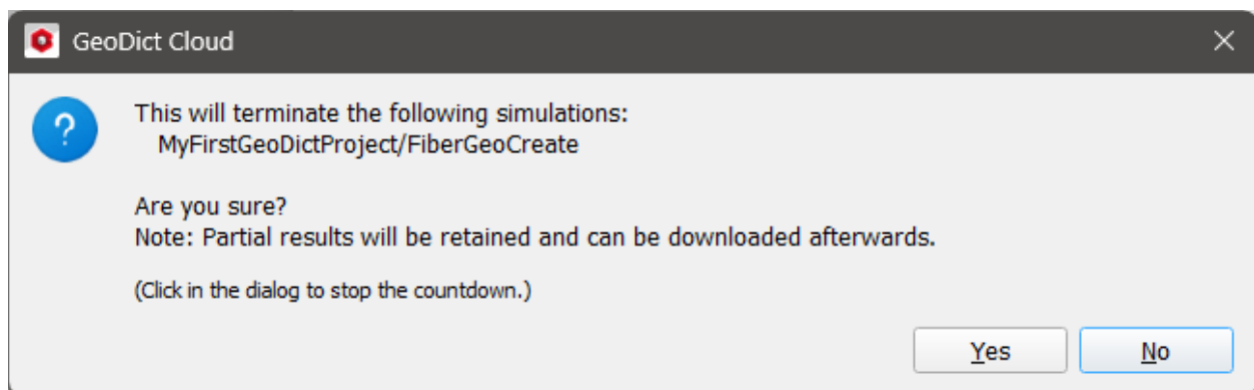
Show Log

Click **Show Log** to view the current GeoDict log output for this job. This information can help you observe the progress of the computation and identify potential errors. The dialog box displays the last 50 lines of the log output. For running jobs, you can refresh the log by closing the dialog and clicking **Show Log** again.



Terminate Simulation(s)

To cancel the simulation, select one or more running jobs and click **Terminate Simulation(s)**. Only running or queued jobs can be terminated. Before a job is terminated, a warning message will appear asking you to confirm termination of all listed jobs. In some cases, partial results may be available if the job has already run for some time.



Delete Job(s)

Click the **Delete Job(s)** button to delete the currently selected job(s) and all of its/their corresponding results. This will remove all generated files for the selected job(s) from the [job server project folder](#)³¹, freeing up disk space on the server machine. Before deleting a job, a warning message will appear asking you to confirm that you want to delete all listed jobs.



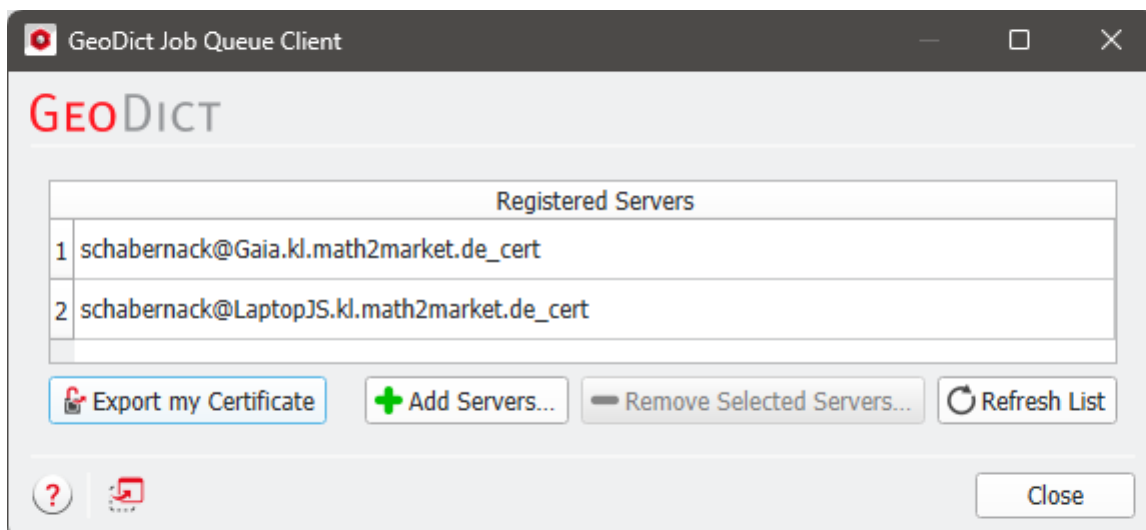
Up & Down Buttons

You can change the order of jobs in the queue to prioritize more urgent tasks or optimize the use of system resources. Use the **Up** and **Down** buttons to change the order of one or more jobs in the queue. Sort by **Processing Order** to obtain the desired queue order. Select a job and move it to the desired position in the queue by clicking the **Up** or **Down** button until you reach that position. The queue position number in the [Status](#)¹³ column will change accordingly. Moving a job into a position before the currently running simulation will not cause the job to start immediately. The currently running job must first be completed or terminated.



1.3.2 Setup Job Queue

In the **Setup Job Queue** dialog, you can manage the servers that you, as the client, are allowed to use. View the list of **Registered Servers** to see which ones are accessible to you. Export your certificate so that it can be added to the server machines and enable access from the server side.



Registered Servers

The list shows all **Registered Servers** for which you have added certificates via the **Add Servers...** button. The list does not indicate whether the server is currently reachable. It only shows whether the certificate is present.

