Network Licensing

User Guide

eCADSTAR™

BEYOND ENGINEERING

Copyright Notice

DISCLAIMER

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Chapter 1 – An Overview of Network Licensing

What It Consists of

The Software: This is made available from the Zuken Global Support site https://support.zuken.com and can be downloaded from within the eCADSTAR Product section.

Software Key: The Network Licensing software is protected by a Software Key (dongle), which is obtained from your distributor.

License File: This is also obtained from your distributor. It provides the information required to license the use of the products in your system. The name of this file is **features.txt**

System Requirements for Network Licensing

Operating System:

All variants of Windows 10, and Windows 11 are supported on both Client and Server machines.

No other operating systems are supported.

Network Systems:

Microsoft network running TCP/IP is supported.

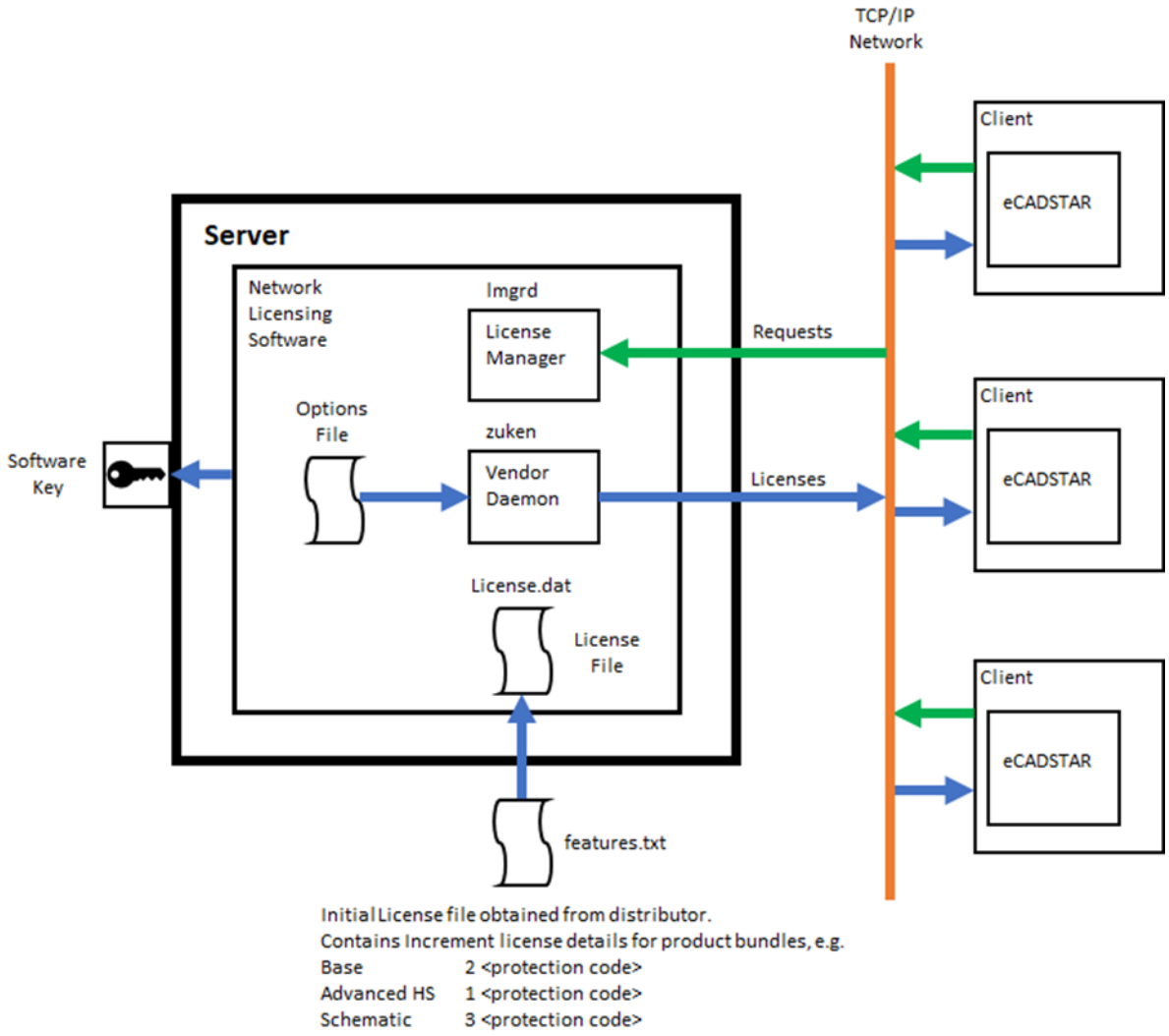
No other networks are supported.

Overview of the Network Licensing System

A Network Licensing system enables you to authorise the use of specified software features by the clients in a network, without using Software Keys. The advantage of this system over the Software Key system is that the Licenses are 'floating', and a particular application is not locked to a particular client.

The network Licensing system obtains its authorisations from a License file which is provided by the distributor. The License file holds information about which products are licensed to be used in the network.

The basic principles of the system are illustrated by the block diagram below:



Note: Daemons are processes that run continuously in the background, once started.

The **License Manager Daemon** handles the initial contact with the Client - this will be when the Client starts up a feature that requires a license (e.g. eCADSTAR PCB Editor).

The system now passes this request to the **Vendor Daemon** which checks whether there is an appropriate license for the application required by the Client. The **License File** tells the Vendor daemon which products are authorised and the number of Licenses available. If there is a license available, the Vendor daemon authorises the product, communicating through the network.

Basically, the system is 'first come first served'. In the example shown on the diagram, the first Client to start up eCADSTAR PCB Editor will receive a license to run eCADSTAR Advanced HS. The License file shows that there is 1 Advanced HS License available, so the next Client to start eCADSTAR will only receive a license to run eCADSTAR Base PCB Editor.

By setting up an **Options File**, you can change this `first come first served' operation to suit your requirements (e.g. ensuring a particular client always runs eCADSTAR Advanced HS). Please see **Chapter 4** for details of configuring the Options file.

Daemons

A daemon is a process which continues to run, even after the user has logged out.

FLEXlm licensing uses two types of daemon to administer the issuing of Licenses:

- The License Manager daemon (**lmgrd**).
- The Vendor daemon, (the Daemon for Zuken products is **zuken**).

The Zuken daemon is started automatically when you start the license daemon, and both run on one or more server nodes. The DAEMON entry in the License file (**features.txt**) determines the location of the Zuken daemon's executable code.

When a client starts to use a feature, the client's system communicates with the license daemon and asks for one or more Licenses to run the feature. If there are Licenses available, the feature can run. When all Licenses are currently in use the designer is informed and given the choice to wait for a license to become free. If the need for a license is urgent, another designer currently using the feature should be asked to finish.

It is important to monitor the number of times designers are not able to obtain a license and, if necessary, take steps to acquire additional Licenses. The DENIED message is added to the daemon log file whenever a license is denied. If designers are having to wait, productivity will be reduced.

The License File (license.dat)

Zuken supplies the initial version of the License file (**features.txt**) and provides subsequent updates as you need new Licenses. When setting up the licensing system this file is merged with the server details entered by the user to produce the License file (**license.dat**) required by the License Manager daemon. This is done by a tool provided by the **Network License Manager** (part of the Network Licensing software - see **Chapter 2. Installation**).

The License file tells the License Manager:

- the name of the Host machine and the number of the Host port (both of these parameters are entered by the Clients when they setup Network Licensing);
- the location of the Vendor daemon's executable code (i.e. **zuken.exe**), and the location of the user Options file if appropriate;

- the incremental features related to the authorized product bundles with the number of Licenses, the expiry date and the authorisation codes for each incremental feature.

There should be little need for you to edit the license.dat file, in fact there is some information you must not edit.

