3D SYSTEMS LICENSE GUIDE

Release Note

License Server 9

3D SYSTEMS

Table of Contents

Licensing – Client Side 1
Get Node IDs – Client Side 2
License Manager – Client Side 3
Dialog Options 4
Dialog Buttons 6
Local-Node (Standalone) License 7
Floating License 8
Mixed Mode License 10
Package Manager – Client Side 11
Licensing – Server Side 12
License Service (CimLmService) 12
License Server Monitor 12
Configuration tab 13
Group Manager 14
License Manager – Server Side 19
Client Activities tab 26
Access Errors tab 27
Licensing Troubleshooting 28
License Server Installation 29
Hardware Requirements 29
Software Requirements 30
Installation Procedure 31

Licensing – Client Side

3D Systems provides you with a flexible licensing system, to make the most efficient use of your software licenses. The system supports two types of licenses; **Local-Node License** and **Floating License** (a Local-Node license is also called a Node-Locked or Standalone license). A Local-Node and Floating license can be used together; this is called **Mixed Mode**.

To use this 3D Systems product, you require a license file. The license file is sent to you by your local 3D Systems Provider or Reseller. This license is issued for a specific computer and Hasp number.

The procedure for acquiring and setting up the license for your 3D Systems product is as follows:

1. Get Node IDs - Client Side; see page 2.

   To receive the license file, you first have to run the **Get Node IDs** utility. This utility creates a text file that should be sent to your 3D Systems Provider or Reseller. This text file contains data about your computer required by the system to issue you your license file. In return, you will receive your license file.

   Extract and save the license file on the computer from which the **Node IDs** utility was run.

2. License Manager - Client Side; see page 3.

   Use the **License Manager** to define the path to the license file, so that your 3D Systems product can verify the license.

3. Package Manager - Client Side; see page 11.

   Once the license is defined, use the **Package Manager** to select a **Base Package** in order to work.

   Any valid license must contain at least one base package. Select a base package from the list of available base packages displayed in the **Package Manager** dialog.

   If there is only one Base Package available in all the valid licenses, it is automatically selected and the **Package Manager** dialog is not displayed. However, if there is more than one Base Package available for you, the Package Manager is displayed listing the available Packages and you are required to select one.

   Once you have selected a Base Package, it is automatically loaded the next time you run the product, unless all the available licenses of this package are already grabbed by other users. In this case, the system will require you to select a different Base Package, if one is available (if no Base Package is available, the Package Manager dialog is displayed empty).

See Licensing Troubleshooting on page 28.

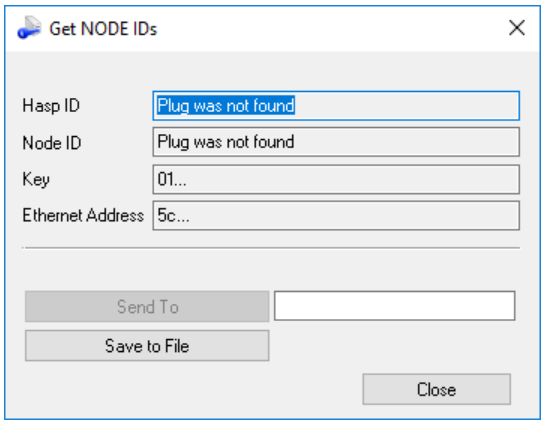
Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

Get Node IDs – Client Side

To use this 3D Systems product, you require a license file. The license file is sent to you by your local 3D Systems Provider or Reseller. This license is issued for a specific computer and Hasp number.

To receive the license file, you first have to run the **Get Node IDs** utility. This utility creates a text file that should be sent to your 3D Systems Provider or Reseller. This text file contains data about your computer required by the system to issue you your license file. In return, you will receive your license file.

The **Get Node IDs** utility is supplied on the installation DVD.
The **Get Node IDs** dialog is displayed with the relevant data:



Note: In order to create the text file, you must have a plug or a physical LAN Ethernet address.

HASP ID	The Hasp ID value is the "long" Hasp ID number.
Node ID	The Node ID value is the "short" Hasp ID number.
Key	Displays the machine key.
Ethernet Address	Displays the Ethernet address.
Send To	Create a text file and automatically send it to the email address entered in the adjacent field. The **Send To** button is available once an email address is entered. The text file contains data about your computer required to issue you your license file (see below, in the **Save to File** explanation). The email address should be that of your 3D Systems Provider or Reseller. An appropriate message is displayed when the email is successfully sent or if a problem occurs. The selected email address is saved in the Registry for the next time the tool is used.
Save to File	Save the text file containing data about your computer required to issue you your license file. This file should then be manually emailed to your 3D Systems Provider or Reseller.
Close	Close the application.

License Manager – Client Side

The **License Manager** is a tool to manage your license. You can either view your license, set your local license or connect to your server license (setting its name or IP).

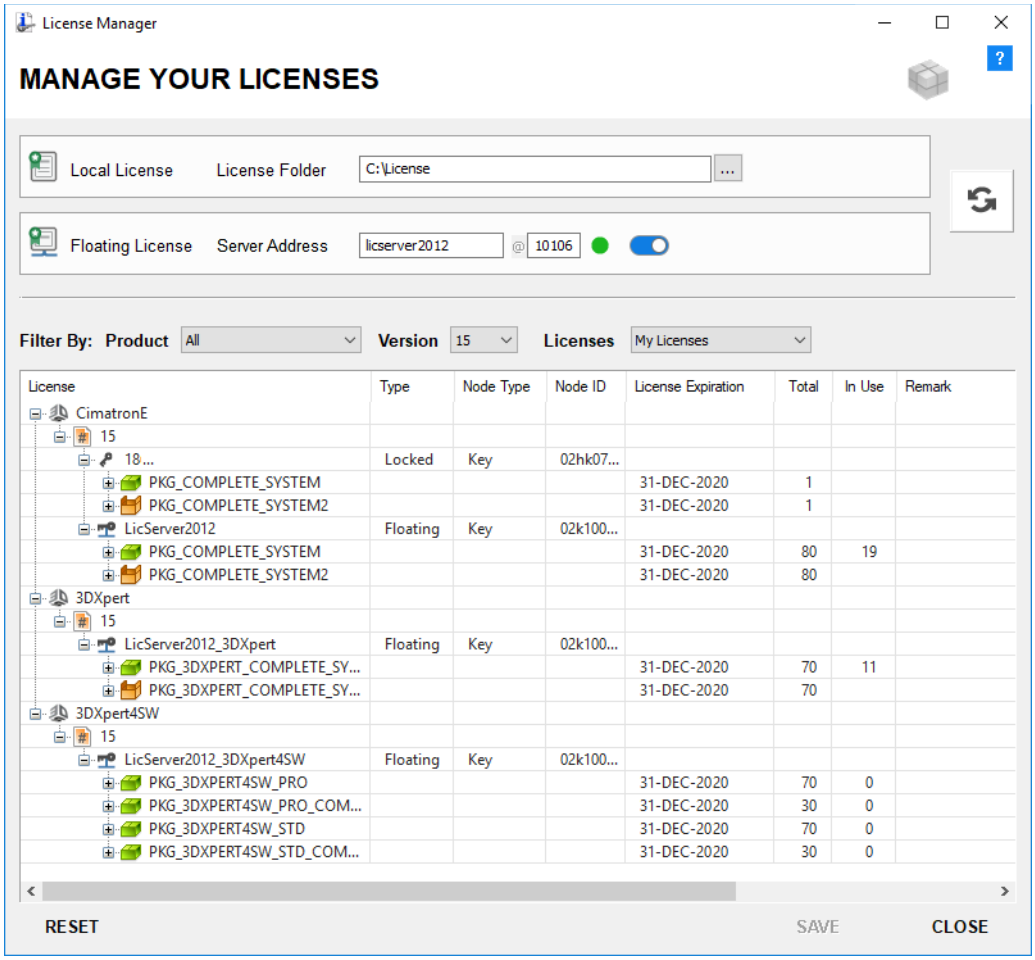
The **License Manager** defines the path to the local license file (received from your 3D Systems Provider or Reseller), so that your 3D Systems product can verify the license, and also displays license information per product and version number.

3D Systems provides you with a flexible licensing system, to make the most efficient use of your software licenses. The system supports two types of licenses; **Local-Node License** and **Floating License** (a Local-Node license is also called a Node-Locked or Standalone license). A Local-Node and Floating license can be used together; this is called **Mixed Mode**.

To use this 3D Systems product, you require a license file. The license file is sent to you by your local 3D Systems Provider or Reseller. This license is issued for a specific computer and Hasp number.

The License Manager can be invoked from the License Server Monitor (see page 12) and shows the license information and version number, per product. Either display your own licenses or all user licenses.

The **License Manager** dialog is displayed showing installed 3D Systems software, from the Client computer:



The License Manager dialog enables you to view multiple license files. Toggling the Licenses dropdown list from "All Licenses" to "My Licenses" filters those licenses which match the Machine Key and HASP_ID of the protection device connected to the PC.

The file **CimLmLib_Client.log** tracks any possible errors, in case a license is unavailable for some reason. This log file is located in the folder:
…\ProgramData\3D Systems\Product_Name>\<Version_Number>\Data\Log
For example:
…\ProgramData\3D Systems\Cimatron\15\Data\Log

License files (node-locked licenses and floating licenses) can be placed in the same folder.

Dialog Options

The following fields are displayed in the License Manager dialog:

License File Locations:

Local License Folder	For a **Local-Node License**, enter the path containing your license file(s) received from your 3D Systems Provider or Reseller - see Get Node IDs on page 2.
Floating License Server Address (Port)	For a **Floating License**, enter the license server address (<the server IP address or the server name> and also the Port).

Filter By:

<table>
<tr><td>Product</td><td>Select the product whose licenses you wish to display.

A dropdown list contains all the relevant 3D Systems products on your computer. If only one product is installed, the product name is displayed and the dropdown list is grayed out.</td></tr>
<tr><td>Version</td><td>Select the version of the product whose licenses you wish to display.

A dropdown list contains all the versions (of the products) on your computer. If only one version of the product is installed, the version number is displayed and the dropdown list is grayed out.

The following options are available in the dropdown list:

<table>
<tr><td>All</td><td>Display all your licenses.</td></tr>
<tr><td><<Product_Name> version #></td><td>Display only the licenses relevant to the product version number selected.

