

Grid*Pro* License Manager Manual

(For Windows and Linux)



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CONTENTS:

1. Introduction	3
2. Pre-requisites	3
3. Software & License Installation	3
4. How to use the License Manager	4
5. Config Service	6
6. Service Start/Stop	6
7. License Info	7
8. License Usage	8
9. Client License Manager	10

1. Introduction

License Manager GUI is developed for the users to keep track of their license and active client information efficiently. Users don't have to go through the hassle of running commands to retrieve license-related information and interpret it. The License manager application would present you with all the necessary details regarding the license like current active clients, expiry date, the total number of licenses available etc.

Two different types of licenses are provided, depending on the type of purchase, provided by **Program Development Company** for the use of **GridPro**.

LICENSE	FUNCTION
SNode	Allows GridPro to run on one machine through a server. A restricted number of copies can run at one time.
Floating	Allows GridPro to run on any machine on a network with a server. A restricted number of copies can run at one time.

2. Pre-requisites:

The *portmap*(Windows) or *rpcbind*(Linux) should be installed on the machine, and it should be running all the time.

On Linux, the *service* command must be available. If not, please install it before proceeding further.

On RHEL distributor, you may have to change the SELinux mode. It is explained in section 9.26 of the GridPro Installation Guide v9.0.

3. Software & License Installation

The license manager installation comes along with the software setup file. During the installation process, users can choose to install either the entire package or just the License manager (in the case of server/host machine). Please refer to section 5.1 and 5.2 of the Installation Guide for more information on the software installation in Windows and Linux OS, respectively.

Once the license manager is installed, refer to section 6 of the Installation Guide to know how to get the license file for the server machine.

Once you receive the license file from GridPro support, rename the license (.lic) file to 'gridpro.lic' and copy it to the "GridPro/lc_mngr/" directory.

4. How to use the License Manager

The License Manager GUI can be opened by double-clicking the *License Manager.exe* file in the installation directory. For e.g. In Windows OS, it can be found in the following path, "C:\Program Files\GridPro\bin". If the license is not found in the default license location, i.e. GridPro/lc_mngr/, the application would throw an error message, as shown in figure 1.

In such a scenario, users have to ensure that the license file is renamed to 'gridpro.lic' and it is copied to the GridPro/lc_mngr/ location. Windows users should ensure that the file extension is enabled so that while renaming, you don't accidentally rename it as 'gridpro.lic.lic'

Note: The License Manager GUI requires admin privileges to start/stop the server.

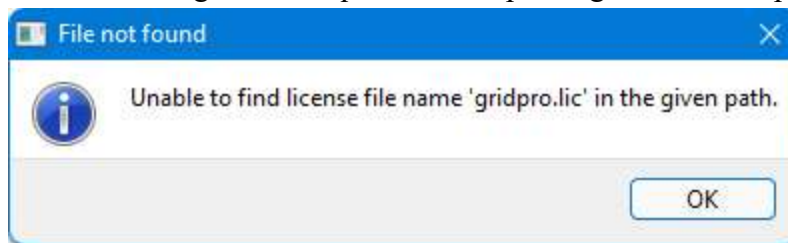


Figure 1: License file not found prompt

A GUI, as shown in figure 2, will be opened. The steps to start and stop the license is as follows.