The License File (**features.txt**) will be sent from the Distributor via email.

The file with the email, should be saved to a file named **features.txt**.

The License file (**features.txt**) should be stored in the directory in which the FLEXlm files have been installed. For example:

C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing Server 2022.0

Chapter 2 – Installation

The Operations for Setting Up the Network Licensing System

To install and set-up the FLEXlm Network Licensing system you need to:

1. Install the Network Licensing Software on the server;
2. Optionally, install the Sentinel Software Key Driver;
3. Install the Software Key for the Network Licensing software into a spare **USB** port on the server;
4. Obtain your License file (i.e. **features.txt**) supplied from your Distributor and copy it onto your server. This is the file which authorises the use of eCADSTAR by the clients on your network;
5. Run the **Network License Manager** program to merge the features.txt and server details to create **license.dat** - the License file that controls the Network Licensing system. This program is run from an icon that is installed by the Network Licensing Software (this process is described by **Setting Up The License File** later in this chapter);
6. Start the Network Licensing daemon **lmgrd** by selecting the **Start Network Licensing** icon;
7. Install eCADSTAR on the client's nodes (see **What the Clients Need To Do** later).

The process should be carried out in this order - server first then clients.

Install the Network Licensing Software on the Server

Nominating A Server

You should select a node on the network that is suitable for running in Server mode. This means any other Windows machine that can share information with other nodes on the network.

The Installation Procedure

To install the eCADSTAR Network Licensing software, you need the installation executable available to download from the Zuken Global Support website.

Note: When installing under Windows you must be logged in with **System Administrator** rights.

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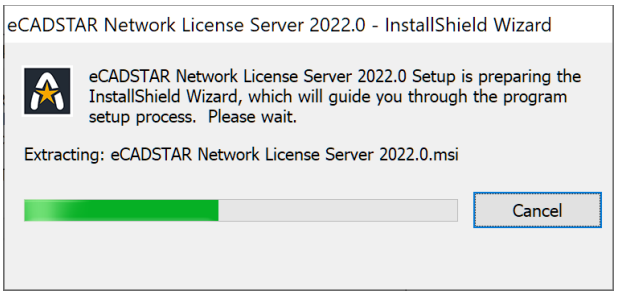
1. *Locate and download the Network License Server 2022.0 installer found on **Zuken Global Support website** in the **eCADSTAR** product section available within **Downloads**.*

2. *Once download has completed launch the Network License Server Installer by double clicking on the executable file.*

The InstallShield Wizard Extraction dialog is displayed.

The following progress message is displayed.



This informs you that the Software installation Wizard is being launched.

The installation process displays dialogs which tell you what it is about to do and prompts you to either continue with the **Next** button or to exit from the installation process with the **Cancel** button.

The first dialog is:

This welcomes you to the installation process.

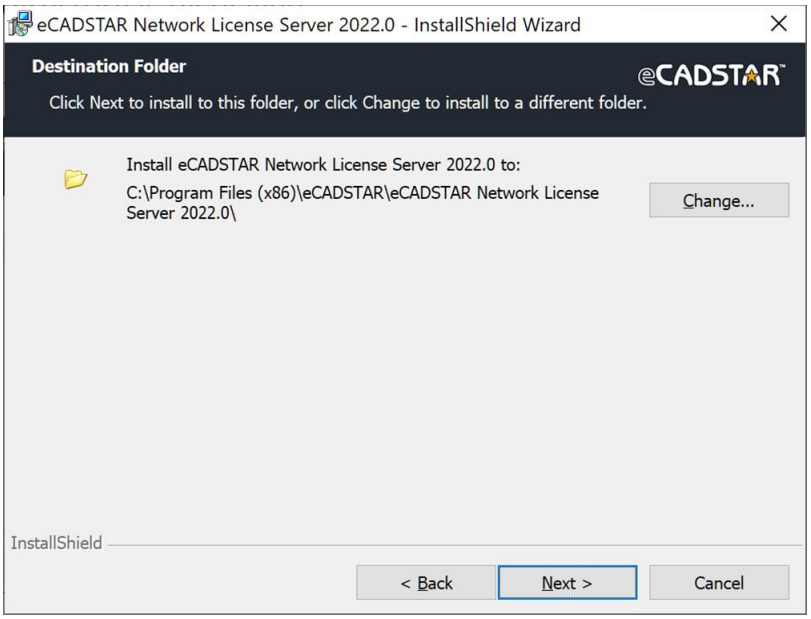
3. *Click on **Next***

The next screen displays the Software License Agreement. You should read it carefully before proceeding.

4. If you are satisfied with the terms, select the radio button **I accept the terms in the license agreement** and click **Next** to continue.

Specifying the Destination of The Installation

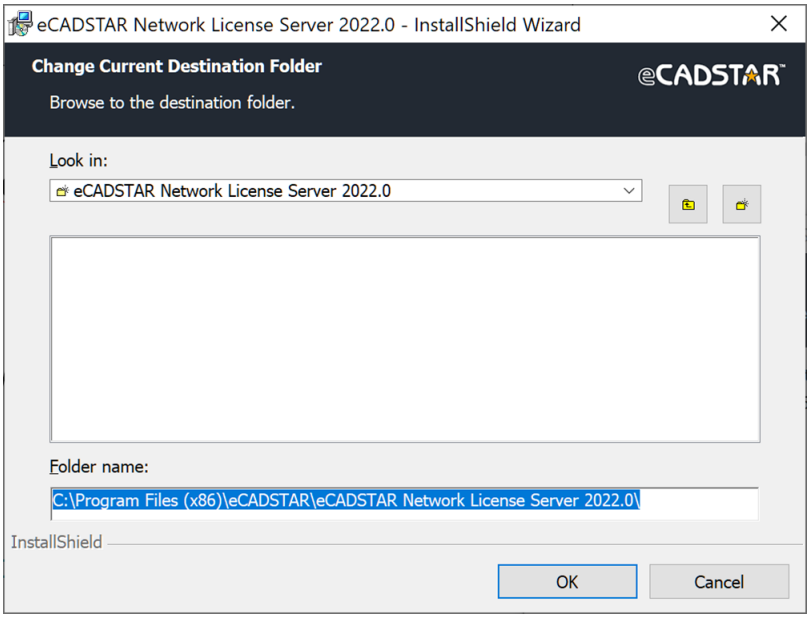
The next dialog enables you to specify which directory eCADSTAR Network License Server will be installed in. The default installation directory is displayed:



If you wish to change the destination of the installation from the default:

5. *Click on the **Change...** button*

A new dialog is displayed ready for you to select the directory you require ...



In the example above, it is set up to install the software in the **eCADSTAR\eCADSTAR Network License Server 2022.0** directory.