The number of versions that are displayed in the list depends on the number of valid licenses on your computer.</td></tr>
</table>
</td></tr>
<tr><td>Licenses</td><td>Display licenses (for the selected product and version) from a dropdown list. The following types are available:

<table>
<tr><td>My Licenses</td><td>Display all your licenses.</td></tr>
<tr><td>All Licenses</td><td>Display the licenses of all users.</td></tr>
<tr><td>Floating Licenses</td><td>Display all your floating licenses.</td></tr>
</table>
</td></tr>
</table>

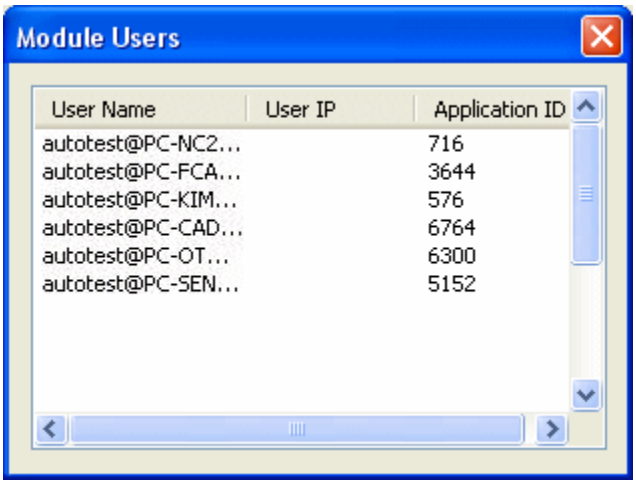
License Display Area:

Displays the licenses and license contents according to the previously selected parameters.

Licenses displayed in red are invalid licenses. These are licenses that have expired or licenses that do not match the Node ID of your protection device.

In Use Column

The **In Use** column shows the number of packages or modules that are currently grabbed, out of the total available. To retrieve additional information regarding these grabbed packages or modules, right-click on the appropriate row to display the **Module Users** dialog which shows the list of the user and PC names.



Dialog Buttons

The following buttons appear in the **License Manager** dialog:

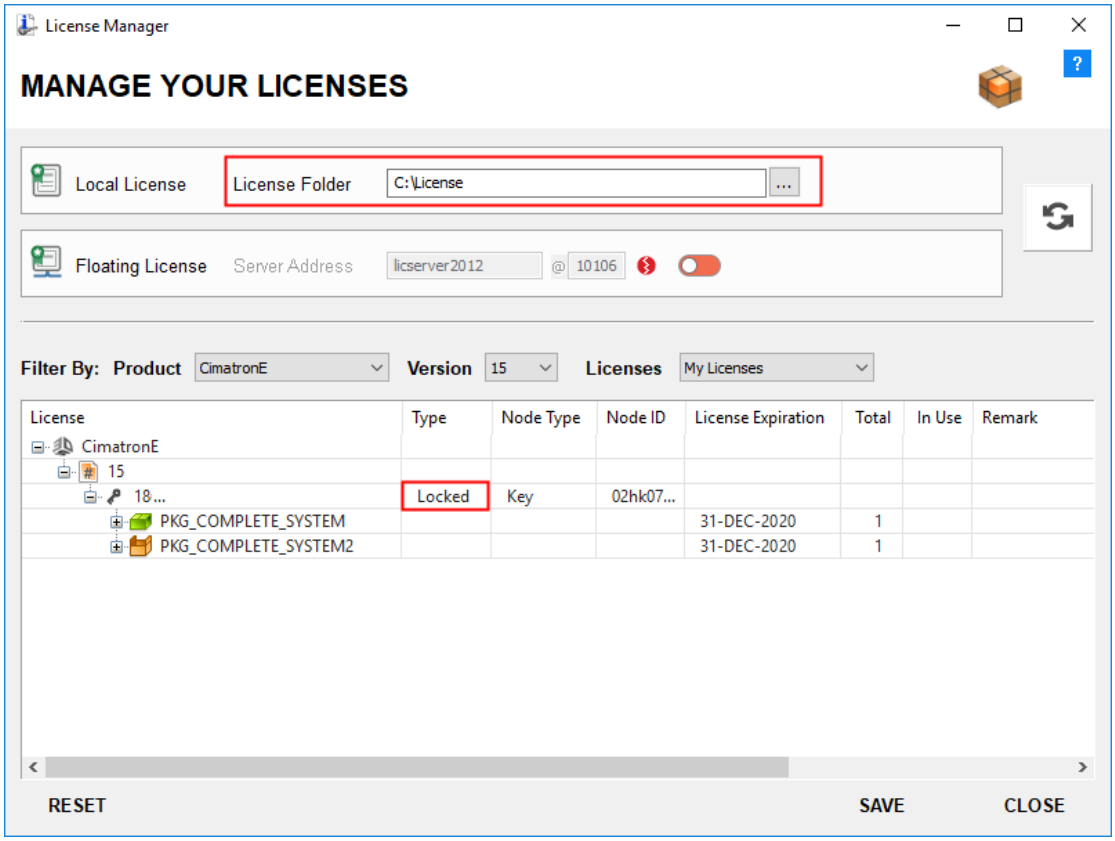
	Help: Open the Help.
	Package Manager: Display the Package Manager – Client Side dialog.
	Refresh View: Refresh the dialog contents after you have changed a setting.
Reset	**Load Defaults:** Retrieve the last saved settings in the dialog.
Save	**Save Settings:** Save the current dialog settings.
Close	Close the **License Manager** dialog.

Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

Local-Node (Standalone) License

This 3D Systems product supports **Local-Node Licensing** (a Local-Node license is also called a Node-Locked or Standalone license). The license file configuration determines the available licenses.

The **License Manager** defines the path to the local license file (received from your 3D Systems Provider or Reseller), so that your 3D Systems product can verify the license, and also displays license information per product and version number.



To set up the Local-Node License Information:

1. Invoke the **License Manager** tool. An empty **License Manager** dialog is displayed showing installed 3D Systems software, from the Client computer.
   For an explanation of this dialog, see the **License Manager Dialog Options** and **License Manager Dialog Buttons**, on pages 4 and 6 respectively.
2. Press the browse button (situated to the right of the License field) and browse to the Local License Folder (this is the folder where you saved the license file you received from your 3D Systems Provider or Reseller - see **Get Node IDs – Client Side** on page 2).
   The Local License Folder textbox and button control enables you to browse and set the Local License Folder to the registry (this requires pressing the Update button).
   The License Manager shows the license configuration of all the license(s) located in the folder path displayed in the Local License Folder field.
3. Press the **Save** button.
4. Press **Close** to close the **License Manager** dialog.

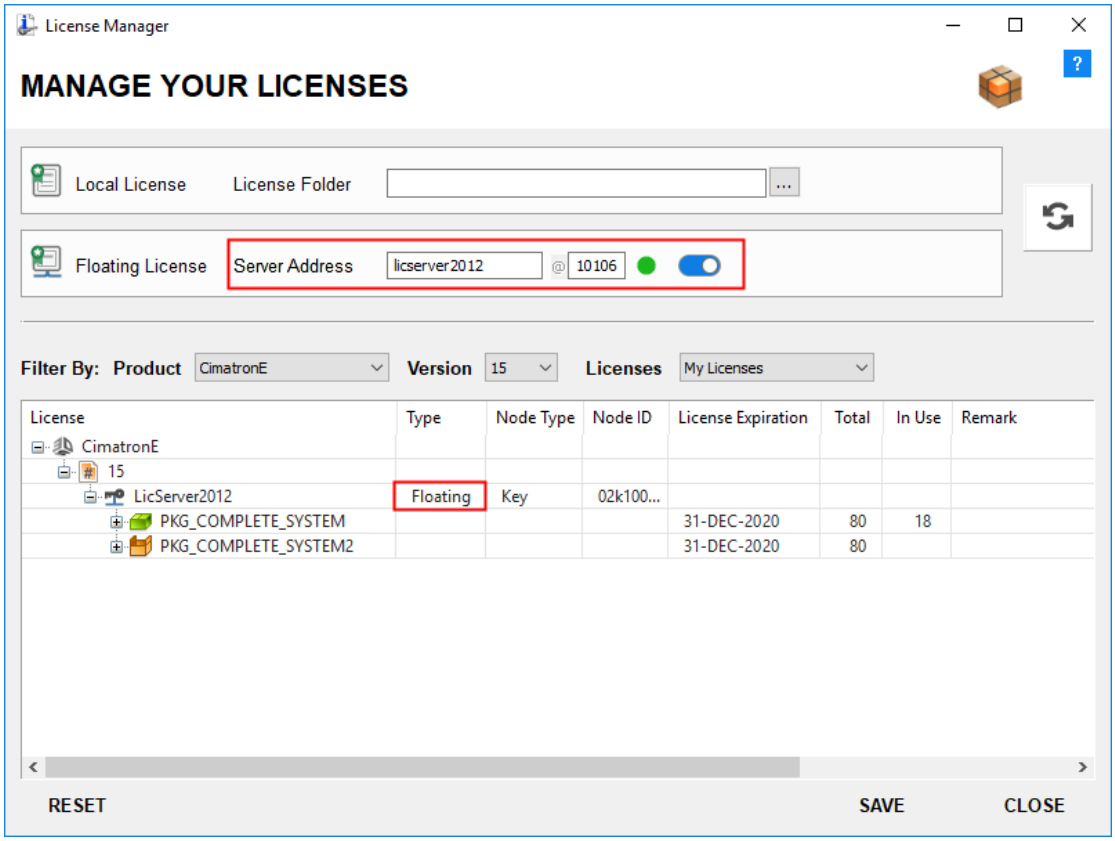
Floating License

This 3D Systems product supports **Floating Licensing**. The license file configuration determines the available licenses.

To work with a Floating License, you should set the client computer to connect to a certain server and set the server license port number according to the CimLmService Monitor (for more information contact your 3D Systems Provider or Reseller).

The product supports floating licensing via a TCP/IP port number. This port number (10106) is the default port that is used to communicate between the floating license **server** and the **clients**. The server and the clients must be configured to the same port. This means that if you change this port number in the floating license server (via the CimLmService Monitor, see page 12), you also need to change the port number on the client side (via the License Manager dialog), and vice versa.

Note: The server and the clients must be configured to the same port!!!



To set up the Floating License Information (Client Side):

Note: To set up the floating license from the **server side**, contact your 3D Systems Provider or Reseller.

1. Invoke the **License Manager** tool. An empty **License Manager** dialog is displayed showing installed 3D Systems software, from the Client computer.
   For an explanation of this dialog, see the **License Manager Dialog Options** and **License Manager Dialog Buttons**, on pages 4 and 6 respectively.

2. In the displayed License Manager dialog, slide the floating license button from OFF to ON . This enables the **Server Address** field; enter the license server address (<the server IP address or the server name> and also the Port). For example: <server IP address>@10106 or <license server name>@10106.

   Note: A default TCP/IP port number (number.10106) is supplied with the license file.