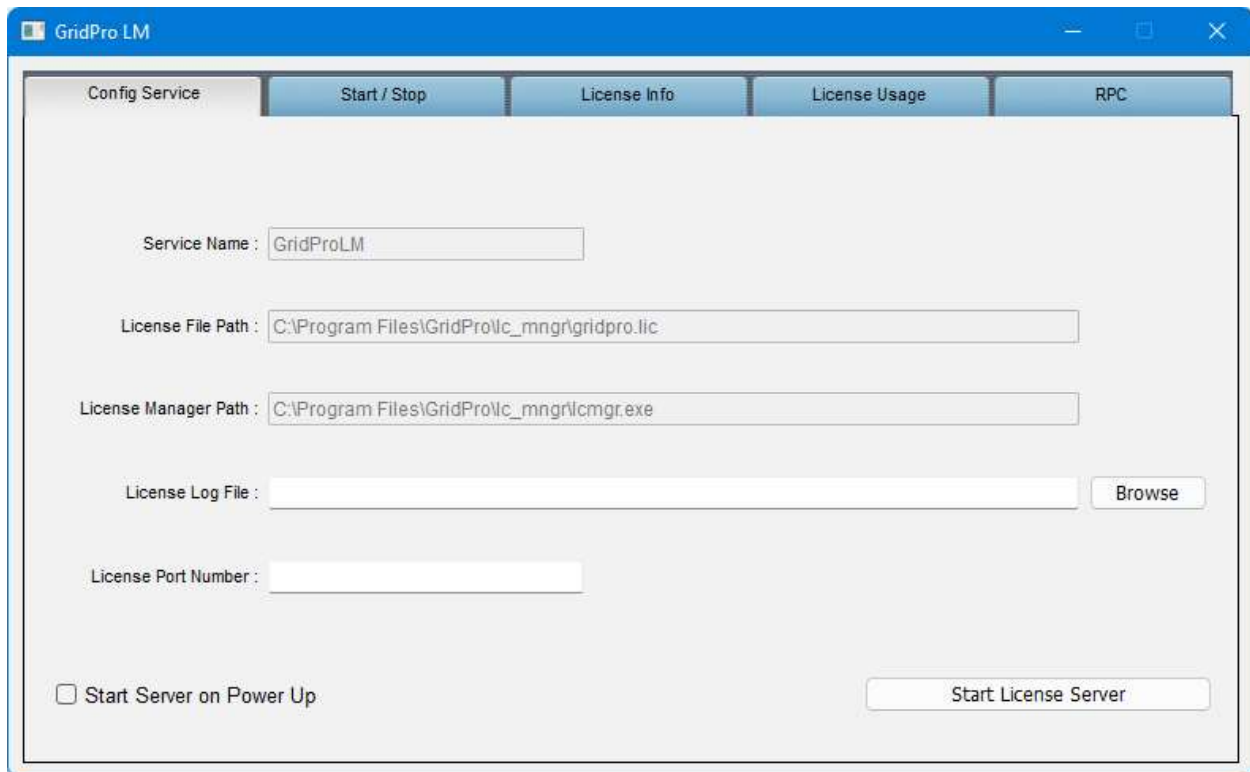


Figure 2: License Manager GUI

- i. Enter the log file name under 'License Log File' with the absolute path if you want to write the log information to the desired file name. Else, leave it blank so that the application can use the default log file (lcmgr.log). The default log file can be found in the home directory of the user.
- ii. Enter the port number under 'License Port Number', if you choose to start the server on a specific port number. To do that, you need to allow the desired port number through the firewall for which certain rules must be added. Refer to section 9.18 to know the steps to add the firewall rules. If you don't input a port number, a random available port number will be used.
- iii. Once the details are entered (if needed), click on "Start License Server" to start the server. A script will be executed that will start the lcmgr as a '*service*'. Port map should be running in the background to facilitate running lcmgr as a service on Windows. While rpcbind service should be running in the background to start the lcmgr service on Linux.
- iv. A UAC prompt would pop up because it requires admin access to start the lcmgr service. Once the service has been started, an entry will be visible in the services list in the *start/stop* tab of the License Manager GUI.
- v. Note: Users can also start the license server by clicking on the "Start License Server" button in the Start/Stop tab. Also, the license server, 'lcmgr', will only be started as a 'service'. To start it as a console process, run 'lcmgr' from a command terminal.
- vi. Stop server button would stop the service. You will need admin access to stop the lcmgr running as a service.
- vii. The Force Kill server button would kill the service or any other lcmgr process that was started from the terminal(Console process).
- viii. Note: lcmgr process started from the console can also be terminated by closing the console.
- ix. License information like that of host name, license expiry date can be found on the License Information tab.
- x. License Usage tab would show the client information if the lcmgr server is running; else, it would prompt a message asking to start the server.