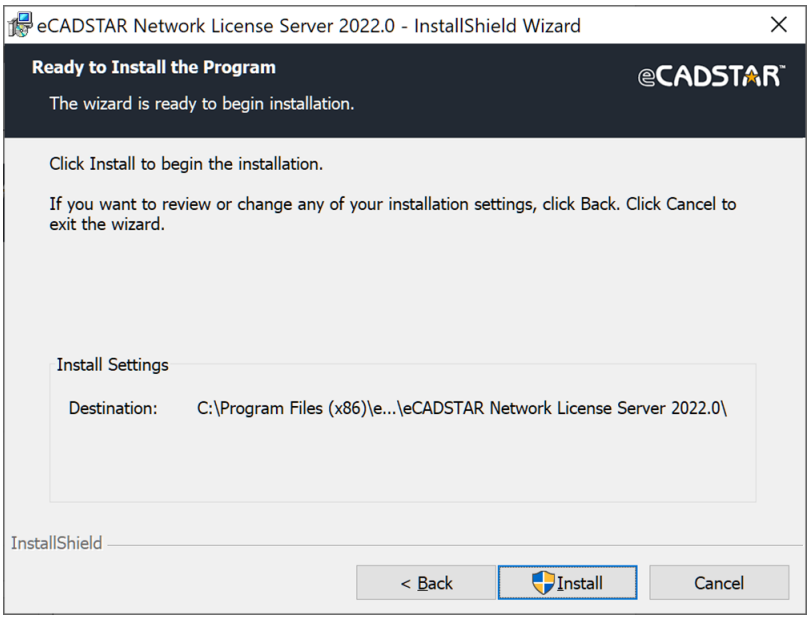
6. *Browse the folder tree or type in a directory path into the **Folder Name** edit control and click on **OK***

The Destination Folder dialog is displayed again. If you are happy with the directory in which the Network License Server is to be installed:

7. Click on **Next**

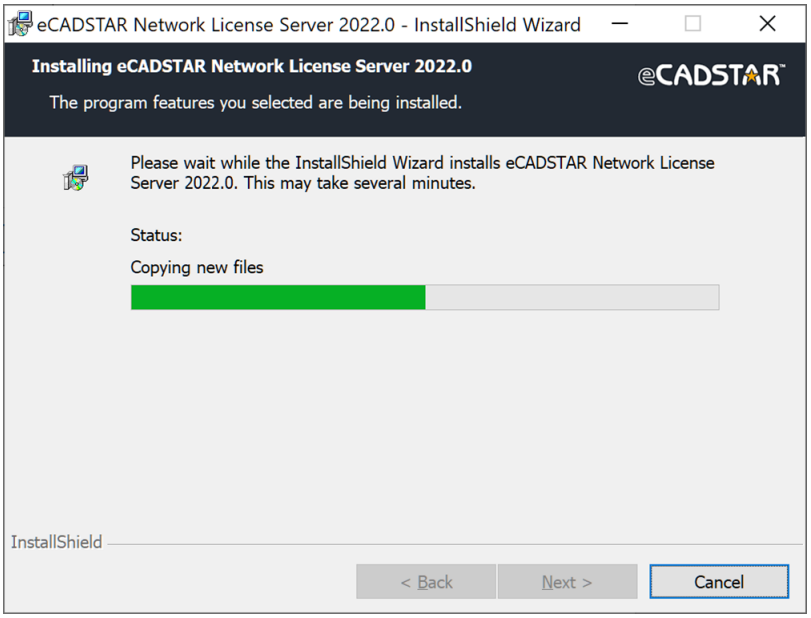
Installation of The Files

The next dialog gives a summary of the parameters you have set up so far.



8. *Check the summary. If you are happy for the installation to proceed: Press the **Install** button.*

The installation now commences. A dialog displays progress information.



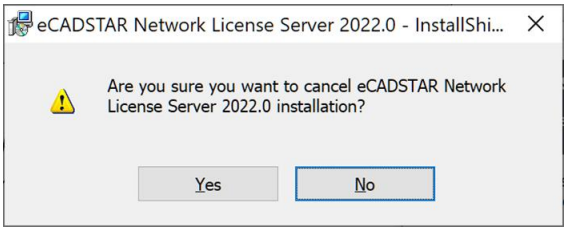
The install process will keep the user informed on its progress as it delivers messages regarding the current action.

Exiting the Installation

If you wish to exit from the installation before it is complete:

9. Click on **Cancel** on the progress dialog

You are then prompted:



10. *Click on **Yes***

Finishing the Installation

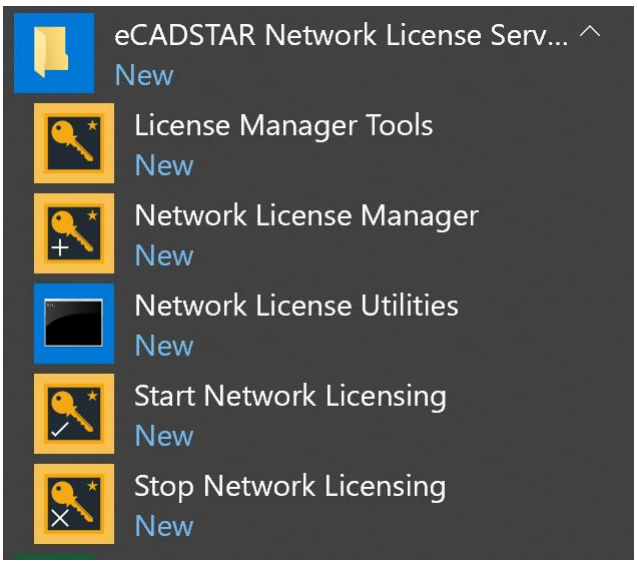
When the installation is complete the following is displayed …

11. *Click on **Finish***

That completes the installation of the Network Licensing software.

Result of Installation

The following icons will now be available under e**CADSTAR Network License Server 2022.0**:



A brief description of the purpose of each program is given below:

License Manager Tools	This tool is for running a program which installs data into the Services registry so that the Vendor daemon can be run as a service. It also can be used to remove the Vendor daemon as a service
Network License Manager	This program is used to create a License file and to change the configuration of the Host name and Host Port number.
Network License Utilities	This program is used to run the utilities provided with the FLEXlm lmgrd tool.
Start Network Licensing	This program is used to start the Network License daemon running on the server. When it is running clients on the network can start using **eCADSTAR**.
Stop Network Licensing	This program is used to stop the Network License daemon running on the server.

The Network Licensing software is protected software. You now need to install the **Software Key**.

Installing the Software Key

Zuken prohibits the duplication of the Network Licensing software for use on other PCs simultaneously.

The software is protected by a device called the **Software Key** (this should be provided by your distributor with the software).

The Software Key must be plugged into the server before the Network Licensing software can be started.

If the Software Key is not plugged in, the system outputs the following message when you start the Network Licensing program:

ERROR: Failed to initialise the Dongle

Installing the Software Key Driver

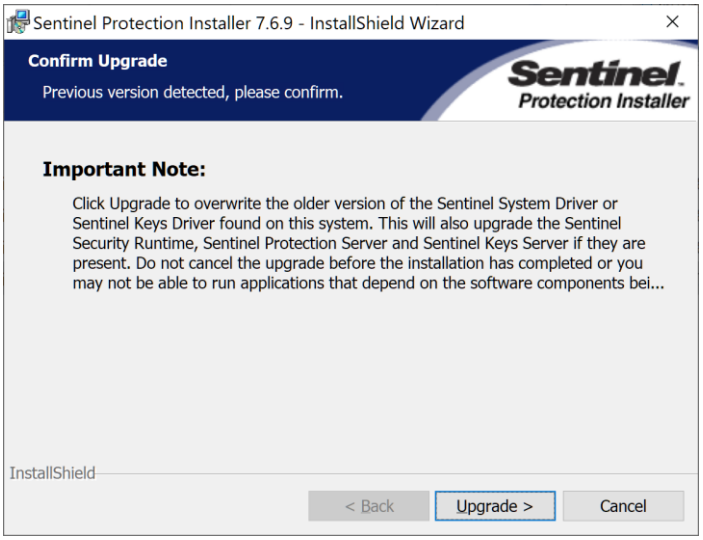
This procedure is for installing the driver which enables the protected applications (i.e. Library Editor, Schematic Editor, and PCB Editor) to communicate with their respective Software keys.

It is essential that you install the Software Key Driver.

Locate the Sentinel Drivers Found on Zuken Global Support Website within the eCADSTAR product downloads.