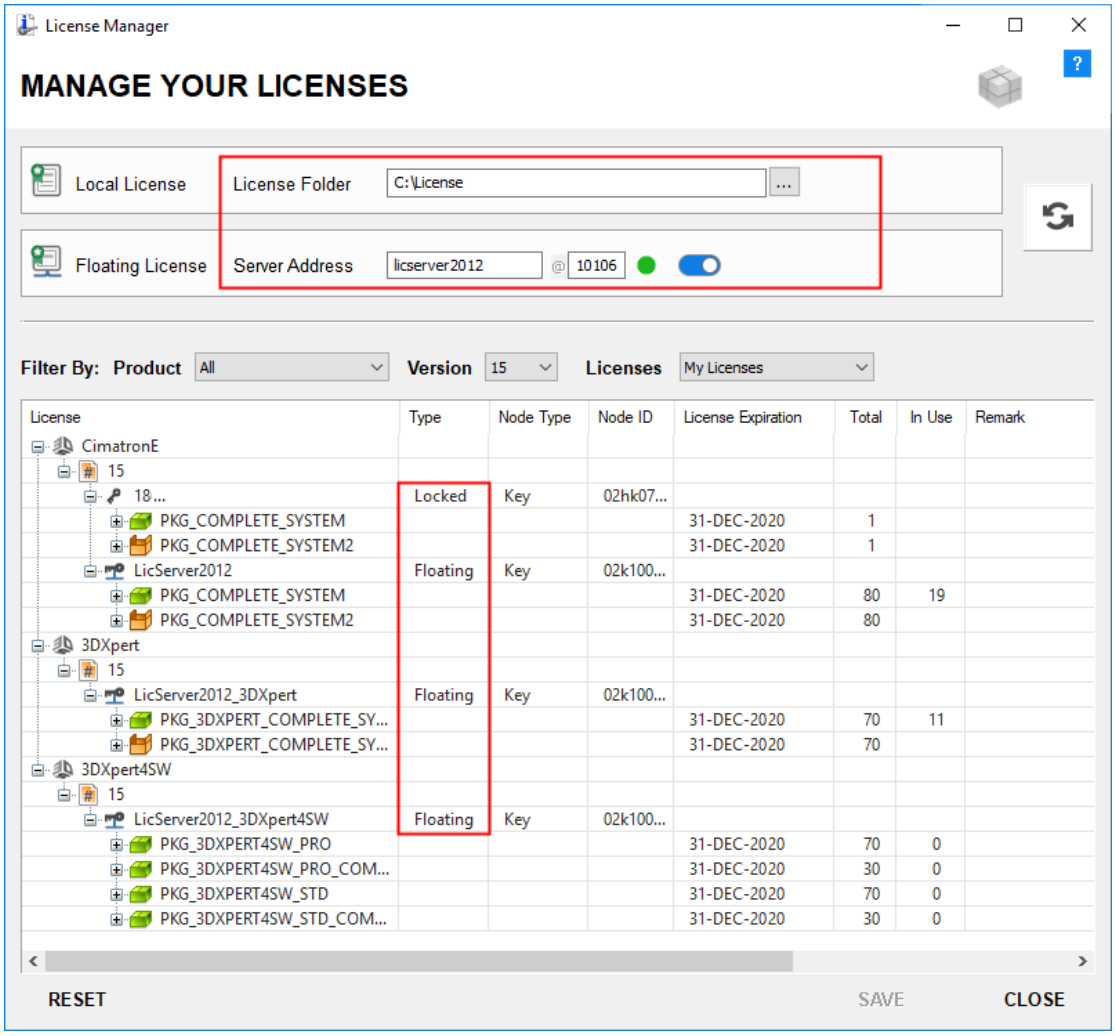
3. Press the **Save** button.
4. Press **Close** to close the **License Manager** dialog.

Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

Mixed Mode License

A Node-Locked and Floating license can be used together; this is called **Mixed Mode**.

The example below shows installed 3D Systems software, from the Client computer:



For an explanation of this dialog, see the **License Manager Dialog Options** and **License Manager Dialog Buttons**, on pages 4 and 6 respectively.

Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

Package Manager – Client Side

Once the license is defined, you are ready to work. 3D Systems requires the setting of a Base Package in order to work. This is done via the **Package Manager**.

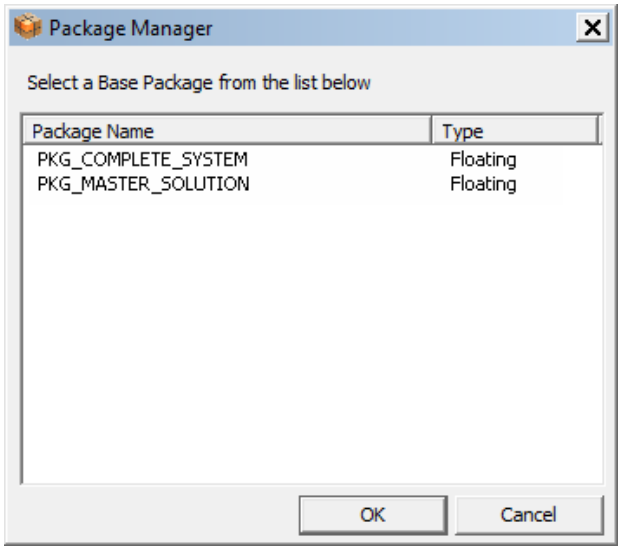
See **Licensing - Client Side** (page 1) for the procedure for acquiring and setting up the license.

Any valid license must contain at least one base package. Select a base package from the list of available base packages displayed in the **Package Manager** dialog.

If there is only one Base Package available in all the valid licenses, it is automatically selected and the Package Manager dialog is not displayed. However, if there is more than one Base Package available for you, the Package Manager is displayed listing the available Packages and you are required to select one.

Once you have selected a Base Package, it is automatically loaded the next time you run the product, unless all the available licenses of this package are already grabbed by other users. In this case, the system will require you to select a different Base Package, if one is available (if no Base Package is available, the Package Manager dialog is displayed empty).

The Package Manager dialog is displayed:



To select the required base package:

1. Invoke the **Package Manager** tool. The **Package Manager** dialog is displayed.

   To invoke the Package Manager, click the Package Manager button in the License Manager dialog.
2. Select the required base package and press **OK** to close this dialog.

Licensing – Server Side

The **License Server** runs the **License Service** (**CimLmService**) which manages client requests for licensing services from the floating license.

Before installing a new version of the License Server, the previous version should be uninstalled.

License Service (CimLmService)

The **License Service (CimLmService)** manages client requests for licensing services from the floating license. The **License Service** runs on the **License Server**.

The License Server is installed in the following folder and will be automatically started after installation: **<Program Default>\3D Systems\License Server**.

To check if the License Server is installed and running, use the License Server Monitor (see page 12). Use the License Server Monitor to select the license file. The usage of only one floating license is supported. If multiple licenses are found, the first one is used.

While the License Server is running, a log file is created in the same location as the CimLmService, under the "Log" folder.

A **TCP/IP** port number (number **10106**) is the default port that is used to communicate between the floating license server and the clients (see **Licensing Troubleshooting** on page 28). The server and the clients must be configured to the same port. This means that if you change this port number in the floating license server (via the **License Server Monitor**, see page 12), you also need to change the port number on the client side (via the **License Manager** dialog, see page 3), and vice versa.

To change the port number in the License Server Monitor, you need to stop the service, change the port and restart the service.

Note: The server and the clients must be configured to the same port!!!

License Server Monitor

The License Server Monitor controls the License Server and enables the System Administrator to control the licensing for 3D Systems products at a user site. The License Server Monitor is installed into the same location as the CimLmService.

Using the License Server Monitor, the Administrator can:

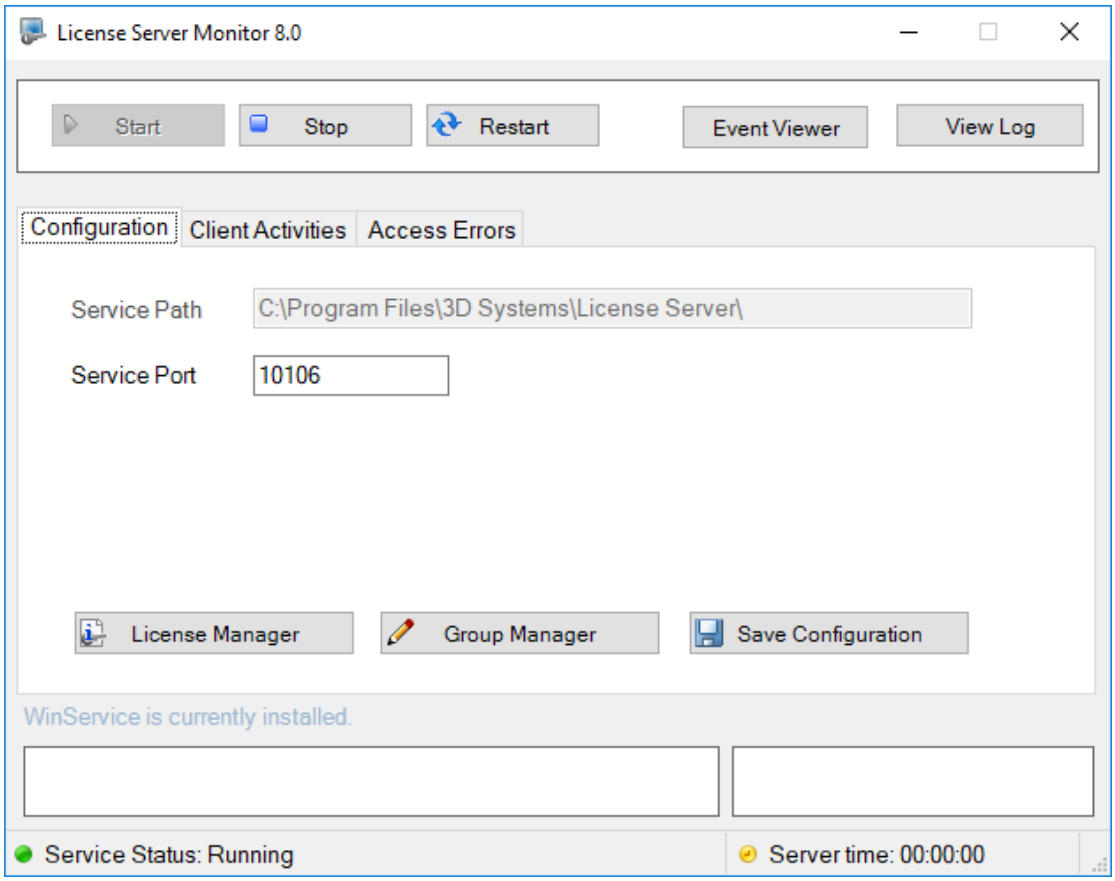
- activate a license
- start/stop the service
- view the recent activities of all the connected clients
- check for any access errors.

Any change to the settings in the **Configuration** tab (see page 13), requires you to stop the service before the change and then to restart it (using the Start and Stop buttons).

To configure and start the service, use the tabs of the License Server Monitor dialog, shown below: **Configuration** tab, **Client Activities** tab and **Access Errors** tab.