NOTE: RHEL users may have to change the SELinux mode for the license manager to work. Please refer section 9.26 in the GridPro Installation Guide v9.0.

5. Config Service Page

The config service tab is the default tab which is shown when the license manager GUI is opened.

Service Name: The name of the application.

License File Path: Full path to the location where the license file is available

License Manager Path: Full path to the location where lcmgr.exe is available.

License Log File Path: Users can browse (or create) a log file from a certain directory which would keep track of the license manager log. If no log file is selected, then the application creates a log file called **lcmgr.log** in the home directory, which is set as default. For e.g. in windows, it will be written to "C:\Users\gridpro".

Port Number: Start the license manager server on a dedicated port. If no port number is entered, it starts the server on a random port number.



Figure 3: Port number conflict prompt

When the input port number is already being used by another application or a process, then it would display a message, as shown in Figure 3.

Start server on power up (checkbox): A checkbox that would allow users to auto-start or disable the auto-start of the server on power-up/reboot.

Start License Server (button): Starts the license server on a specific port number if passed.

6. Start/Stop Server Tab

Service Name: GridProLM with its corresponding process id is listed first on the service name list. If a license server is running, then the lcmgr service would be listed with its process id. Note: GridProLM is the name of the application.

Start License Server: Clicking on the button would start the server on a specific port (only if the port number is entered else, it will start on a random available port). A log file can be passed to lcmgr as well; if none passed, then it would create a log file with the name "lcmgr.log".

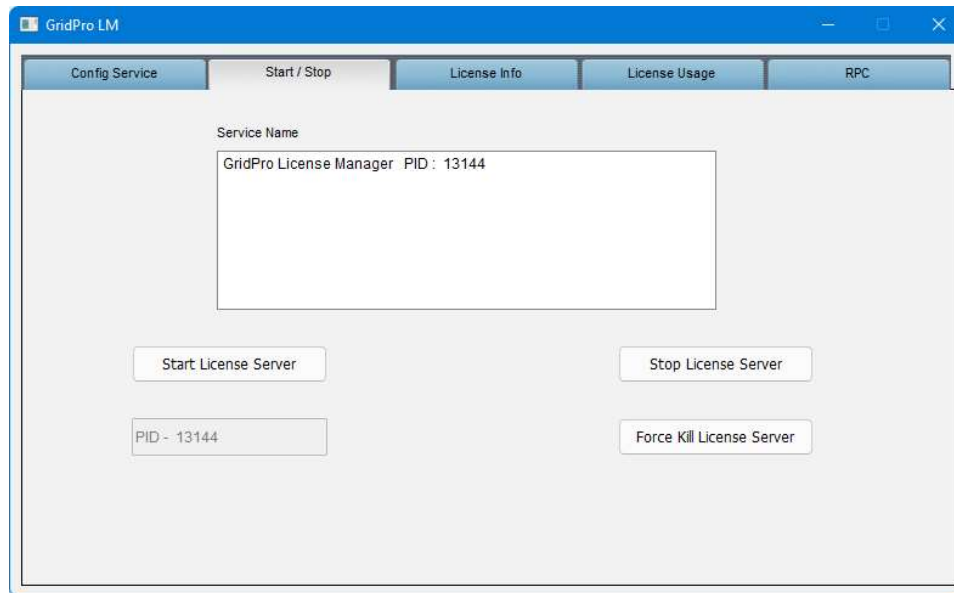


Figure 4: Start and stop service tab

Stop License Server: Clicking on the button would stop the lcmgr service.