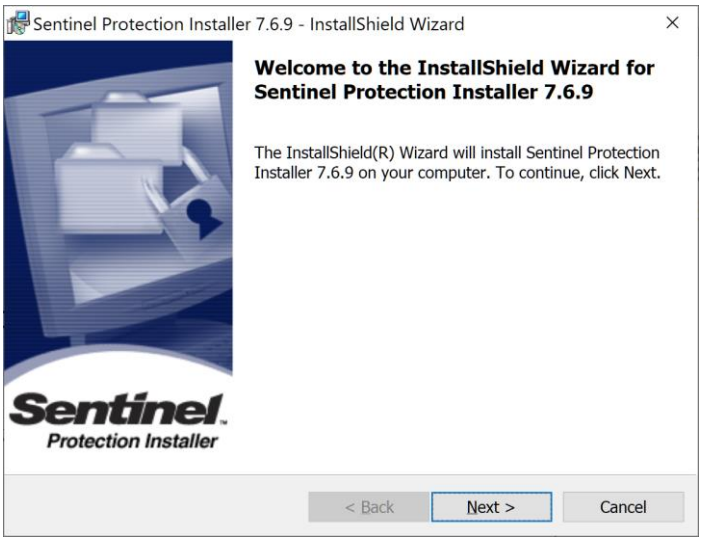
1. *Click on the **Install Sentinel Drivers** button*

If you are an existing user with an old version of the driver, the following dialog is displayed:



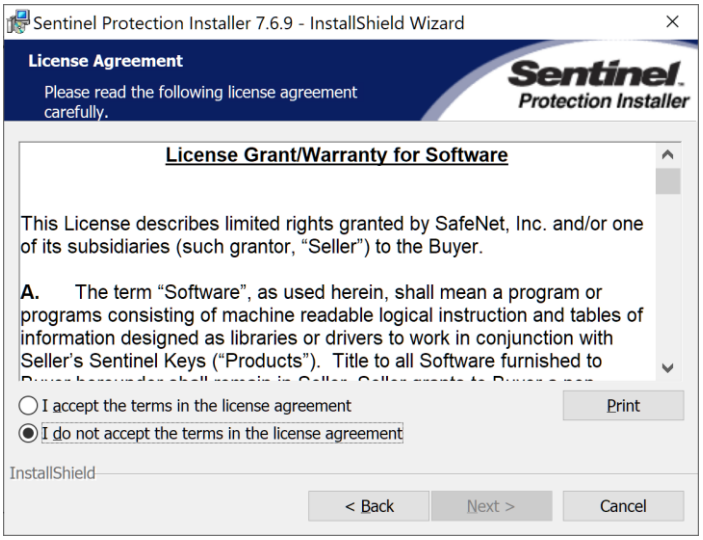
2. *Click on **Upgrade** to continue with the installation*

An introduction to the Installation 'Wizard' is now displayed ...



3. *Click on **Next***

The next dialog displays the **License Agreement**, which you should read carefully.

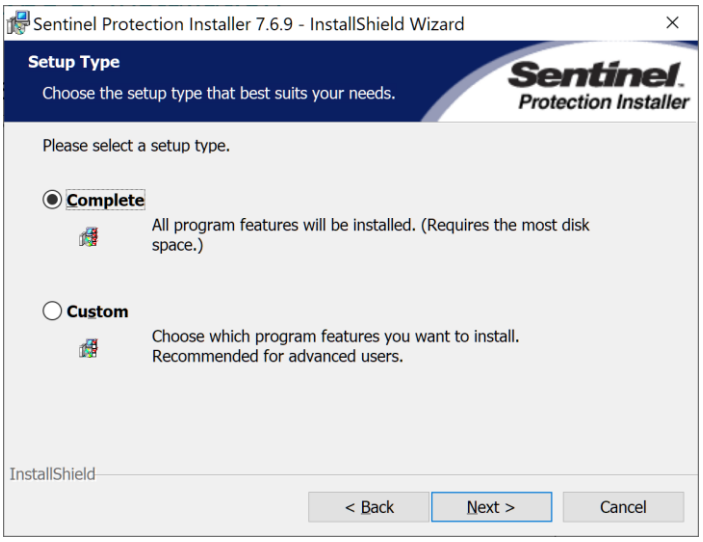


If you accept the terms of the License Agreement.

4. *Click on **I accept the terms in the license agreement** and the **Next** button*

Setting Up the Type of Installation

The next dialog asks you what type of installation you require …

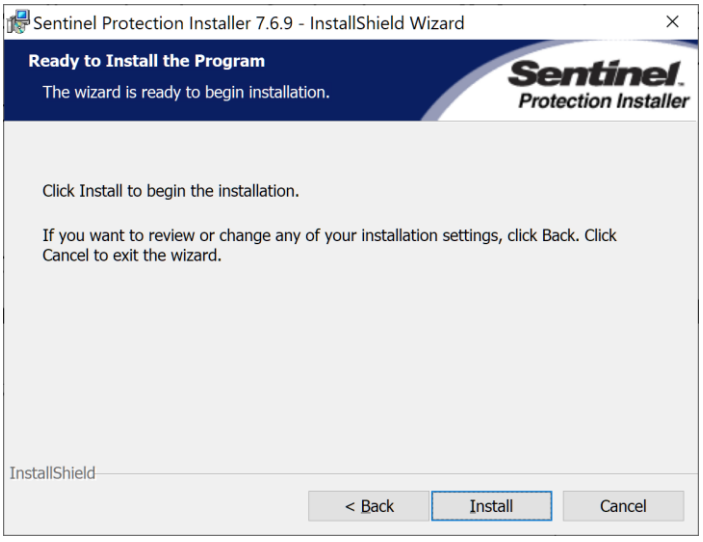


Complete - for installing the drivers for both **USB** Port keys and **Parallel** port keys;
Custom Install - is for selecting whether you install the driver for a **USB** port key or a **Parallel** port key.

It is recommended that you choose a Complete installation:

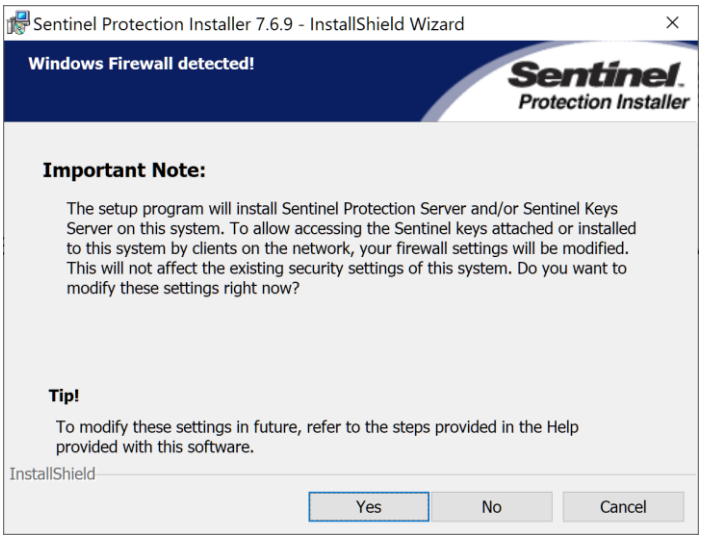
5. *Select **Complete** and then Click on **Next***

The next dialog informs you that the installation of the Driver is about to start …



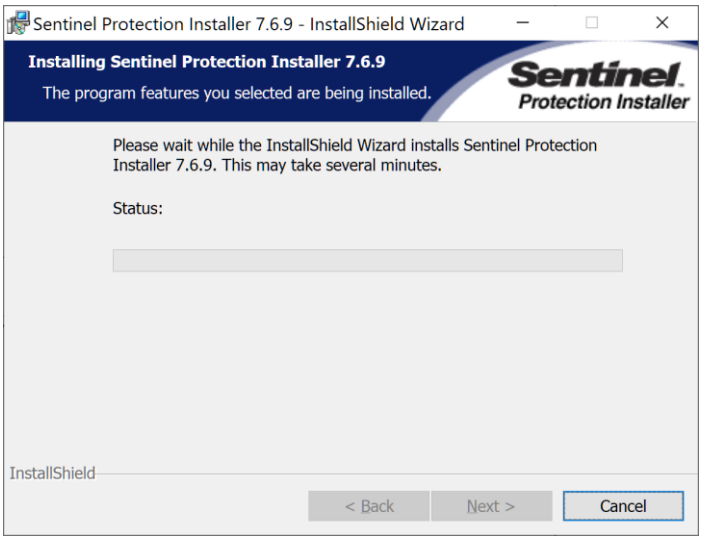
6. *Click on the **Install** button*

Depending on the Operating System used, you may get the following dialog:

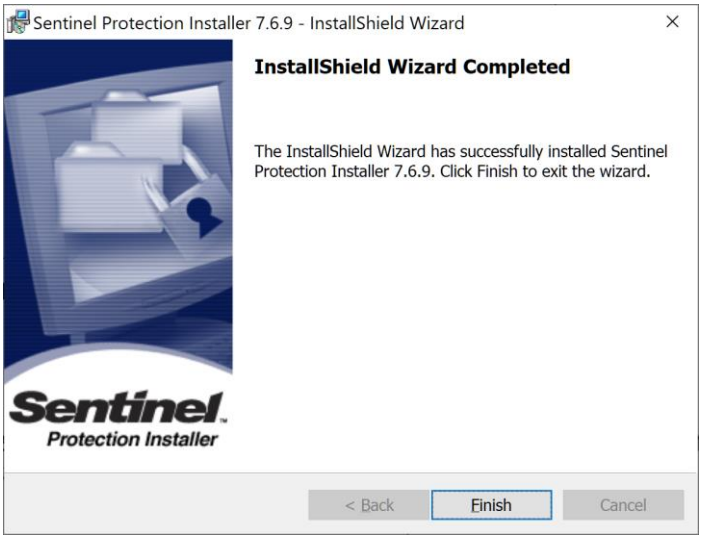


7. *Click **No**.*

Installation progress is displayed on the following dialog:



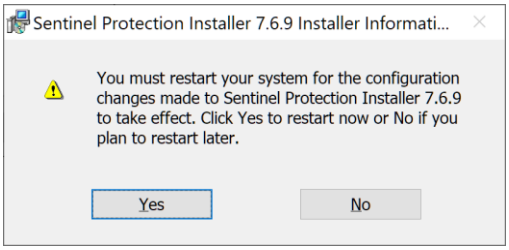
When installation is complete, you are informed of this by the following dialog ...



To exit from the Installation Wizard:

8. *Click on the **Finish** button*

You might get the next dialog, dependent on the Operating System being used:



If you wish to continue using the newly installed Driver:

9. *Click on **Yes***

You are now ready to continue to the next stage of the installation if appropriate.

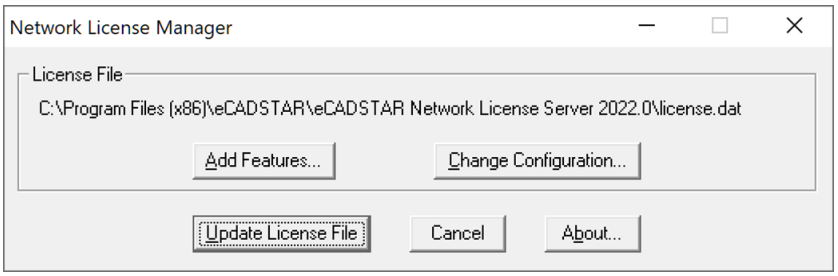
Setting Up the License File

Next you need to use the Network License Manager program to set up the License file used by the Network Licensing system, and to set up the Configuration to match the Host Port and Host Name parameters entered by the clients.

Setting Up the License File:

1. *Using the **Start** button select **Network License Manager** from the **eCADSTAR Network Licensing Server** program group*

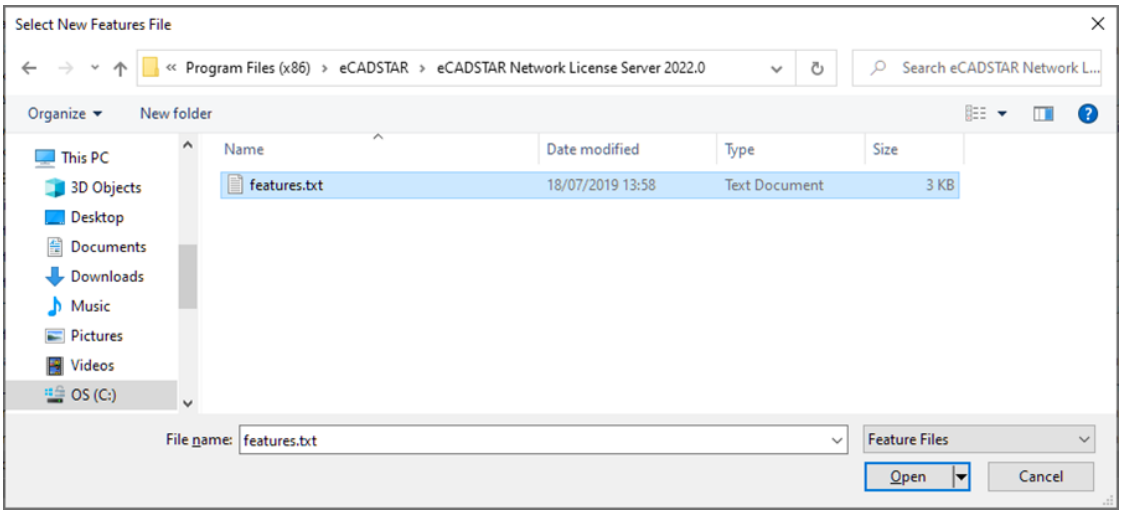
The following dialog is displayed:



To set up the License file:

2. *Click on the **Add Features...** button*

The following dialog is displayed. It is for loading in the contents of the License file (**features.txt**) delivered from your distributor, ready to generate the **license.dat** file.



3. *Set up the parameters to read in your **features.txt** file*

If the loading is successful a message similar to the following is displayed …

4. ***OK** the dialog*

The top-level dialog is displayed again.

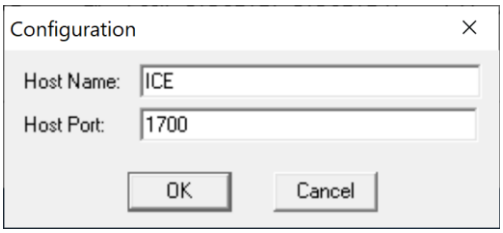
Setting Up the Host Name and Host Port:

For the Network Licensing system to work each client node must point to the License file on the server. The Client sets this up during installation of eCADSTAR.

To set up the location of the License file on the server:

5. *Click on the **Change Configuration** button*

The following dialog is displayed:



The Host Name is the name of the Server machine in the network, the Host Port is **1700** as shown above. Host Port can be any unused port number between 0 and 64000.

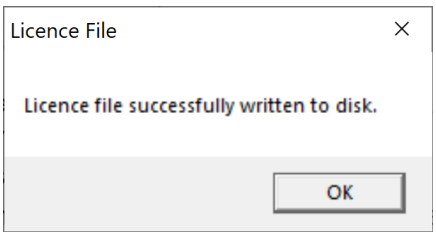
6. *Enter the network **machine name** of the server in **Host Name** and **1700** in **Host Port** and OK the dialog*

That completes the setting up of the License file.

To make the changes to the License file permanent, you have to save the file to disk:

7. *Click on the **Update License File** button*

The following message is displayed to confirm the update:



This will create a file called **license.dat** within the eCADSTAR Network License Server installation, which is read by the Vendor daemon when the license server is started.