Configuration tab

The **Configuration** tab of the **License Server Monitor** dialog is where the license is defined.



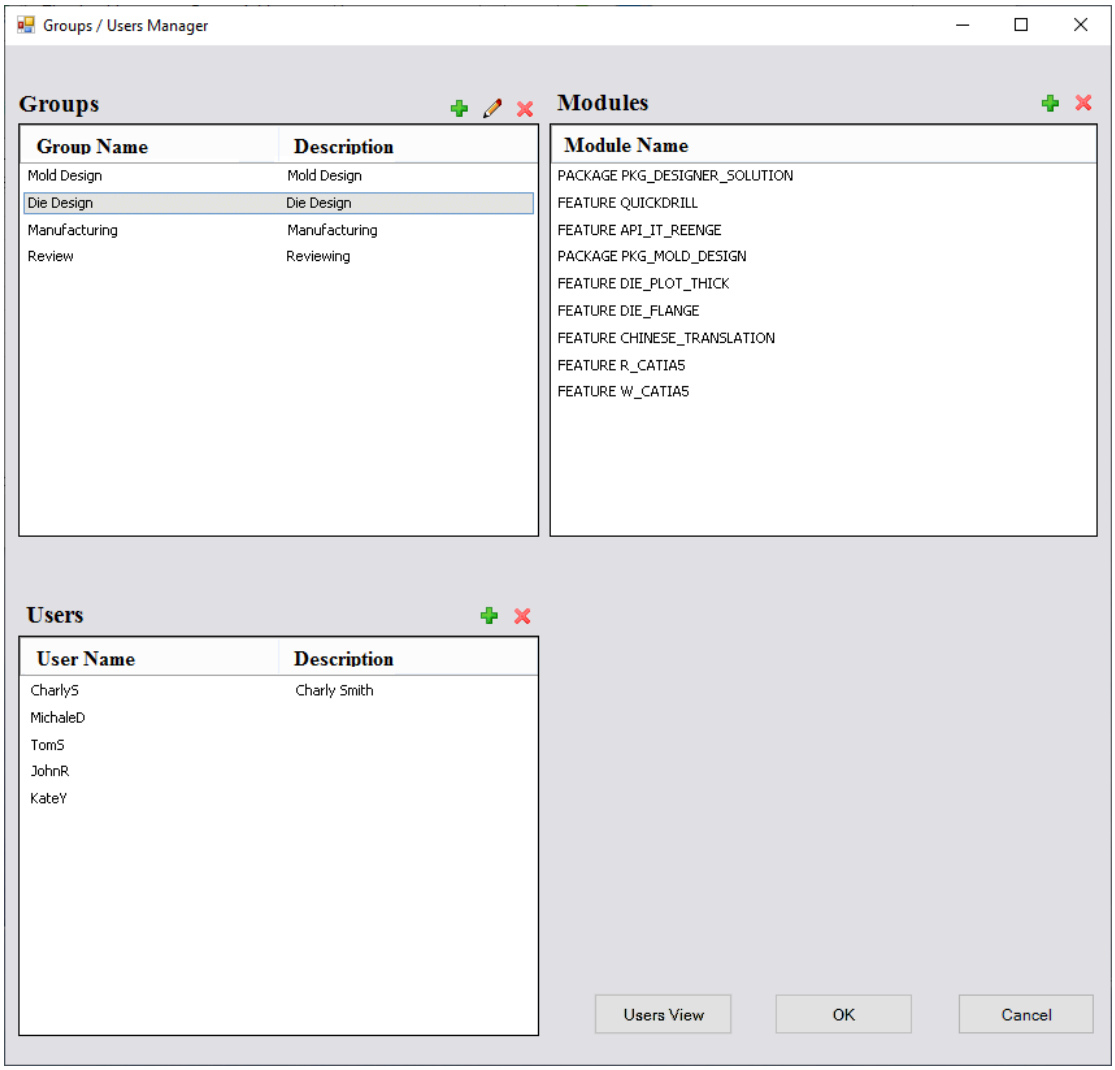
Start, Stop, Restart	Start, stop and reload a license service.
Service Port	Enter the service port details. **Note:** The server and the clients must be configured to the same port!!!
License Path	Browse to the location of the floating license. **Note:** You can browse to only one floating license.
Event Viewer	Shortcut to the event viewer of the operating system.
View Log	Displays the service log file.
License Manager	View the contents of the floating license. This is displayed in the License Manager – Server Side dialog. (This is a version of the License Manager dialog that is invoked from the License Server Monitor).
Group Manager	View the **Groups/Users Manager** dialog. Configure which users have access to which packages or modules.
Save Configuration	Save the current settings.

Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

Group Manager

In a floating license environment, the Group Manager utility enables a System Administrator to configure which packages or modules are available to which users. This prevents users accidentally grabbing modules they do not need, depriving them from others who must have them.

The **Groups/Users Manager** dialog is displayed. This dialog is used to define the groups of users and the packages / modules available to those groups.



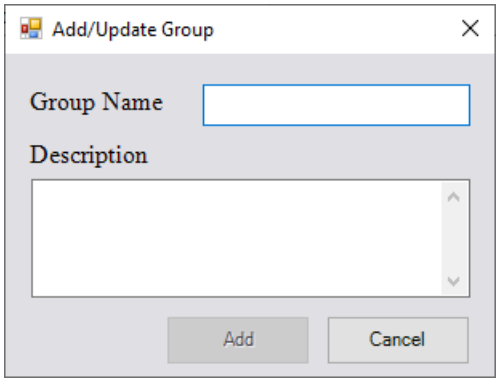
For each pane in the dialog, Add ( ), Edit ( ) or Delete ( ) items.

When assigning groups, the following principles apply:

- Each group has a unique descriptive name.
- For each group, the Administrator is able to define the list of packages and modules available to that group (out of the overall pool available in the license).
- Each group has a list of users assigned to it. A user may belong to one group only (or conflicts may arise).
- Users are identified by their Windows-login name (so access management is by user, not by PC).
- When a user that belongs to a given group opens the 3D Systems product (or the Package-Manager or License-Manager tools), the user only "sees" the packages and modules allowed for his group (as far as the License Server is concerned – there may be other node-locked modules on his PC).
- The limitations do not apply to package/module quantities. In other words, user groups are not assigned "quotas".
- Users who do not belong to any group see the entire license content.

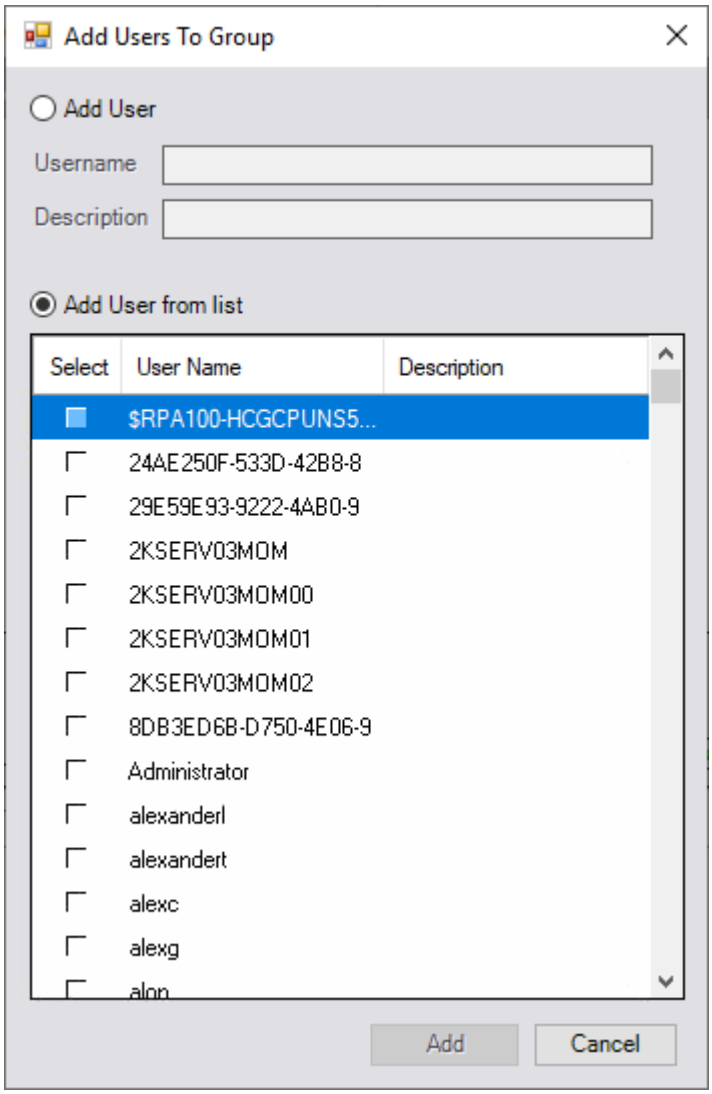
Groups Pane

The **Groups** pane enables the System Administrator to define application groups.
The following dialog is displayed when adding or editing a group:



Users Pane

The **Users** pane enables the System Administrator to assign users to groups.
The following dialog is displayed when adding or editing a user:

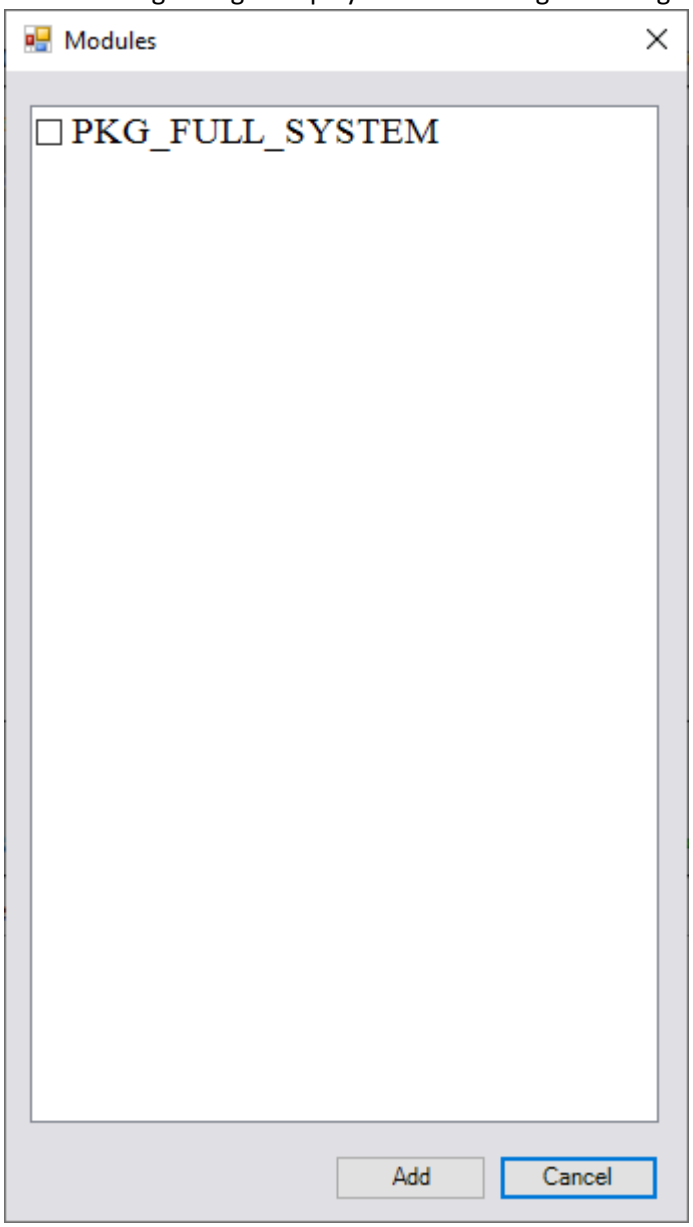


A user may belong to one group only.
Users are identified by their Windows-login name (so access management is by user, not by PC). A list of login names is displayed from the company domain, which enables the Administrator to select and add them to the group. The initials of a user name can be typed and the selection will jump to the matching initials. The Administrator can also type-in user names (for cases when there is no domain defined).
When trying to add a user who is already assigned to another group, an appropriate warning message is displayed.