Export my Certificate

Clicking **Export my Certificate** opens a file browser dialog. Save the certificate file, *username@hostname_cert.pem*, to your machine. Then, transfer the file to the machine running the job queue server and select [Add Clients](#)²⁷ in the **Manage Job Queue Server** dialog. Alternatively, you can access the certificate file directly under the *JobSystem/id/* folder, as described [here](#)³¹.

Add Servers

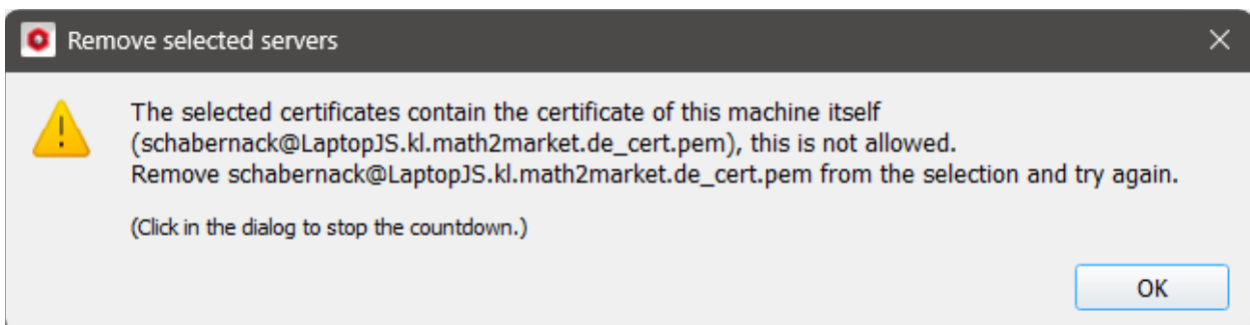
Click **Add Servers...**, then select the certificates of the job queue servers that you transferred to your machine. After clicking **Open**, the server will appear in the **Registered Servers** list. To add a server manually, copy its certificate to the *JobSystem/servers/* folder on the client machine. Then, click **Refresh List** to see the server in the list.



Important! Access from the client to the server is enabled by exchanging and adding both client and server certificates using the respective buttons.

Remove Selected Servers

Select one or more job queue servers from the list, then click **Remove Selected Servers...** to delete their corresponding certificates from your machine. These servers will then be inaccessible. Your machine is always a registered server, so you cannot remove its certificate from the list. A warning message will appear if you try to remove your own certificate.

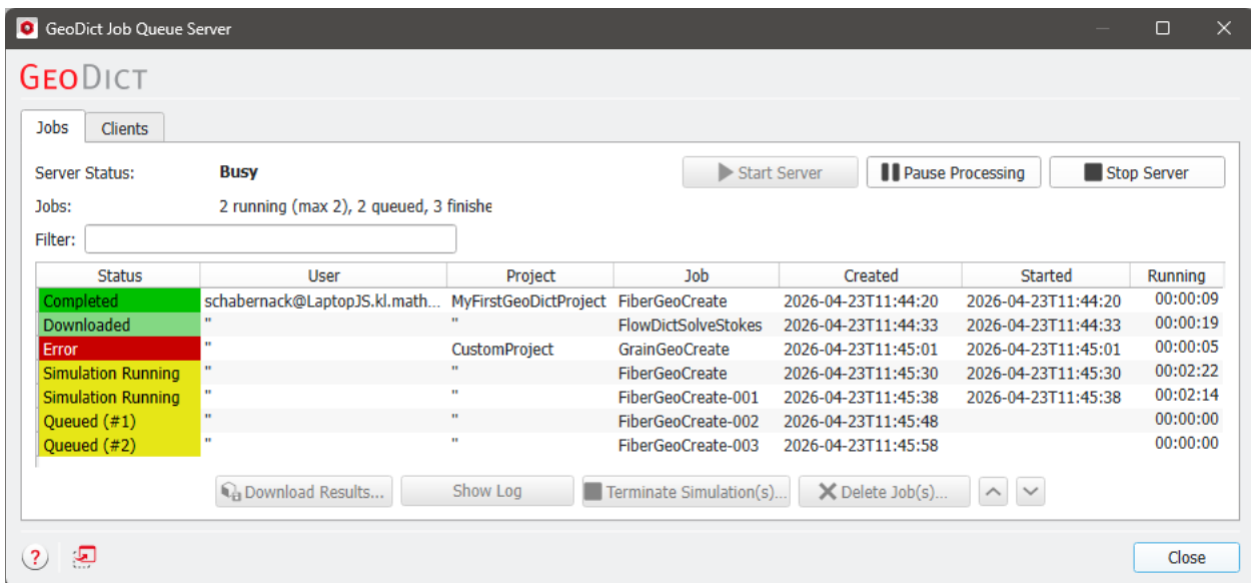




Note! When you update your GeoDict version (e.g., from 2025 to 2026) the program will automatically check the clients and servers folders of the old version for certificates and ask if you want to import them to the new version.

1.3.3 Manage Job Queue Server

The **Manage Job Queue Server** dialog lets you control the job queue server on this machine. You can also see and control all jobs submitted by clients and add new clients to the server.



Discover the tabs of the Manage Job Queue Server dialog

- [Jobs](#) ¹⁹
View and manage all simulations running on your server.
- [Clients](#) ²⁶
Manage access to the server from client machines.

Jobs

The **Jobs** tab contains all the functionalities related to the job queue server on this machine, as well as an administrator overview of all jobs submitted to it.