8. *Click on **OK***

To prevent problems later you should now check the contents of the **license.dat** file you have just installed. This is documented in **Appendix A - Troubleshooting.**

Starting/Stopping the Network Licensing System

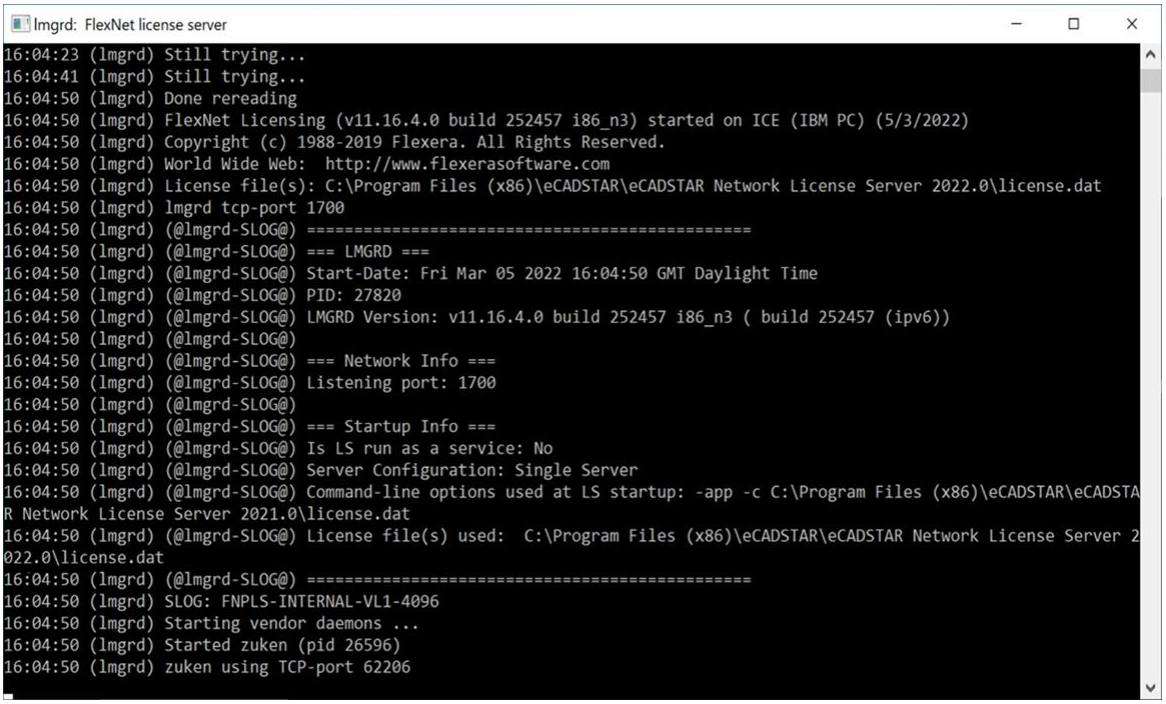
Now that you have installed the Network Licensing software, you need to start it so that clients can run their eCADSTAR applications.

Starting ...

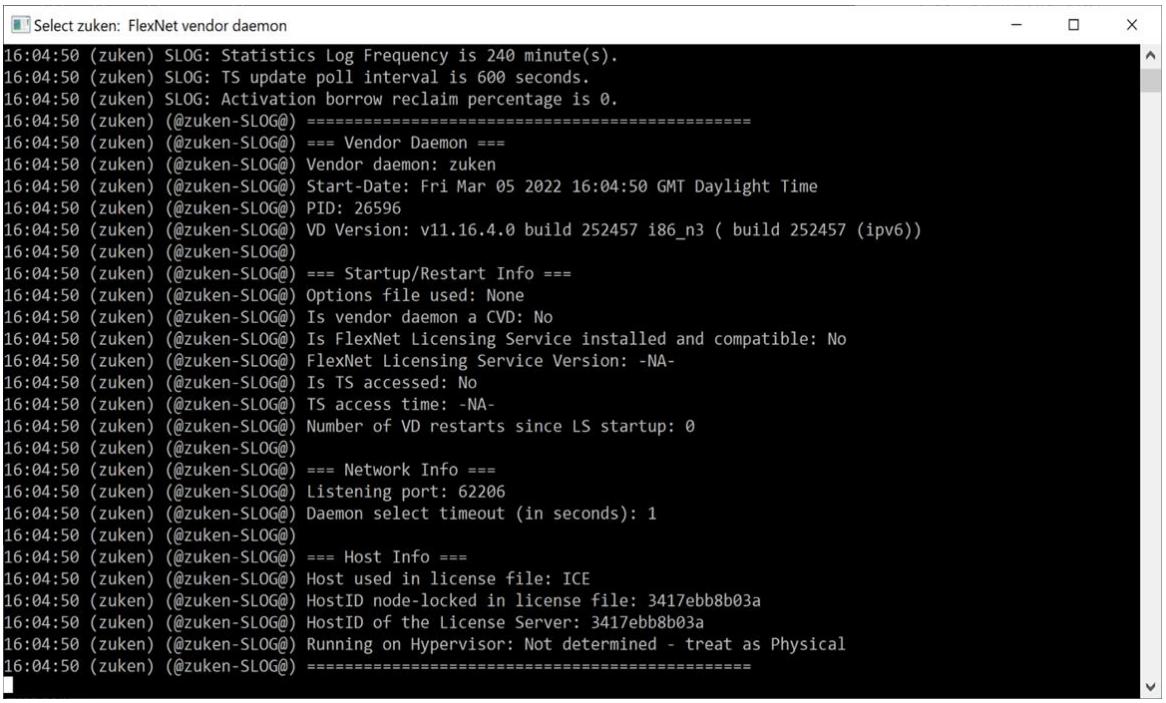
1. *Using the **Start** button select the **Start Network Licensing** program within the **eCADSTAR Network License Server 2022.0** group*

Two windows are launched relating to the Network Licensing server...

The license manager daemon:



The vendor daemon:



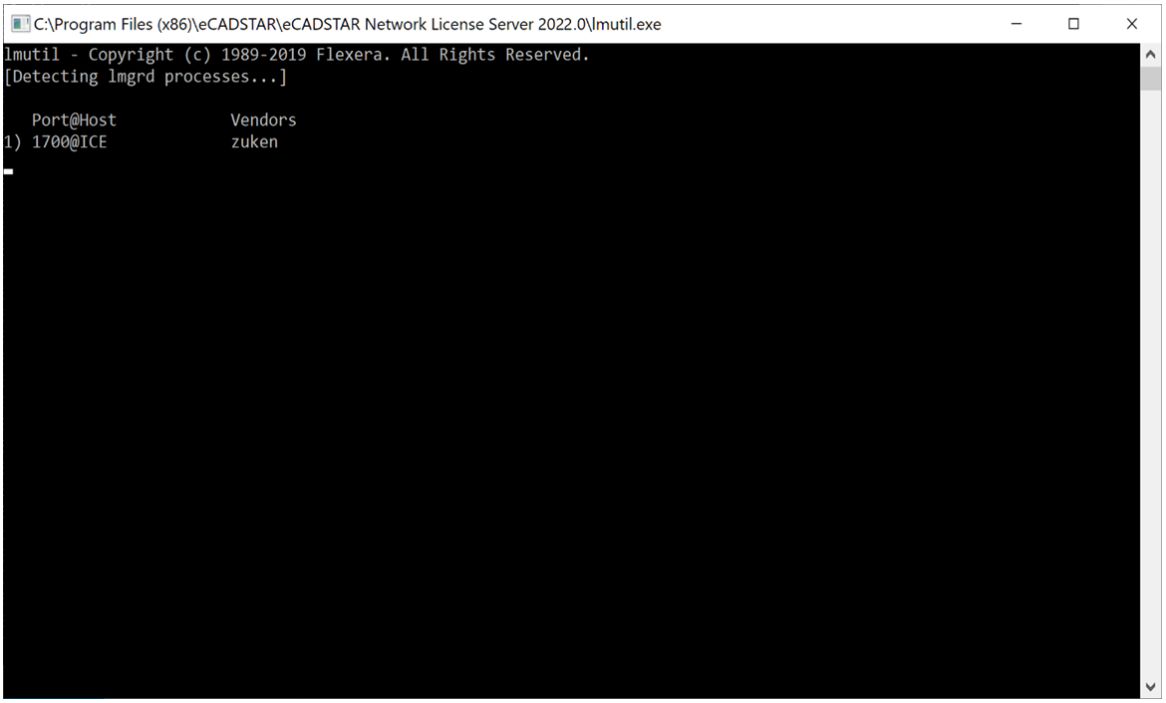
The vendor daemon window keeps a record of the licensing operations that have been carried out on the network.