PID: Displays the Process Id of GridPro License Manager.

Force Kill License Server: Clicking on the button would stop the service as well as kill the console process, which was not started as a service in case any exist.

7. License Information Tab

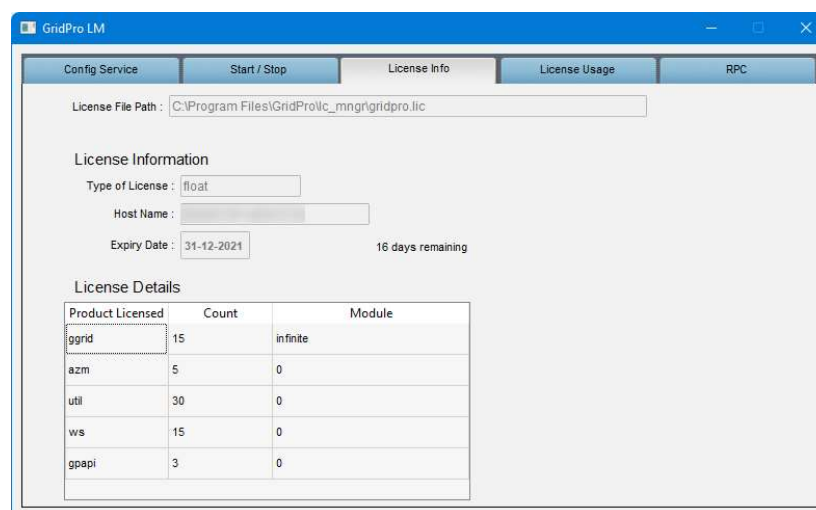


Figure 5: License Information tab

License File Path: Full path to the location where the license file is available.

Type of License: GridProLM application is intended for float license users.

Host Name: Host name of the system.

Expiry Date: Displays the license expiry date. If the license is expired, then an error message will pop up as shown below.

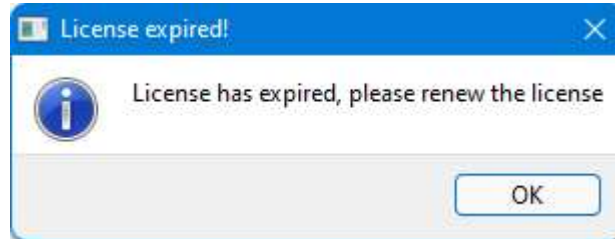


Figure 6: License Expiry prompt

Remaining Days: Remaining days till the license expiry date.

License Details: Displays the license information in a tabular form. The first column is the name of the licensed product; the second column is the total count of the corresponding product licenses, and the third column is the total number of modules for each of the products, which is applicable only for Ggrid for which the license is provided based on the number of blocks. For e.g. in the case of a free academic license, it would be 250, which is the maximum number of blocks that a free user can run the grid generation process.

8. License Usage Tab

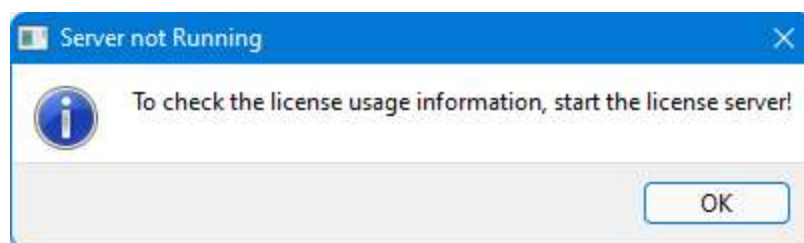


Figure 7: License Usage tab prompt

To check for the license usage information, make sure the server is running; if clicked on the License Usage tab when the server is not running, it displays a pop-up message, as shown in Figure 7.

License Usage: License Usage Tab has all the license information as well as additional two more columns; License available and active clients. Available licenses for corresponding products are displayed in the License available column.