Server Status

The current **Server Status** is displayed at the top of the dialog:

- **Not available:** The server is not running or is not reachable (e.g., due to being blocked by a firewall).
- **Ready:** This means the server is running, but there are no jobs running or in the queue.
- **Busy:** The server is running, and one or more jobs are running.

- **Paused:** The server is paused due to the **Pause Processing** button being clicked.

Jobs	Clients
Server Status:	Not available
Jobs:	
▶ Start Server ⏸ Pause Processing ■ Stop Server	

Jobs	Clients
Server Status:	Ready
Jobs:	0 running (max 2), 0 queued, 5 finished
▶ Start Server ⏸ Pause Processing ■ Stop Server	

Jobs	Clients
Server Status:	Busy
Jobs:	2 running (max 2), 2 queued, 3 finished
▶ Start Server ⏸ Pause Processing ■ Stop Server	

Jobs	Clients
Server Status:	Paused
Jobs:	0 running (max 2), 0 queued, 5 finished
▶ Start Server ⏸ Pause Processing ■ Stop Server	

Jobs Information

Below **Server Status**, you can find information on the current number of **running**, **queued**, and **finished** jobs. The maximum number of parallel jobs allowed is shown behind the number of running jobs. You can adjust this setting in [Server Settings](#)²⁸ before starting the server.

Server Control Buttons

The buttons to control the server are located to the right of the **Server Status**.

When the server is not running, click the **Start Server** button to start it. Any user who has purchased a GeoDict server license can start a job queue server. Administrator privileges are not required. This terminal window displays a log of all invoked functions and who invoked them (e.g., GeoDict Job Queue Server running, CreateJob called by User, Running GeoDict, etc.). This log is also saved to the [job system directory](#)³¹ (\GeoDict2026\JobSystem\serverlogs\).

```

C:\Program Files\Math2Market x + v
14:02:32.282: init_logging in C:/Users/schabernack/GeoDict2026/JobSystem/serverlogs/
14:02:32.283: 2026-04-23 14:02:32,282 - INFO - start_daemon args: root path: C:/Users/schabernack/GeoDict2026/JobSystem,
projects dir: C:/Users/schabernack/GeoDict2026/JobSystem/projects, rendering: True, license: C:/Users/schabernack/GeoDi
ct2026/License/GeoDict2026-Docu-NodeLocked-Standard.glic
14:02:32.303: 2026-04-23 14:02:32,302 - INFO - Creating Job Queue, project directory = C:\Users\scha
barnack\GeoDict2026\JobSystem\projects, 2 parallel jobs
14:02:32.303: 2026-04-23 14:02:32,302 - INFO - Detected 20 CPU cores, using up to 10 threads per job
14:02:32.305: 2026-04-23 14:02:32,305 - INFO - Nothing to get for C:\Users\scha
barnack\GeoDict2026\JobSystem\projects\sorted-jobs.pickle...
14:02:32.331: 2026-04-23 14:02:32,330 - INFO - GeoDict Job Queue Server running.
14:02:35.585: 2026-04-23 14:02:35,585 - INFO - accepted <socket.socket fd=1228, family=2, type=1, proto=0, laddr=('10.220.0.22', 25052), raddr=('10.220.0.22', 53765)> from ('10.220.0.22', 53765) name: 10.220.0.22
14:02:35.606: 2026-04-23 14:02:35,606 - INFO - GetVersionInfo called by schabernack@LaptopJS.kl.math2market.de
14:02:35.608: 2026-04-23 14:02:35,607 - INFO - GetJobsAllClients called by schabernack@LaptopJS.kl.math2market.de

```

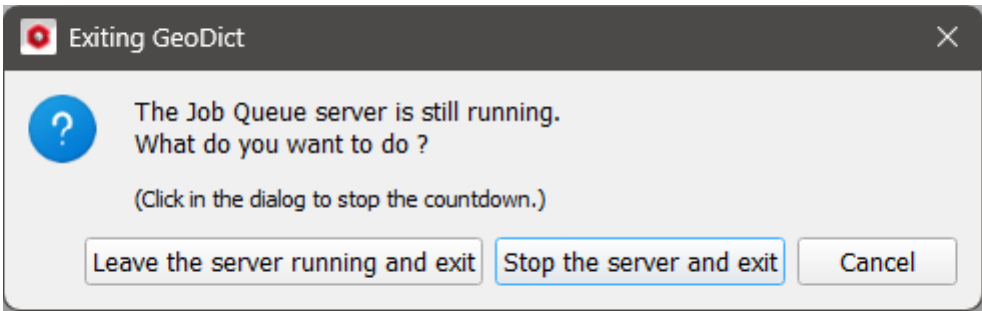


Note! It is also possible to start the job queue server by starting GeoDict from the command line with the option: `--job-server=<project folder>`. In this case, the location of the project folder for the job queue server needs to be provided.

Click **Pause Processing** while the server is running to pause the processing of queued jobs. Any jobs that are already running will continue until they finish, are terminated, or fail, and the server status remains **Busy** during this time. When all running jobs have completed, the server status switches to **Paused**. Jobs that were queued when the **Pause Processing** button was clicked, or those submitted afterward, will not start until you click the button again to end the pause. This allows you to free up computational resources without stopping the Job Queue server completely.

To shut down the server, click **Stop Server** when the server is running. This will also close the terminal window. You can also stop the server by manually closing the terminal window.