If an error occurs, these windows shut down before you are able to see which error caused the shutdown. Refer to **Appendix A** to see how to 'troubleshoot' this.

Stopping

1. *Using the **Start** button select the **Stop Network Licensing 2022.0** program within the **eCADSTAR Network License Server 2022.0** group.*

A window is displayed indicating the Network Licencing server vendor is being stopped.



The FLEXlm License Manager

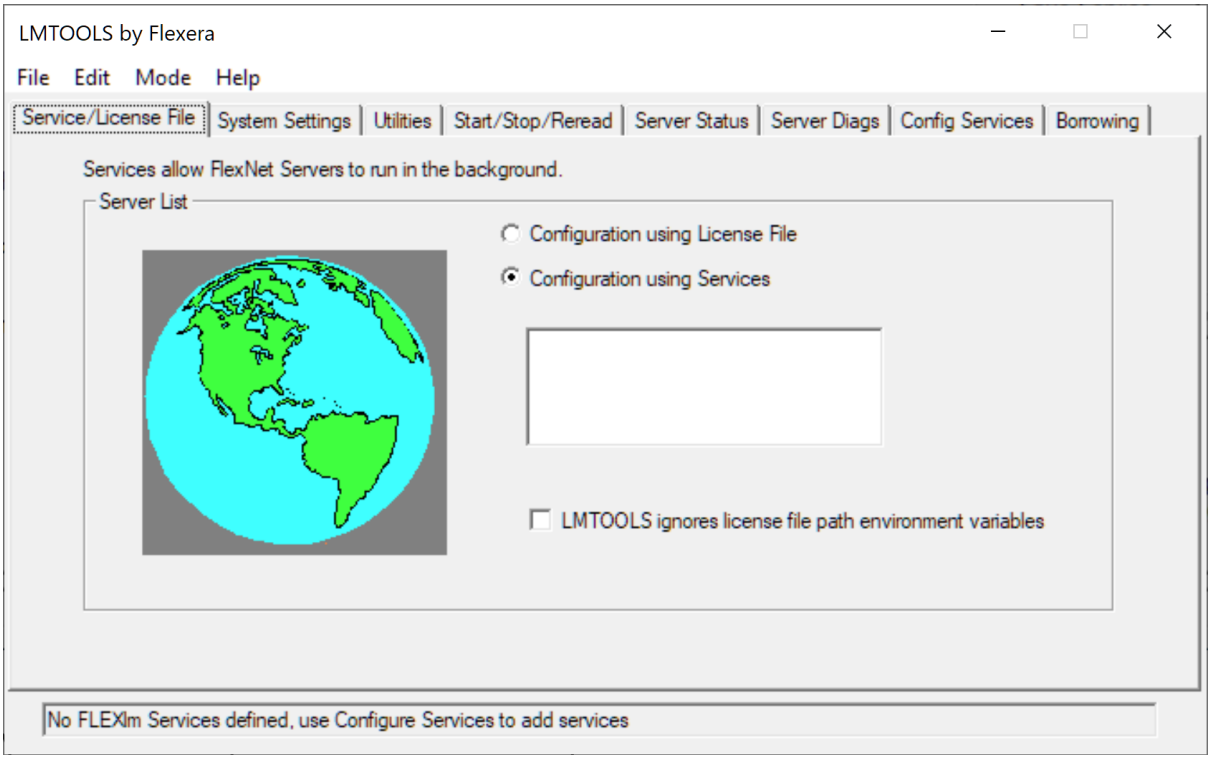
This tool is obtained from the **License Manager Tools** option in the eCADSTAR Network License Server program group of the Start menu.

It displays several tabbed dialogs which enable you to set up various parameters appropriate to the License file.

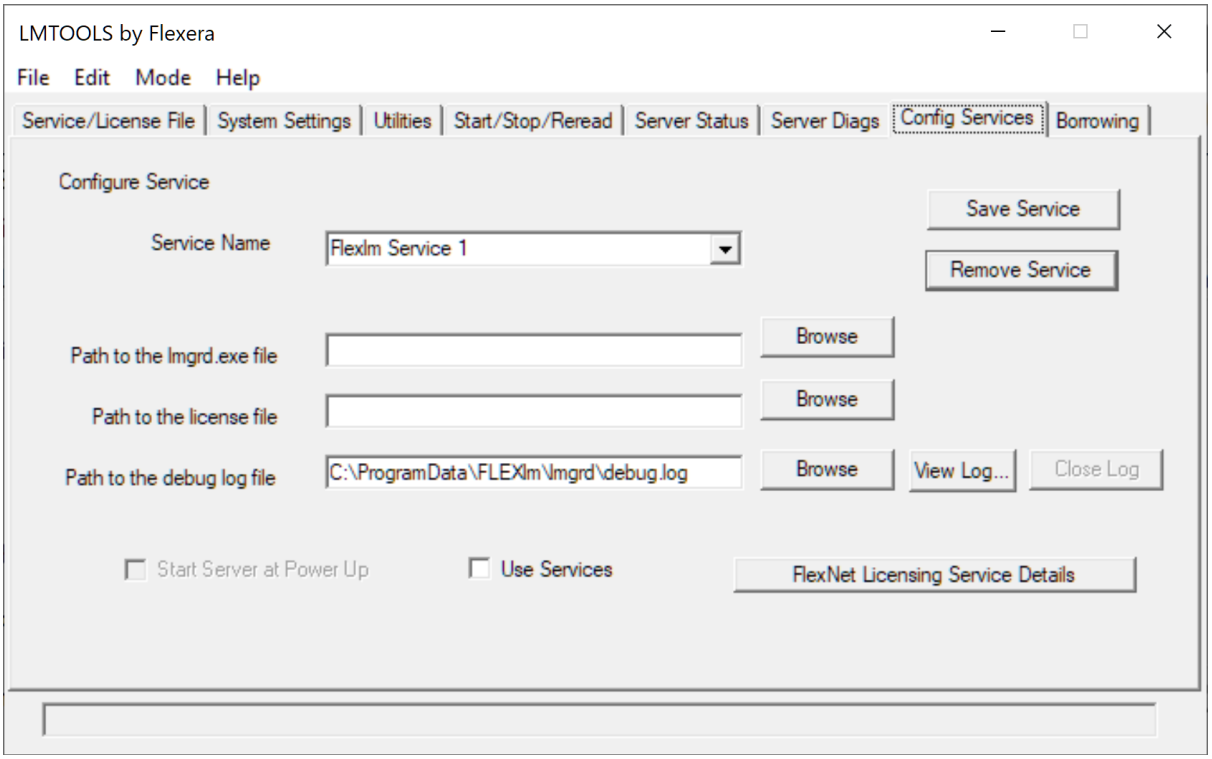
If you prefer to run Network Licensing as a service or are using applications from different vendors which use FLEXlm as the licensing method, you should use this control panel instead of the **Start/Stop Network Licensing** icons on the Start menu.