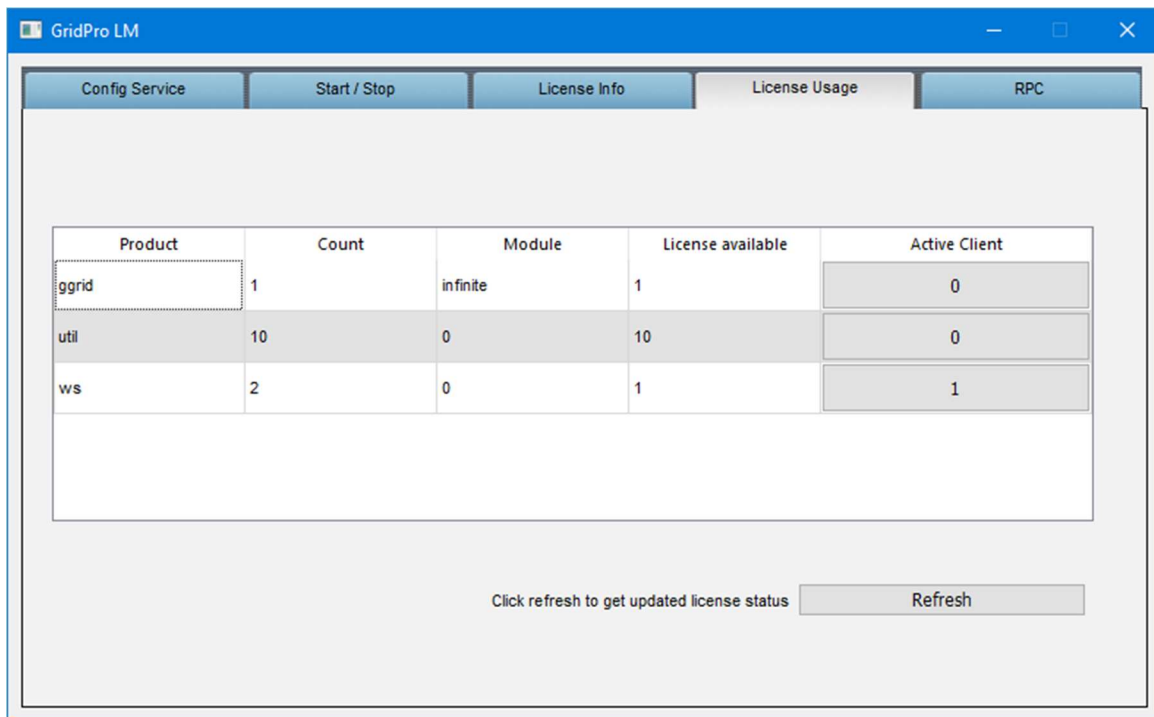


Figure 8: License Usage tab

Active client column is like a button; when depressed on each row would prompt a dialog that would have the details of the clients who are currently using the product.

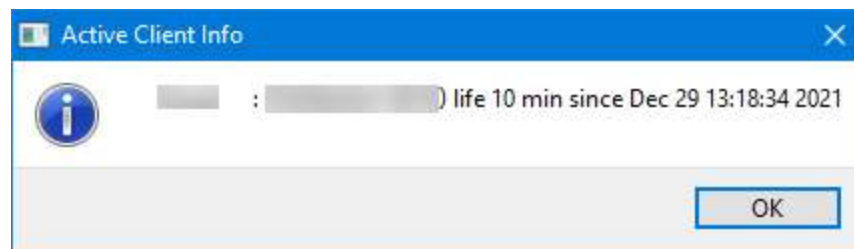


Figure 9: Active client information dialog box

If there are no clients using the product, then it would display "There are no Active clients!"