If the job queue server is running when you close GeoDict, a message indicating that the server is still running will appear. There are two options here. You can **Leave the server running and exit** GeoDict. In this case, the terminal window will remain open, and as long as this window is not closed, the job queue server will run and jobs can be submitted. Alternatively, you can **Stop the server and exit** GeoDict, which will also close the terminal window.



Filter

You can **Filter** the jobs shown by entering text or numbers in the **Filter** field at the top left of the dialog. This allows you to quickly find specific jobs in the list by entering **Job**, **Project** or **Host** names, a certain **Status**, or dates/times.

Jobs Table

In the **Jobs** tab, the server administrator sees the same list of jobs that clients see in the [Job Queue Projects](#) dialog. However, the administrator can see all jobs submitted by all clients on the server, while clients can only see their own jobs. The server administrator can perform the same actions as the clients, such as downloading results, terminating simulations, deleting jobs, and changing the queue order.

Status	User	Project	Job	Created	Started	Running
Completed	schabernack@LaptopJS.kl.math...	MyFirstGeoDictProject	FiberGeoCreate	2026-04-23T11:44:20	2026-04-23T11:44:20	00:00:09
Downloaded	"	"	FlowDictSolveStokes	2026-04-23T11:44:33	2026-04-23T11:44:33	00:00:19
Error	"	CustomProject	GrainGeoCreate	2026-04-23T11:45:01	2026-04-23T11:45:01	00:00:05
Simulation Running	"	"	FiberGeoCreate	2026-04-23T11:45:30	2026-04-23T11:45:30	00:02:22
Simulation Running	"	"	FiberGeoCreate-001	2026-04-23T11:45:38	2026-04-23T11:45:38	00:02:14
Queued (#1)	"	"	FiberGeoCreate-002	2026-04-23T11:45:48		00:00:00
Queued (#2)	"	"	FiberGeoCreate-003	2026-04-23T11:45:58		00:00:00

Status

The **Status** column provides information about the current processing stage of your job. The **Status** can be one of the following:

- **Queued:** This job is currently in the queue. The position in the queue is given in brackets after the **Queued** status.
- **Simulation Running:** This job is currently running on a job queue server.
- **Completed:** This job has been successfully completed and the results can now be downloaded.
- **Downloaded:** This job has run successfully and the results have been downloaded. You can download the results again if necessary.
- **Error:** There are multiple possible causes of this status:
 - The computation failed, and the error message can be found in the [log file](#)^[24].
 - You [terminated](#)^[25] this job.
 - The job has reached the defined [timeout](#)^[7] limit.



Note! Even if the job ends with an **Error** status due to failure, termination, or timeout, partial results may still be available for download.

User

The **User** column shows the name of the person who submitted this job.

Project

The **Project** column displays the [project name](#)^[8] you defined.

Job

The **Job** column displays the [job name](#)^[8] you defined. If the job name is duplicated, it is followed by a number.

Created

The **Created** column shows you the date and time the job was created and submitted to the queue.

Started

The **Started** column shows when the job was started on the server. For jobs in the queue, this field is empty.

Running

The **Running** column shows the time that the job has been running, or is currently running.

Buttons

After selecting one or more jobs from the list, you can perform multiple actions using the buttons located at the bottom of the dialog:



Know how! You can select multiple jobs by either holding the **Ctrl** button and left-clicking on the jobs you want, or by left-clicking on one job, holding the **Shift** button, and then left-clicking on another job to select those jobs and any in between.