Modules Pane

The **Modules** pane enables the System Administrator to assign modules and packages to groups.

The following dialog is displayed when adding or editing modules:



For each group, the Administrator can add and remove items (packages, modules) from the existing content of the license on the License Server.

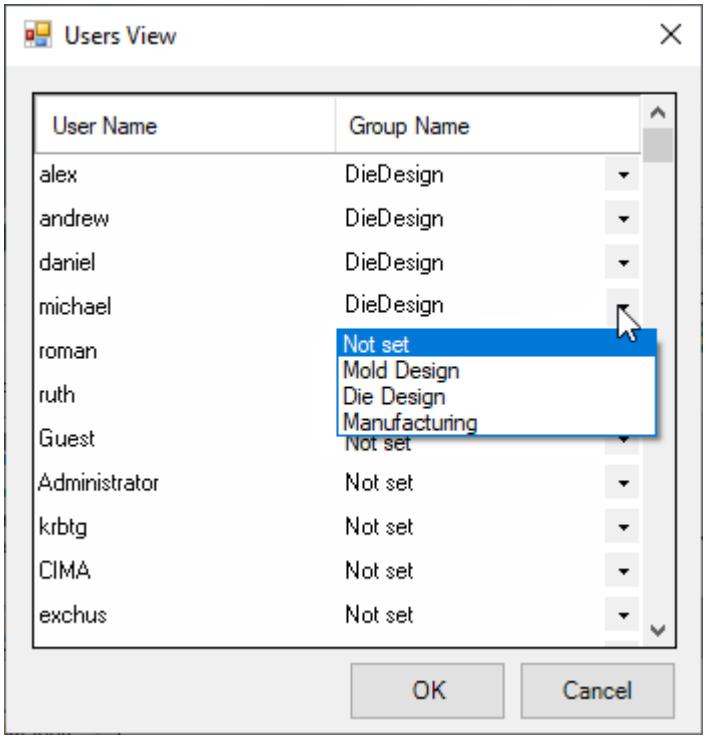
There are no restrictions regarding what goes in a group. A base package is NOT a must (e.g., a group may contain “CATIA5” only). Such groups are useful in case the user has a node-locked base package.

When trying to delete a group or groups which have users assigned to them, an appropriate warning message is displayed.

Users View button

The **Users View** button enables the System Administrator to view all the users defined in the Group Manager and their assigned group. In the case of a domain, other users (those yet assigned a group) are also displayed.

The following dialog is displayed when adding or editing modules:



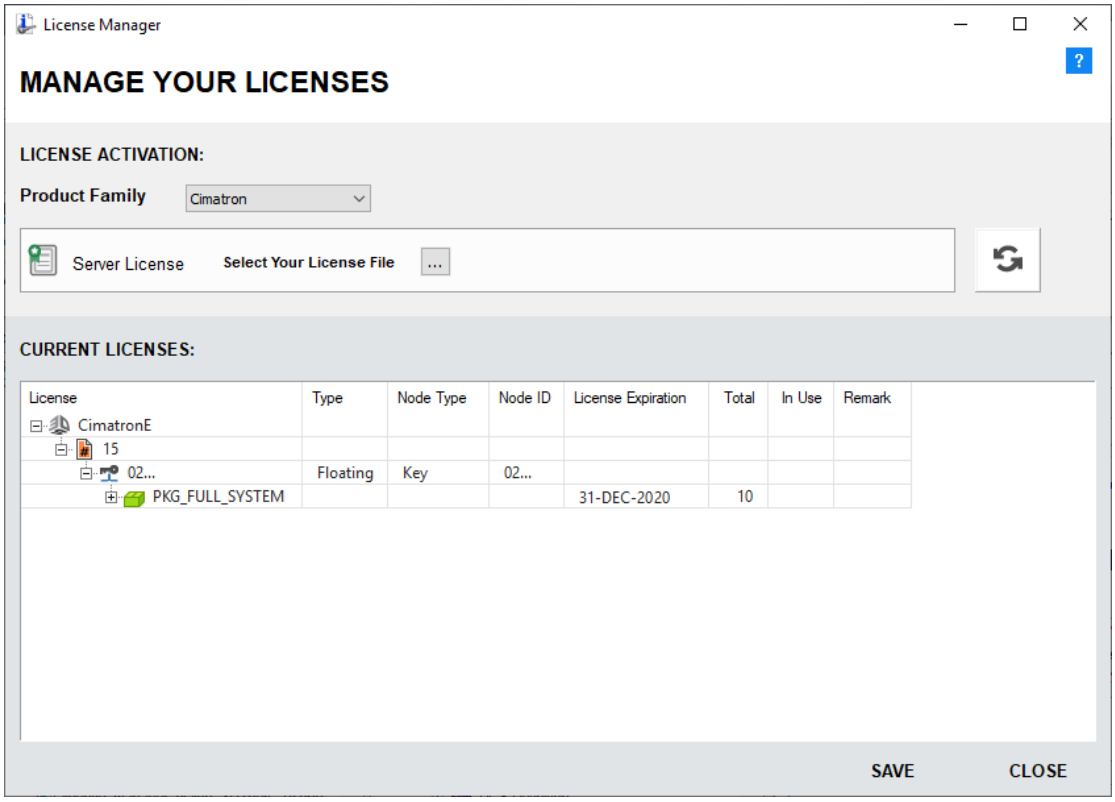
Using this dialog, the Administrator can assign or change an assigned group for users. For each user, a dropdown list of existing groups is displayed; the Administrator can select the appropriate group and the user is assigned to that group. If the user was a member of a different group before, the user will be removed from the previous group (since a user may belong to one group only).

Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

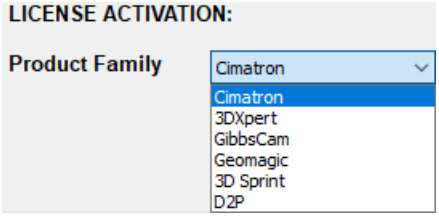
License Manager – Server Side

The **License Manager** defines the path to the local license file (received from your 3D Systems Provider or Reseller), so that your 3D Systems product can verify the license, and also displays license information per product and version number.

The **License Manager** dialog (invoked from the **License Server Monitor**, see page 12) is displayed showing installed 3D Systems software, from the Client computer:



From the **Product Family** dropdown list, select the product whose License Manager dialog is to be displayed.



When selecting a Product Family, the relevant activation type control button is displayed. For example, for Cimatron and 3DXpert, this is a **Browse** button to select the license file; for Geomagic, an **Activation** button is displayed.

For products that support license deactivation and update, relevant buttons are displayed.

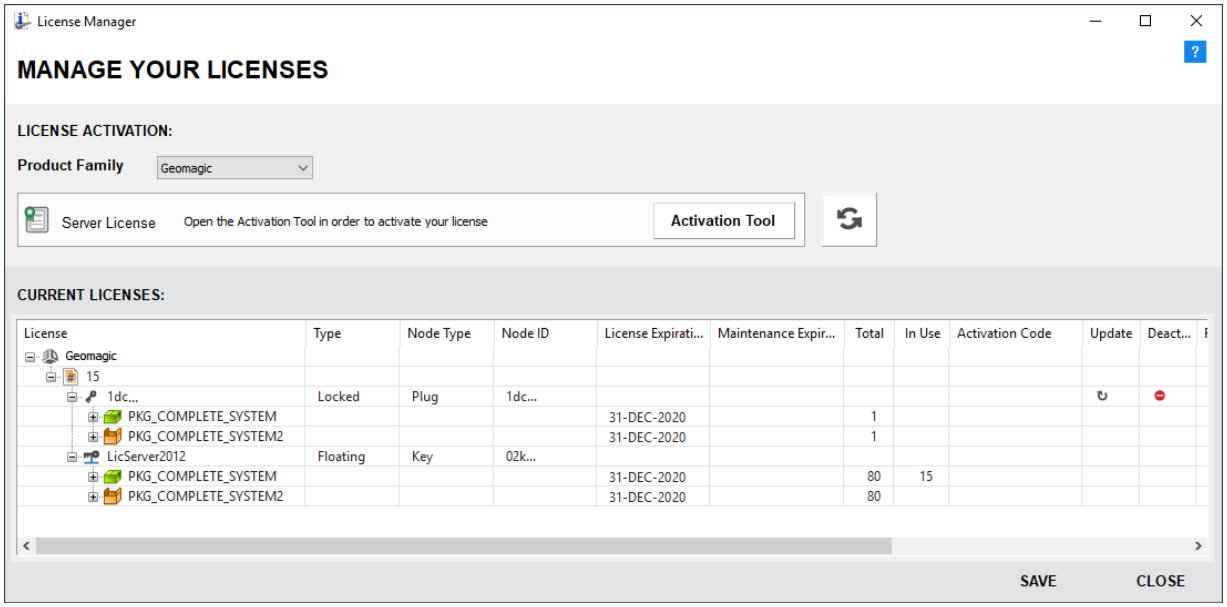
For an explanation of this dialog, see **License Manager – Client Side** on page 3.

License Manager - Server Side: Activate License

The License Manager is a tool to manage your license. You can either view your license, activate your local license or connect to your server license (setting its name or IP).

When selecting a Product Family, the relevant activation type control button is displayed. For example, for Cimatron and 3DXpert, this is a **Browse** button to select the license file; for Geomagic, an **Activation** button is displayed.