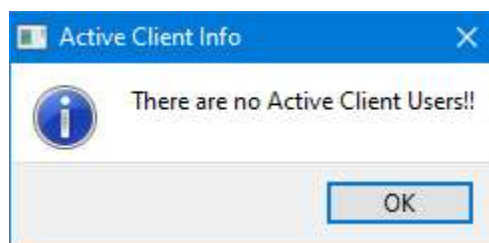


Figure 10: No active client dialog box

Refresh: Click to refresh the active client information

9. Client License Manager

Client License Manager is developed to ease the users from going through the cumbersome task of editing the host file, opening RPC port on the firewall. With the client license manager, the solutions to all these problems are just a click away. Currently, it works only for the snode license.

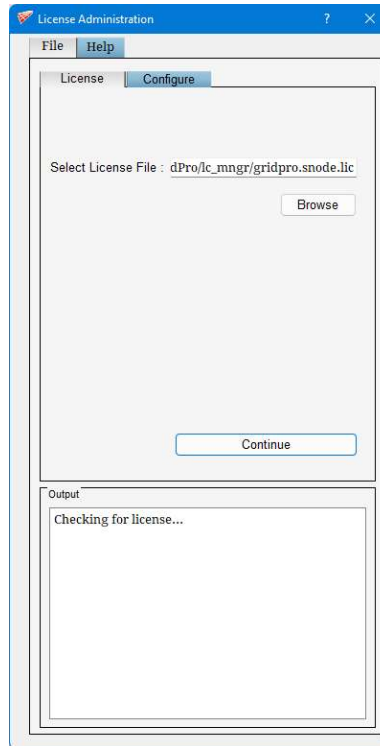


Figure 11: Client License Manager GUI

The client license dialog box opens up while opening the ws GUI, only on certain conditions. For e.g when there is no license file and user tries to open the WS, then the dialog box as shown in figure 11 appears. If you have the correct license file which is renamed as 'gridpro.lic', then the license manager ensures that the WS GUI opens up without any issues by initializing the service at the background.

Figure 11 shows the license tab of the client license manager. Users can browse the license file from any location. Once the license file has been selected, click on Continue to read the file contents. Once done, move to the adjacent "**Configure**" tab. Suppose if the user copied the license file to the GridPro/lc_mngr location manually, then

The first section in the configure tab displays the location of the selected license file, license type and host name. Users can also browse for a log file that can be used to write down the log info.

Next section is License Initialisation. There are four checkboxes, namely,

1. Initialise License
2. Initialise Host
3. Initialise Portmap/RPC
4. Initialise RPC port

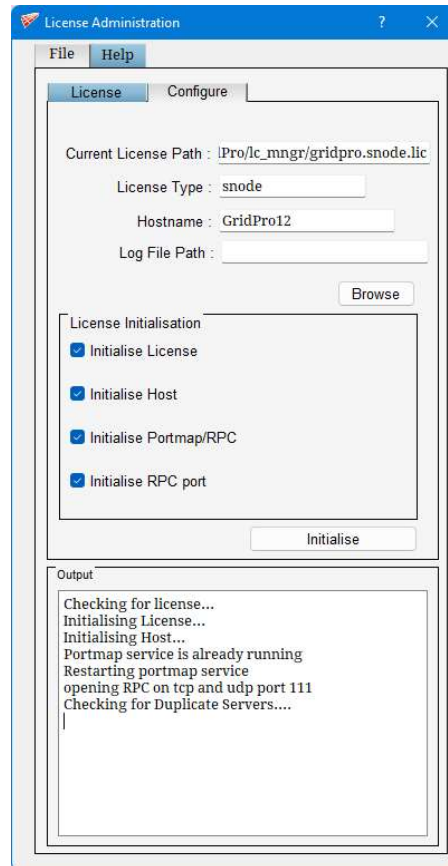


Figure 12: Configure tab

Initialise License: If the checkbox is checked, the license file that is selected will be renamed to gridpro.lic and copied to GridPro/lc_mngr/ folder.