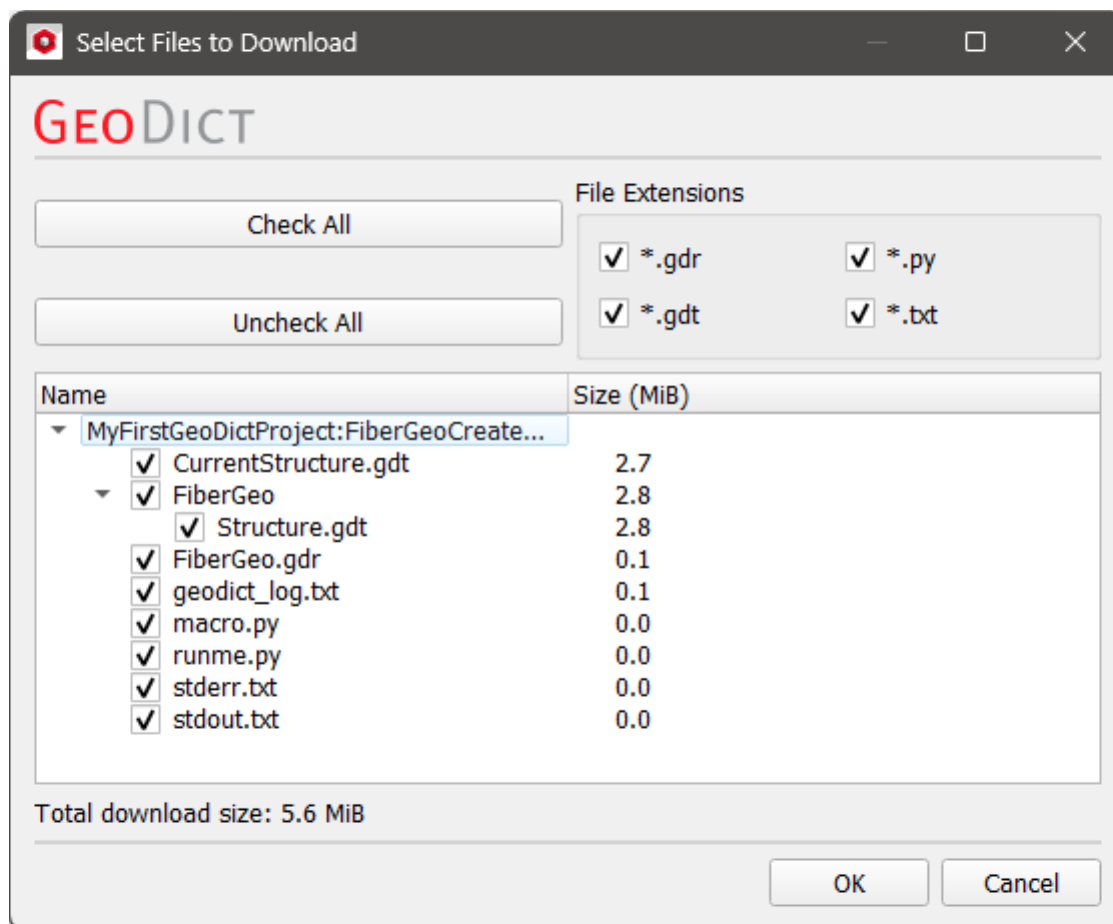
Download Results

Select one or more jobs and click **Download Results** to access their results. This will open the **Select Files to Download** dialog, where you can view all the files in the job folder for each selected job. Click the checkbox to activate (check) or deactivate (uncheck) the download for a file. At the top right all the file extensions contained in the job results are listed. Here, you can include or exclude all files of a certain format.



Note! By default, data and computational results are stored on the Job Queue server under `C:\Users\Username\GeoDict2026\JobSystem\projects`. How to change the location of this folder is described [here](#).

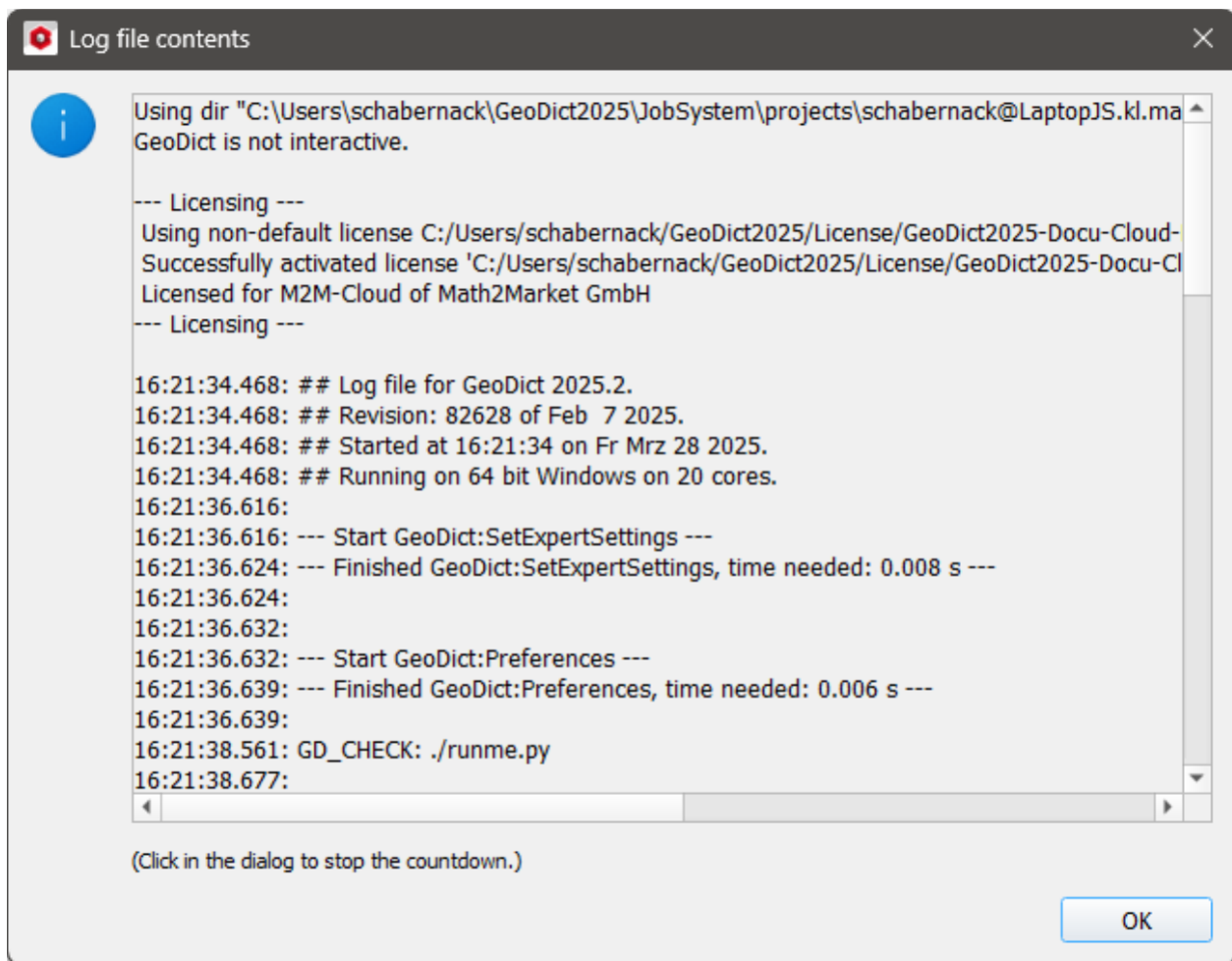
The job results contain the GeoDict result file (*.gdr) and the result folder created by the executed command or macro. The GeoDict log (geodict_log.txt), the macro created from the executed command (macro.py), the Python script that ran the command (runme.py), the standard error (stderr.txt), and the standard output (stdout.txt) are also available for download.