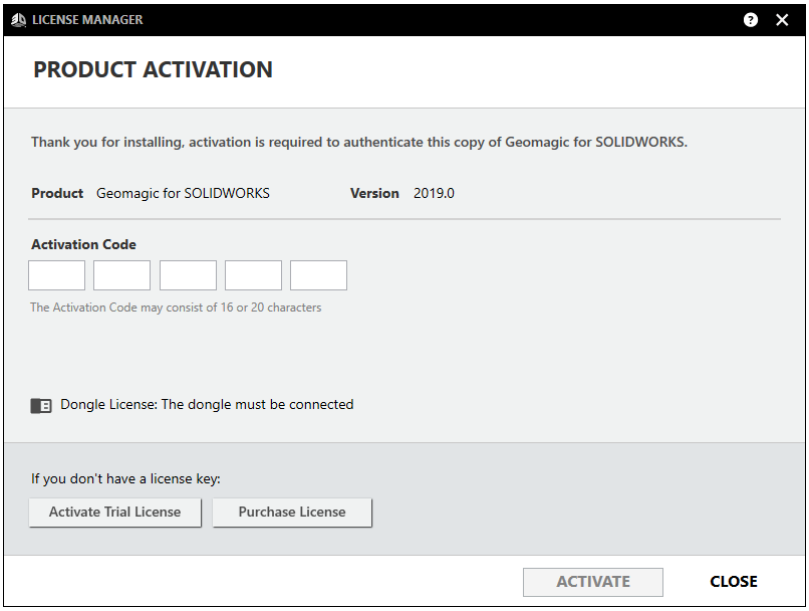
The follow activation example is for Geomagic. To obtain a local license you must enter the Activation Tool.



To set up the Local License :

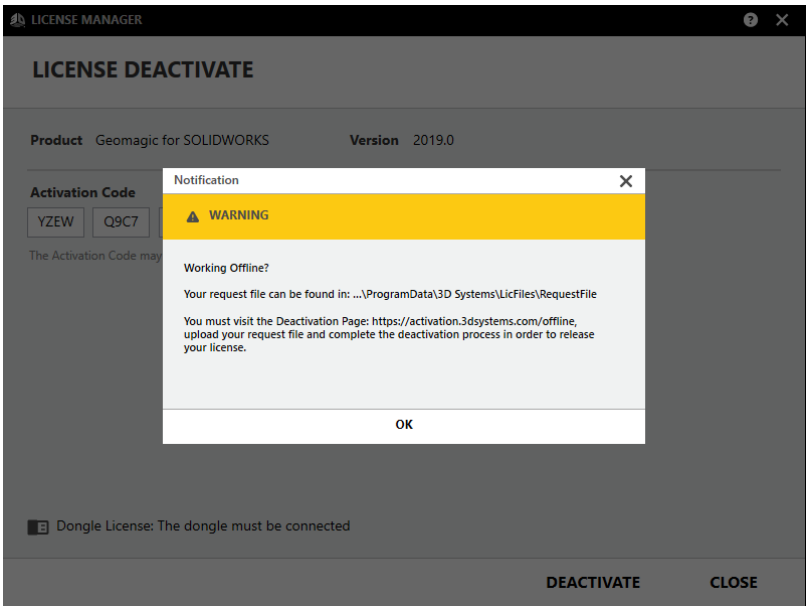
1. Press the **Activation Tool** button.

   The Product Activation dialog is displayed, where you enter your activation code.



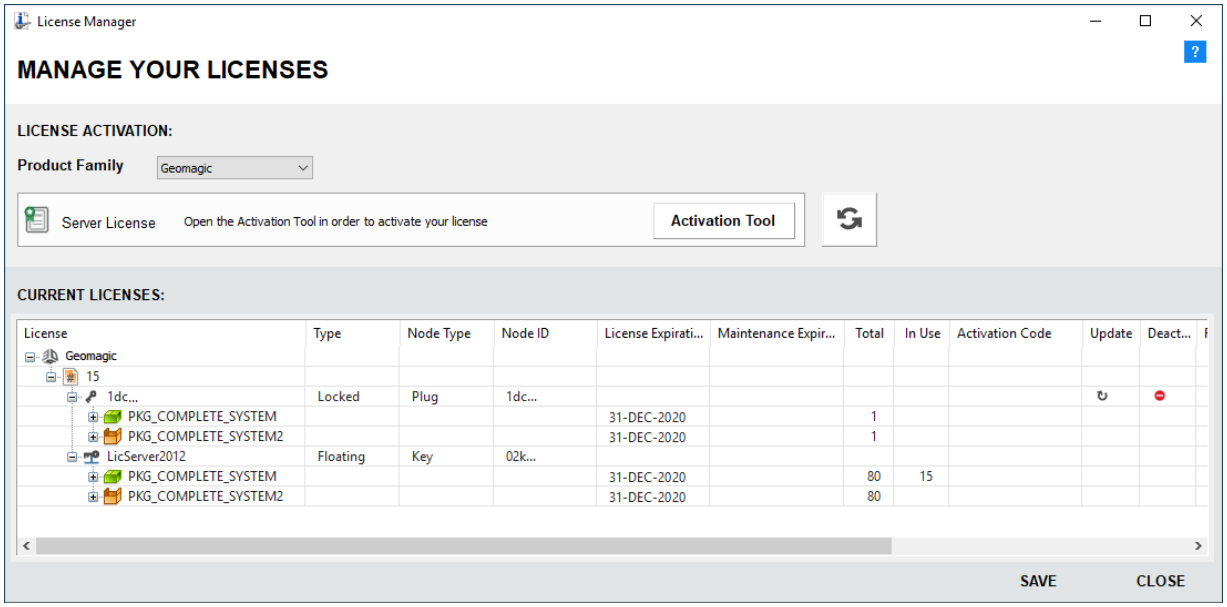
2. Press the **Activate** button to activate your license.

3. If you are offline, the following message is displayed with instructions how to activate from the 3D Systems web page.



License Manager – Server Side: Deactivate License

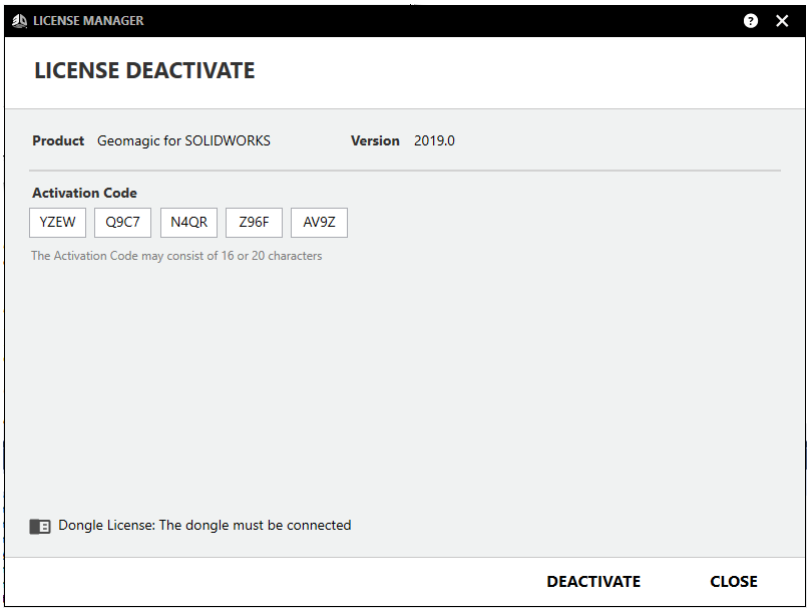
To deactivate a local license, click the **Deactivate** button in the **Deactivate** column of the license.



To deactivate the Local License :

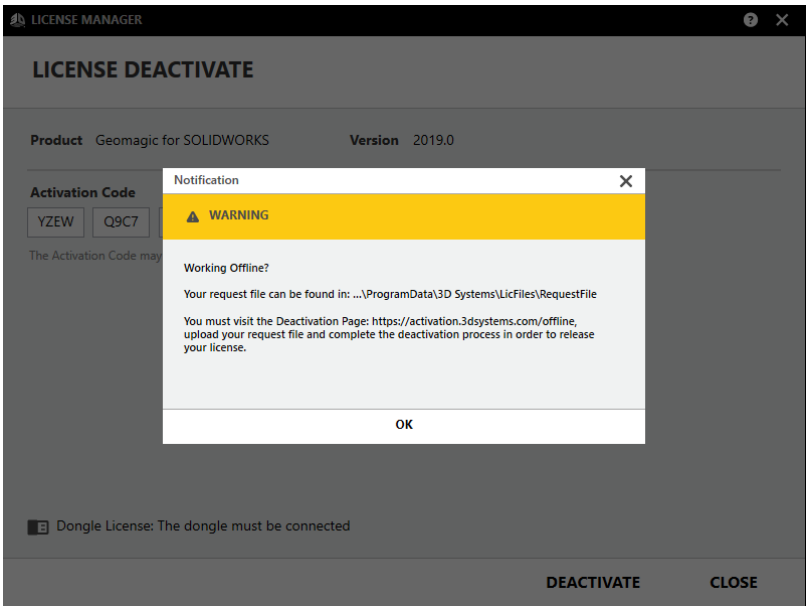
1. Click the **Deactivate** button in the **Deactivate** column of the license.

   The License Deactivate dialog is displayed.



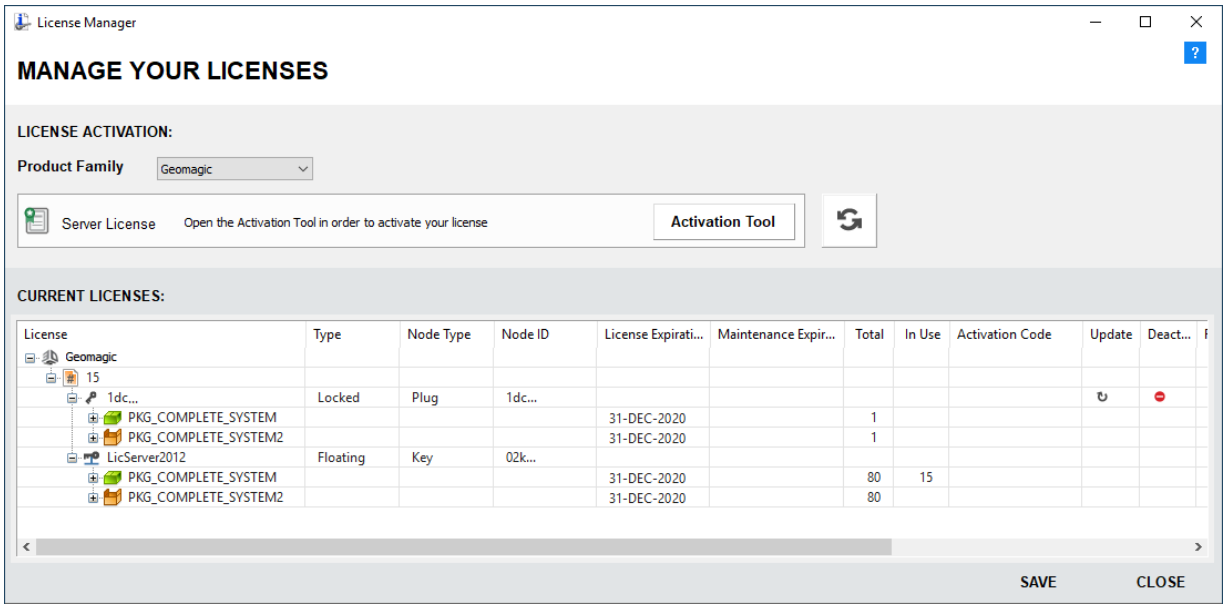
2. Press the **Deactivate** button to deactivate your license.