Initialise Host: If it is checked,

1. If the IP address is not mapped to the host name in the hosts file, then an entry of mapping between IP address and hostname is written into the host file. All the commands are added to a script that would execute when the initialise button is being clicked.

2. If the host name is mapped to a different ip address, then the script would comment down the existing entry and write down a new entry where 127.0.0.1 is mapped to the hostname of the machine.
3. If the host file is already mapped to 127.0.0.1 and the host name of the machine, then nothing is modified in the host file.

Initialise PortMap/RPC: If checked, the portmap service is started/restarted on Windows and rpcbind service is started/restarted on Linux.

Initialise RPC port: Certain times RPC port might be blocked by the firewall. To unblock RPC port 111, a rule needs to be added to the firewall to open/unblock tcp and udp port 111. On the other hand linux uses "firewall-cmd" to block or unblock ports on a firewall except for ubuntu which uses "ufw" (ubuntu firewall) to do the same. So initializing RPC port, will automatically add a rule to unblock the port number 111.

Once the user checks all the necessary boxes and clicks on Initialise, a UAC is prompted, which requires admin access to carry out the operation. All the operations for corresponding checked boxes will be performed. It also checks for duplicate servers, if it exists, that will be killed or terminated and lcmgr will be restarted on the default port and the selected log file, if any; else, it will use lcmgr.log (default) file to store the log information.

Errors: When an expired license is found in the license location, a warning pop up appears and upon closing it, the client license dialog box opens up to select a new license.

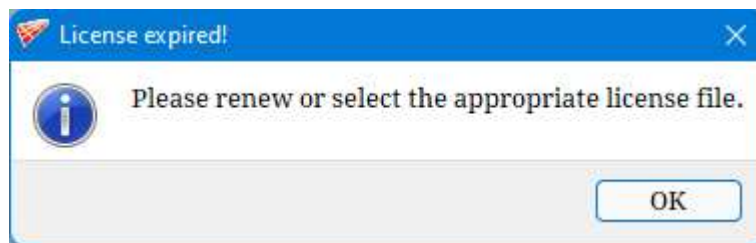


Figure 13: License Expired

When a license file of different hostname is found, a warning pop up appears and upon closing it, the client license dialog box opens up to select a new license.

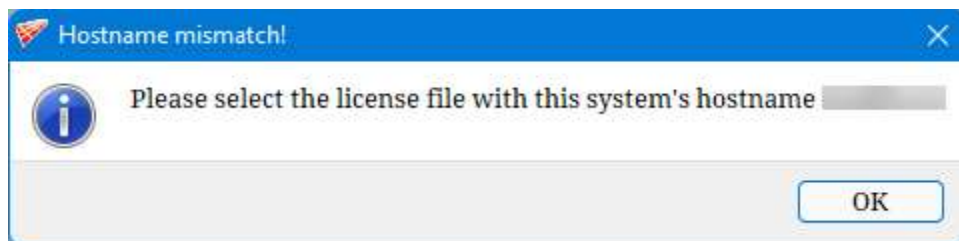


Figure 14: Hostname Mismatch

When a license file of different mac address is found, a warning pop up appears and upon closing it, the client license dialog box opens up to select a new license.

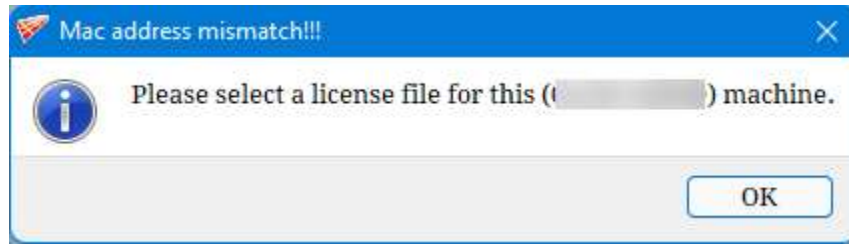


Figure 15: Mac address Mismatch