After clicking **OK**, the file browser will open automatically, allowing you to choose where to store the downloaded files on your machine. During the download, a folder for every [Project Name](#) is created within the selected location. Within each folder, a folder with the name [JobNamePrefix](#)@Hostname is created for all jobs belonging to this project. All chosen files and the result folder from this job are stored in this folder.

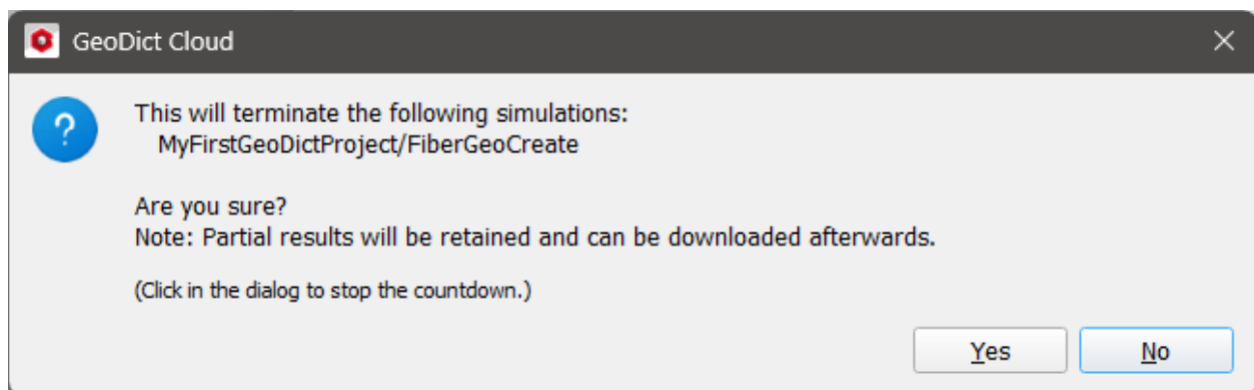
Show Log

Click **Show Log** to view the current GeoDict log output for this job. This information can help you observe the progress of the computation and identify potential errors. The dialog box displays the last 50 lines of the log output. For running jobs, you can refresh the log by closing the dialog and clicking **Show Log** again.



Terminate Simulation(s)

To cancel the simulation, select one or more running jobs and click **Terminate Simulation(s)**. Only running or queued jobs can be terminated. Before a job is terminated, a warning message will appear asking you to confirm termination of all listed jobs. In some cases, partial results may be available if the job has already run for some time.



Delete Job(s)

Click the **Delete Job(s)** button to delete the currently selected job(s) and all of its/their corresponding results. This will remove all generated files for the selected job(s) from the [job server project folder](#)³¹, freeing up disk space on the server machine. Before deleting a job, a warning message will appear asking you to confirm that you want to delete all listed jobs.



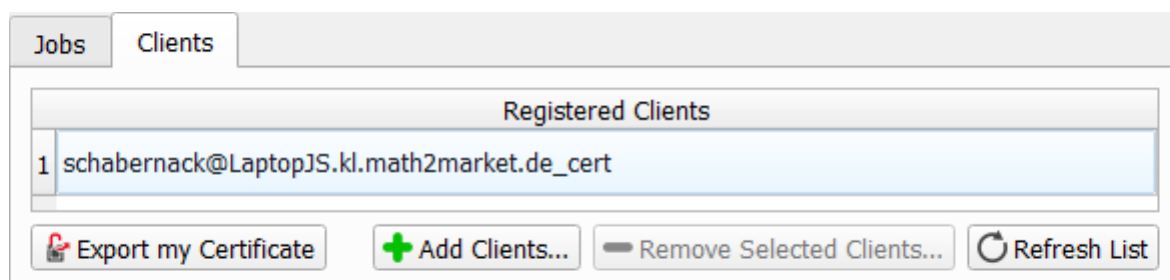
Up & Down Buttons

You can change the order of jobs in the queue to prioritize more urgent tasks or optimize the use of system resources. Use the **Up** and **Down** buttons to change the order of one or more jobs in the queue. Sort by **Processing Order** to obtain the desired queue order. Select a job and move it to the desired position in the queue by clicking the **Up** or **Down** button until you reach that position. The queue position number in the [Status](#)²² column will change accordingly. Moving a job into a position before the currently running simulation will not cause the job to start immediately. The currently running job must first be completed or terminated.



Clients

From the **Clients** tab, the server administrator can control which client machines have access to the job queue server. View the **Registered Clients** list to see which clients currently have access to the server. Export the server certificate to enable access from the client side.



The list shows all **Registered Clients** for which you added certificates via the **Add Clients...** option.

Export my Certificate

Clicking **Export my Certificate** opens a file browser dialog. Save the server certificate file, `username@hostname_cert.pem`, to the machine. Then, transfer the file to all client machines and select [Add Servers](#)¹⁸. Alternatively, you can access the certificate file directly under the `JobSystem/id/` folder, as described [here](#)³¹.