3. If you are offline, the following message is displayed with instructions how to deactivate from the 3D Systems web page.



License Manager – Server Side: Update License

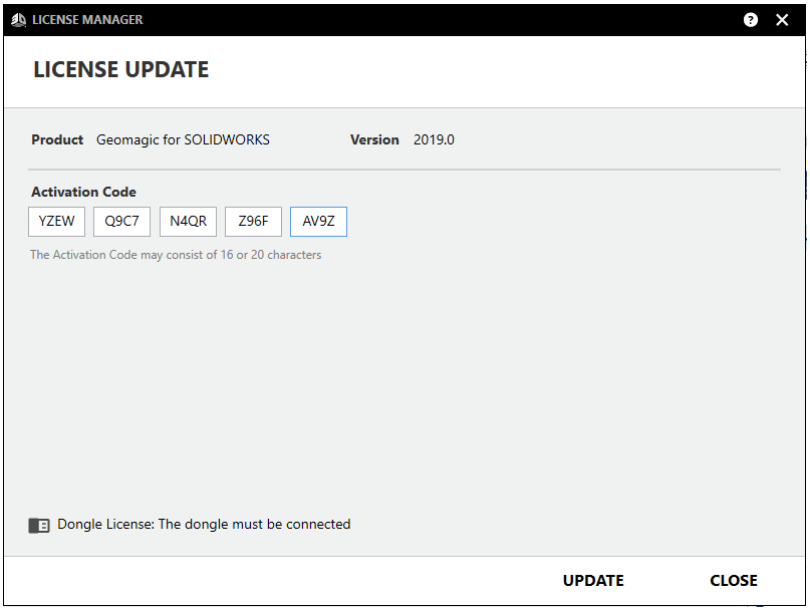
To update a local license, click the **Update** button ↻ in the **Update** column of the license.



To update the Local License :

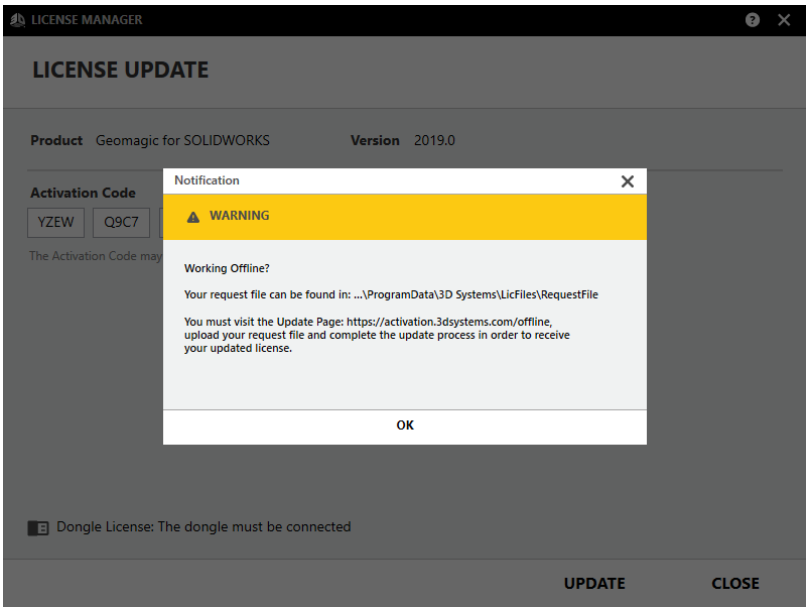
1. Click the **Update** button ↻ in the **Update** column of the license.

   The License Update dialog is displayed.



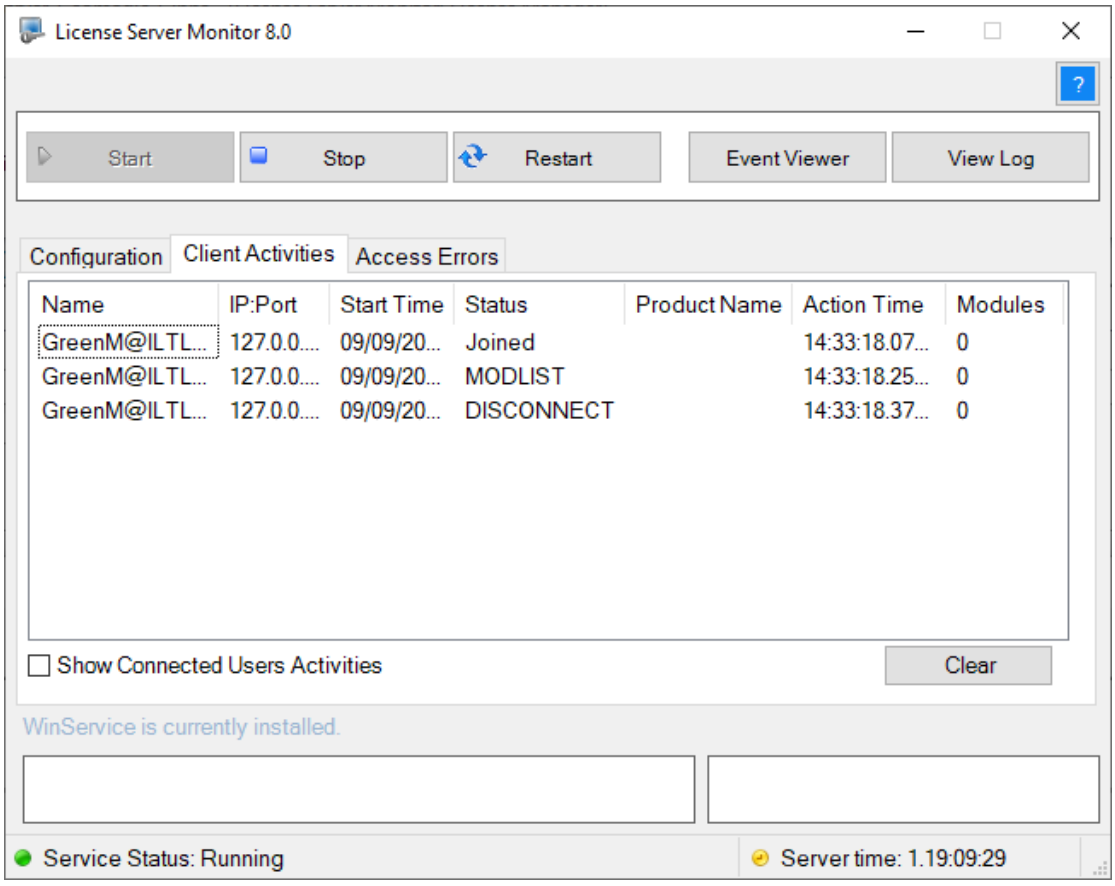
2. Press the **Update** button to update your license.

3. If you are offline, the following message is displayed with instructions how to update from the 3D Systems web page.



Client Activities tab

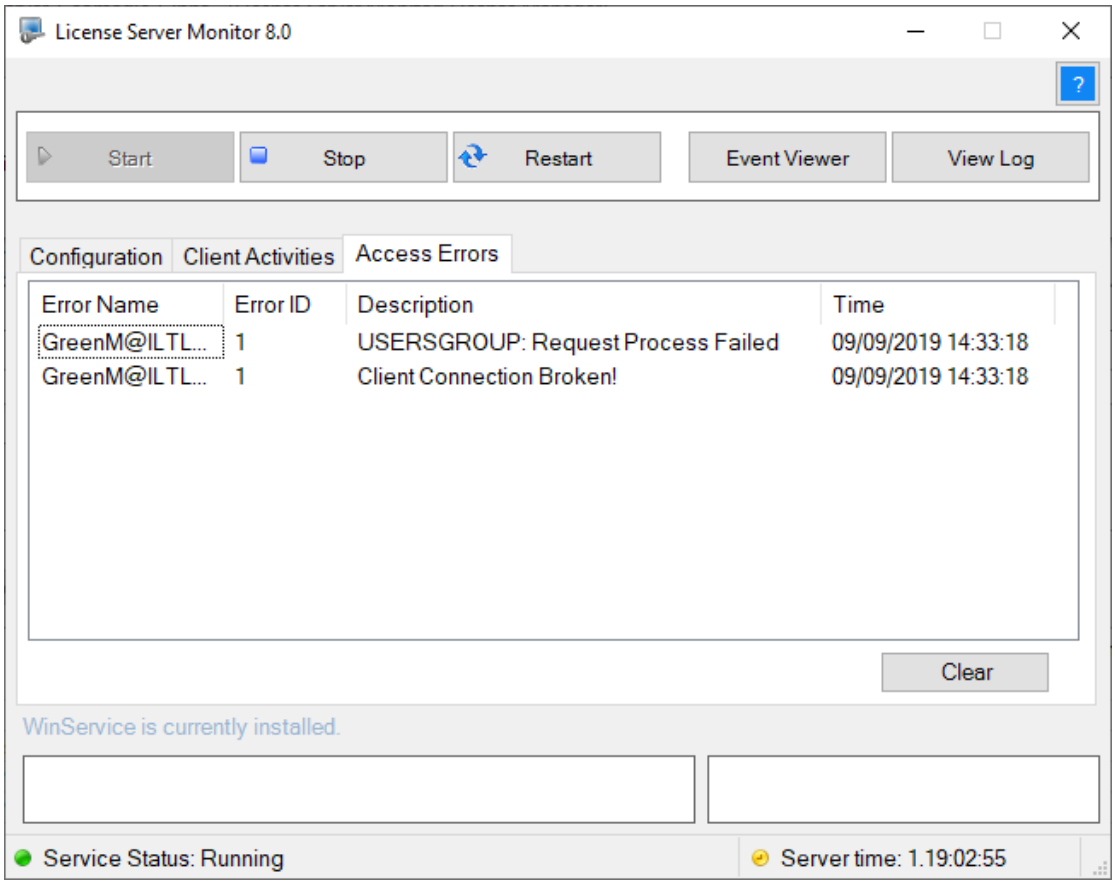
The **Client Activities** tab of the **License Server Monitor** dialog lists the recent activities of all the connected clients.



Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

Access Errors tab

The **Access Errors** tab of the **License Server Monitor** dialog lists the connection or access errors.



Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

Licensing Troubleshooting

This troubleshooting section provides tips that can help you resolve some of the common problems associated with the **License Manager**.

Before continuing with this troubleshooting data, verify that you have read and completed the Licensing stages.

Troubleshooting

1. If there is a conflict with the default TCP/IP port number (**10106**), try using another number (refer to the System Administrator for assistance).
2. If the client cannot connect to the floating license server, check that the server and client are connected to the same port.

   The product supports floating licensing via a **TCP/IP** port number. This port number (**10106**) is the default port that is used to communicate between the floating license **server** and the **clients**. The server and the clients must be configured to the same port. This means that if you change this port number in the floating license **server** (via the **License Server Monitor**, see page 12), you also need to change the port number on the **client** side (via the **License Manager** dialog, see page 3), and vice versa.

   Note: The server and the clients must be configured to the same port!!!

3. If the 3D Systems product is installed on the license server computer and a floating license is used, it should be connected to the server license file in the same way as all other clients ("**<Server IP >@<Server Port>**").
4. If the license cannot be found while the product is loading, perform the following:
   - Check that you entered the correct location of the license file.
   - If you are on a client computer (floating license), check that you are communicating with the server over the network.
   - Check that the server license manager has started.
5. If you encounter a problem with the **License Server Monitor** (see page 12), validate that you are an Administrator.
6. Some internet image/sound recorders (e.g. Freecorder from Applian Technologies Inc.) listen to all open ports to intercept transmissions and may cause socket creation problems.

Note: In the case of a virtual machine, connect the HASP to the server PC and run the **Get Node IDs** utility (see page 2); if it is not recognized (as some Virtual Software does not support it) get a license based on the computer's machine key.

Note: For additional information on licensing, contact your 3D Systems Provider or Reseller.

License Server Installation

The **License Server** runs the **License Service (CimLmService)** which manages client requests for licensing services from the floating license.

Before installing a new version of the **License Server**, the previous version should be uninstalled.

The License Server is installed in the following folder and will be automatically started after installation: **<Program Default>\3D Systems\License Server**.

The License Server Installation installs the following components:

- **.NET Framework 4.6.2** (use the recommended installation defaults).
- **Runtimes**:
  - C++ Redistributable 2017 x64
  - VC2017x64
- **License Server** with built-in monitor.

The hardware / software requirements for the License Server are detailed below:

Hardware Requirements

Processor: **Minimum Requirements:** Intel Core™ 2 Duo
Memory: 8 GB RAM
Disk Space: 2 GB

Note: Processors with more Cores/Threads will be able to more efficiently handle multiple users connected to the license server.

Software Requirements

The software requirements for this product are detailed below.

Recommended:

- Windows Server 2008, 2012, 2016 or 2019.
- Windows 10, Professional/Ultimate Edition.

Not Supported:

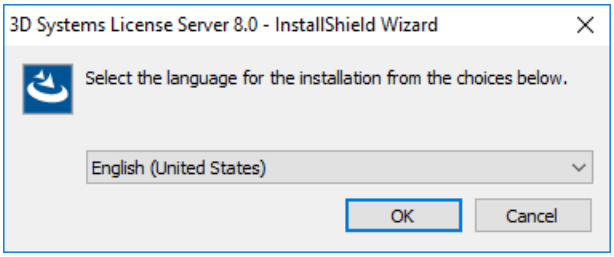
- Windows 7, 8 and 8.1 are no longer supported, however, the system will still run on them.
- Windows versions older than Windows 7 are not supported.

- .NET Framework 4.6.2 is an installation prerequisite.
- If more than 5 users are connected to the license server, it is recommended that you work with one of the Windows Server operating systems mentioned above, and not with the desktop operating systems.

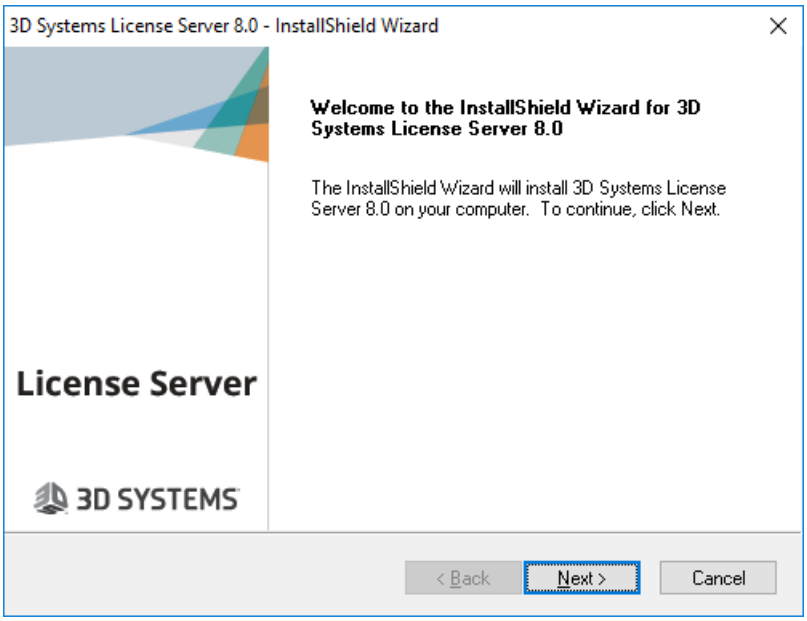
Installation Procedure

When installing the software product, prepare the computer for installation as follows:

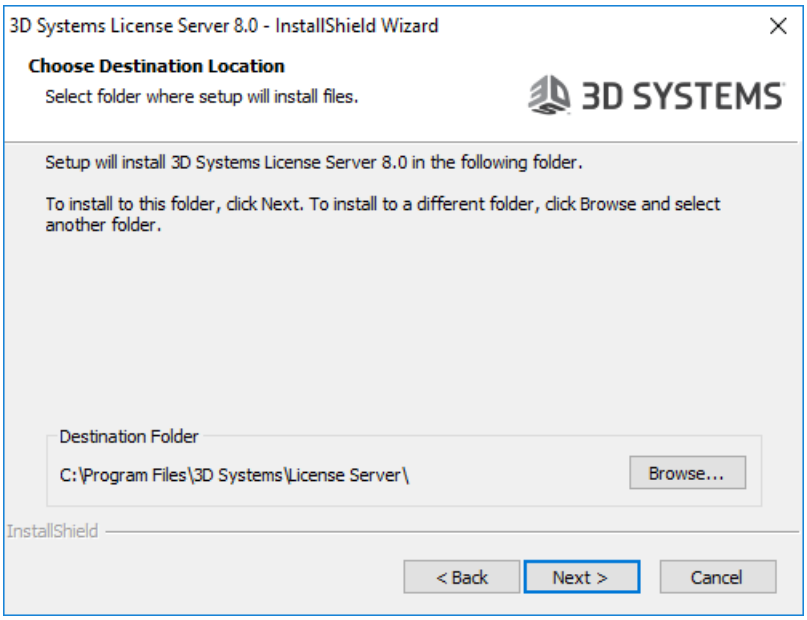
1. Close all other applications.
2. The **Language Selection** dialog is displayed. Select the required language from the dropdown list. All installation dialogs and the product dialogs will be displayed in the selected language.



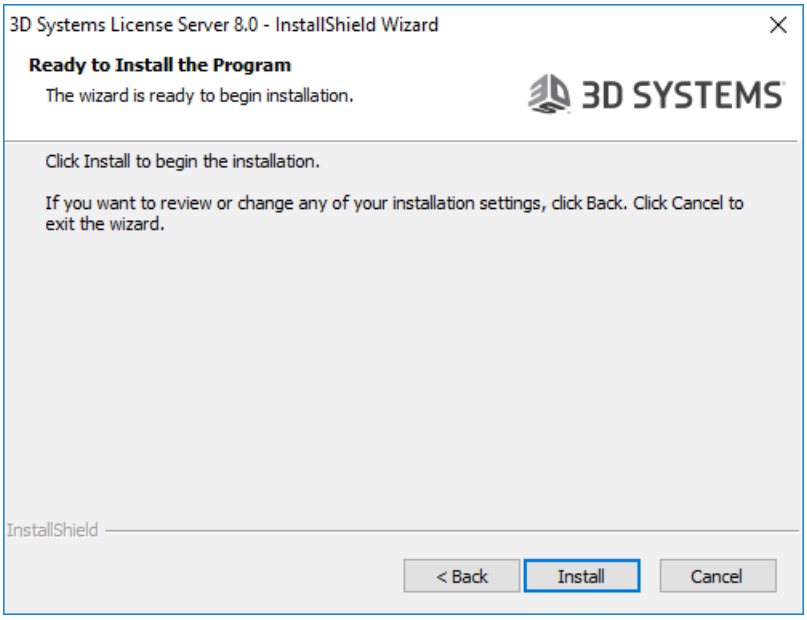
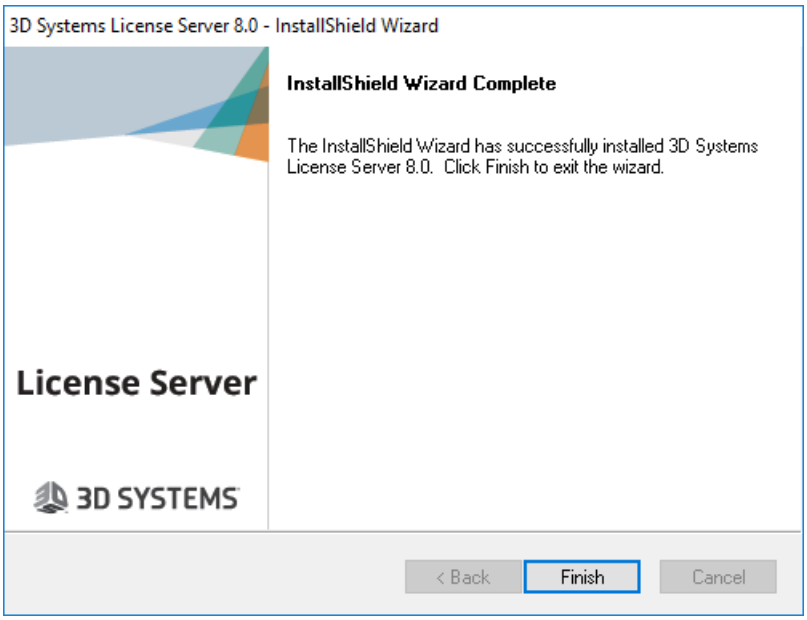
3. The **License Server Setup Wizard** dialog is displayed. Click **Next**.



4. The **Destination Folder** dialog is displayed. Either accept the default location or browse to select another location. Click **Next**.



5. The **Ready to Install Program** dialog is displayed. Click **Install**.



6. The installation commences. When the installation is complete, click **Finish** to exit the installation procedure.