Add Clients

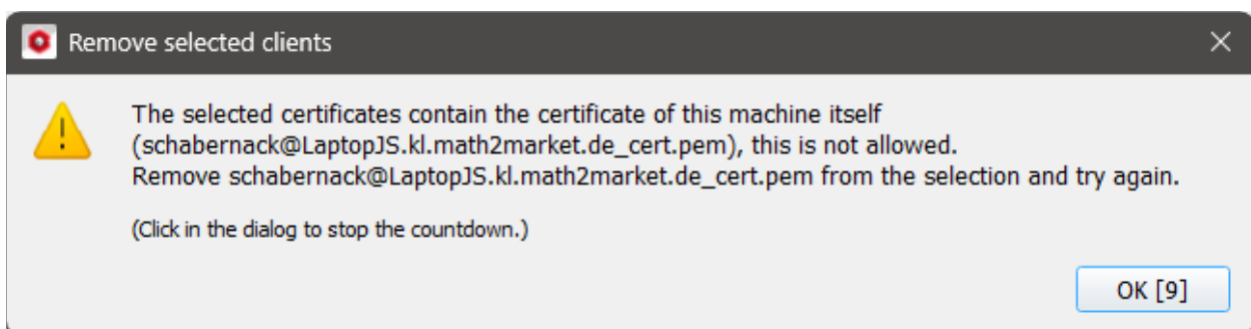
Click **Add Clients...**, then select the certificates of all the clients you transferred to the server machine in the file browser that opened. After clicking **Open**, the clients will appear in the **Registered Clients** list. To manually add a client, copy the client certificates to the `JobSystem/clients/` folder on the server machine. Then, click **Refresh List** to see the client in the list.



Warning! When the server grants access to a client, the client is granted permissions and may gain broad access to the server machine. For instance, Python scripts can be executed via GeoDict, which could potentially access sensitive resources. To maintain security, we strongly recommend setting up a dedicated "functional" user account on the server. This allows for better control and monitoring of client access. Never grant server access to unauthorized or unverified users. Doing so may pose a security risk.

Remove Selected Clients

Select one or more clients from the list, then click **Remove Selected Clients...** to delete their corresponding client certificates from the server machine. These clients will then no longer be able to access the server. Note that the server machine itself is always a registered client, so you cannot remove its certificate from the list. A warning message will appear if you try to remove your own certificate.



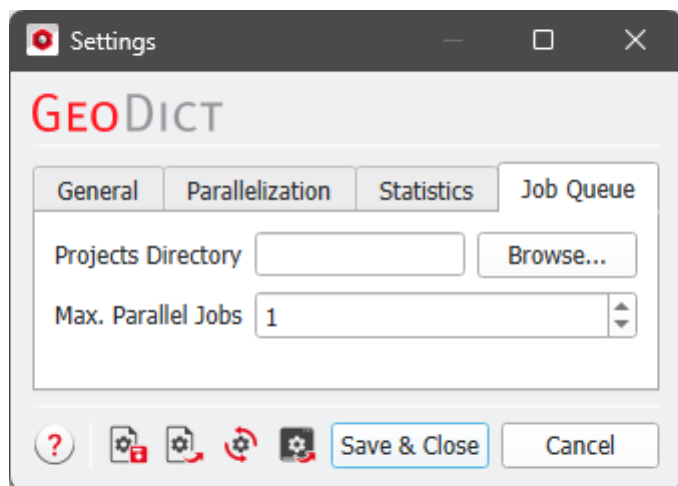
Note! When you update your GeoDict version (e.g., from 2025 to 2026) the program will automatically check the clients and servers folders of the old version for certificates and ask if you want to import them to the new version.

1.4 Job Queue Server Settings

Additional settings that affect the job queue can be found in the GeoDict menu bar under **Settings** → **Settings** → **Job Queue**.



Important! Change these settings before the job queue server is started, otherwise the default settings will be used.



Projects Directory

Since the [projects folder](#)³¹ contains all simulation files for jobs on the server, a huge amount of data may be stored in it. Therefore, you can choose a different location for this folder. Click **Browse** and navigate to a folder of your choice. All data and computational results from jobs will then be stored in this folder.



If the job queue server is started from the command line, you must always specify a location in the option `--job-server=<project folder>`.

Max. Parallel Jobs

With the **Max. Parallel Jobs** setting, the server administrator can control the maximum number of jobs that the Job Queue Server can process simultaneously. The number of threads used per job is computed by dividing the number of available threads for the server machine's hardware by the **Max. Parallel Jobs** setting. For example, for a server machine with **20** CPU cores and a setting of **4** **Max. Parallel Jobs**, each job will use **5** threads. The default value of **1** results in the server processing the jobs sequentially.



1.5 Job Queue Server License Priority

When multiple users request the same license, the RLM server grants it to the first user. Subsequent requests wait in a queue until the license becomes available. By default, this is handled on a first-come, first-served basis, so users requesting a license must wait until all previous requests have been fulfilled.

To prevent simulations on your Job Queue server from waiting for licenses due to other users blocking them, you can increase the priority of the license request from the machine running the Job Queue server. This option is only available when using GeoDict with a floating license.

Prioritizing license requests from the Job Queue server

To give higher priority to license requests from the machine running the Job Queue server, follow these steps:

1. Configure the RLM Options File on the license server

Your GeoDict installation includes a file named **m2m.opt**, located at:

```
C:\Program Files\Math2Market GmbH\GeoDict 2026\RLM\m2m.opt
```

Copy this file to the directory on your RLM license server where the license files (*.lic) are stored.

Options (*.opt) files allow you to define rules for how licenses are allocated within your organization. For more details, refer to the Installation & Licensing user guide. The **m2m.opt** file contains entries like the following:

PRIORITY 1 geodictbase	project GEODICT_JOBQUEUE
PRIORITY 1 geodict-processes	project GEODICT_JOBQUEUE
PRIORITY 1 geodict-server	project GEODICT_JOBQUEUE
PRIORITY 1 geodict-viewer	project GEODICT_JOBQUEUE
PRIORITY 1 geodictcloud	project GEODICT_JOBQUEUE
PRIORITY 1 fibergeo	project GEODICT_JOBQUEUE
PRIORITY 1 fibergeo-processes	project GEODICT_JOBQUEUE

These entries assign the highest **PRIORITY** of 1 to license requests associated with the **project GEODICT_JOBQUEUE**.

2. Set the Project environment variable on the Job Queue server machine

On the machine running the Job Queue server, define the following [environment variable](#):

```
RLM_PROJECT=GEODICT_JOBQUEUE
```

This ensures that all license requests from this machine are tagged with the **GEODICT_JOBQUEUE** project.

Once configured, any queued license requests from the Job Queue server will be prioritized over requests from other machines, reducing delays for scheduled simulations.

For more information on priority handling in RLM, refer to the [RLM documentation](#).

1.6 Job System Folder

The server stores data in your GeoDict settings folder, which by default is located here:

- Windows: `C:\Users\Username\GeoDict2026\JobSystem\`
- Linux: `/home/Username/.geodict2026/JobSystem/`



Note! *Username* is the login name of the user and *hostname* is the name of the computer.

The **JobSystem** folder contains the following subfolders:

- The **clients** folder contains the `username@hostname_cert.pem` files for all machines that can act as clients for this server. Selecting the [Add Clients](#)^[27] button automatically adds the chosen client certificates to this folder.
- The **id** folder contains two files, `username@hostname_cert.pem` and `username@hostname_key.pem`, that are used to identify the machine. Versions of GeoDict prior to 2024 Service Pack 1 used a different naming scheme for certificates and are therefore incompatible with newer versions.
- The **projects** folder is the default location for all data and computational results generated by a running job queue server.



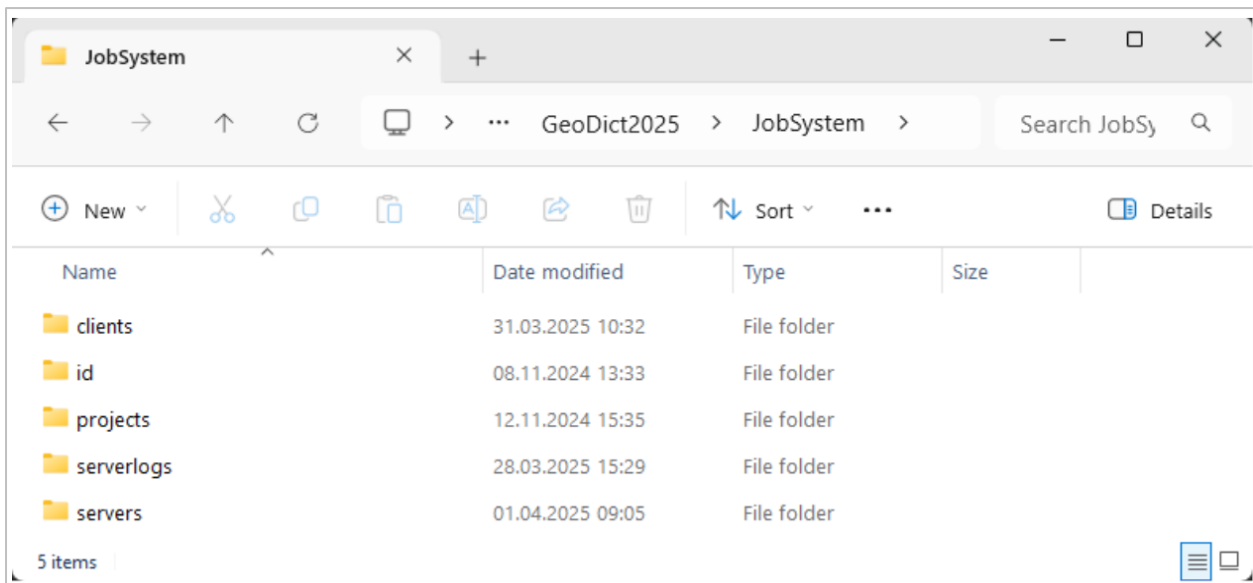
Know how! You can manually define the **projects** folder used for storing the data and computational results as described [here](#)^[28].

- The **serverlogs** folder contains the log output from the server, which is also displayed in the server's [terminal window](#)^[20].
- The **servers** folder contains the `username@hostname_cert.pem` files for all machines that can act as job queue servers for this client. Selecting the [Add Servers](#)^[18] button automatically adds the chosen server certificates to this folder.



Important! We recommend performing all actions, such as exchanging certificates or accessing job results, directly through GeoDict rather than manually through the JobSystem folder.

Job Queue: Job System Folder



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