Setup ...

In the **Service/License File** tab ensure that 'Configuration using Services' is selected.



The **Config Services** tab enables you to specify the location of the license manager daemon, the license file and the license server log file. It also enables you to run Network Licensing system as a service.



When you first complete an installation, these fields will be left blank.

For eCADSTAR, we recommend that the Service Name is changed to '**eCADSTAR License Service'**. If you have more than one product which uses FLEXlm licensing, each product's license server must be set up with a unique name.

Select the **Browse** button for each field and choose the file from the install directory (usually **C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing Server [version]**). The log file doesn't exist and needs to be created; a warning will be issued if the log file is not created within the default location.

When you have finished configuring the service you should save the settings by clicking the **Save Service** button.

Running Network Licensing as a Service

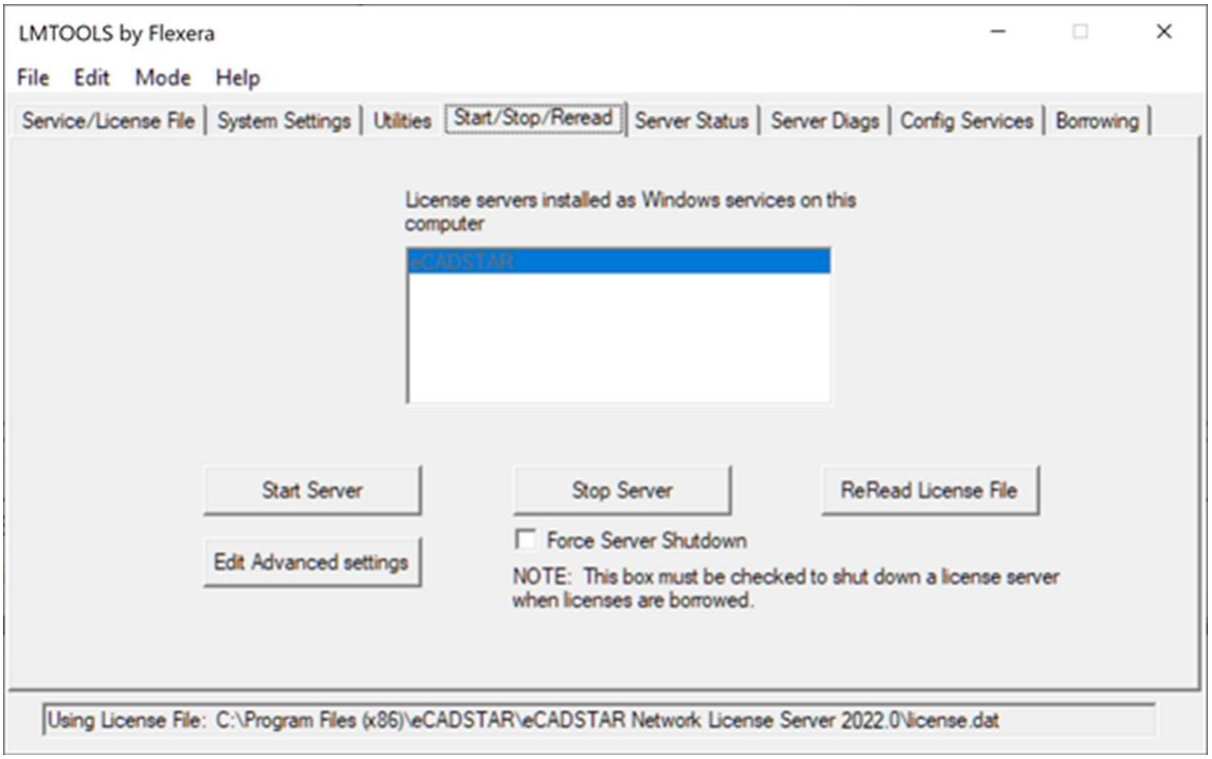
It is more convenient for your colleagues on the network if you run the Network Licensing system as a 'service'. This means that the licenses will always be available, even when you have logged off.

Select the "**Use Services**" check box on the dialog above to enable the license server to continue after you log out. If you want the license server to start automatically if the machine is rebooted, select the "**Start Server at Power Up**" check box also.

Again, when you have finished configuring the service you should save the settings by clicking the **Save Service** button.

Starting / Stopping the License Server

The **Start/Stop/Reread** tab enables you to start / stop the license server.



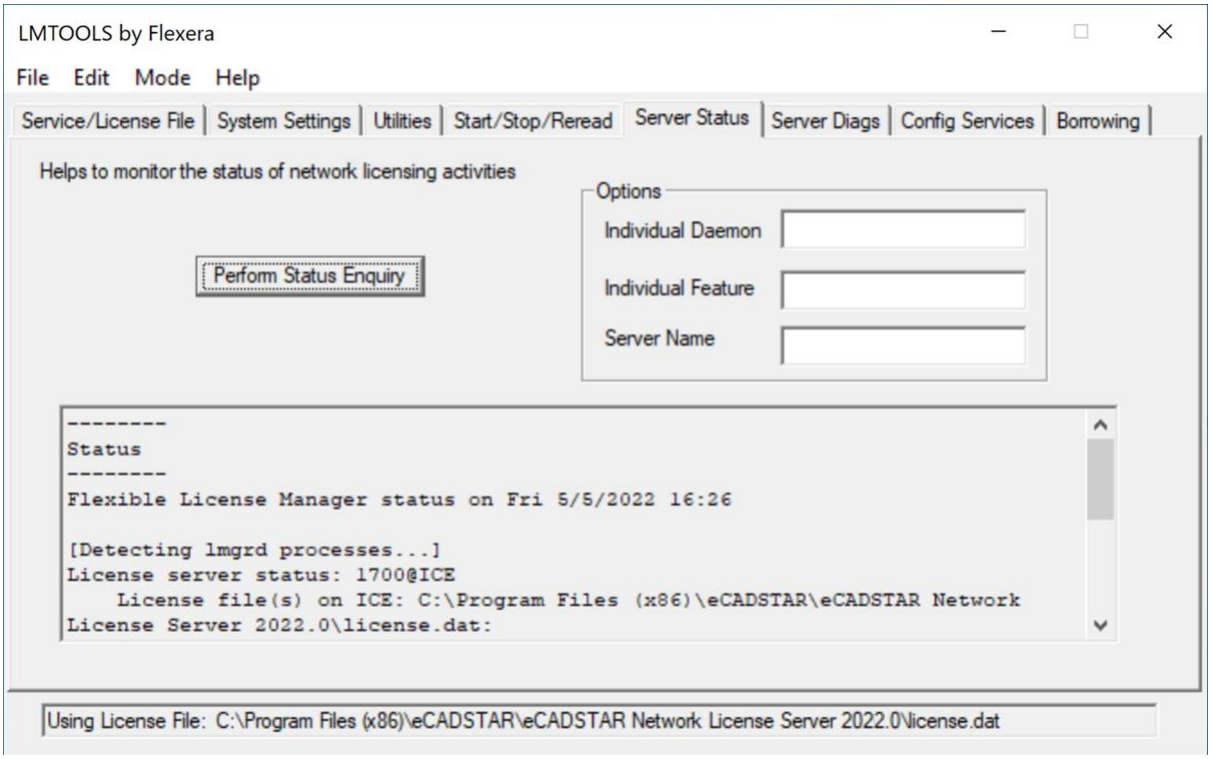
Ensure that the correct service is highlighted for eCADSTAR (this can be changed by selecting a different service from the Config Services tab). The license file being used by the service can be seen in the status bar.

Select the **Start Server** button to start the license server. The status bar will indicate if the server was started successfully.

If you need to stop the server (when you are about to shut down the PC, for example), select the **Stop Server** button.

If you are unsure whether the server is running or not, select the **Perform Status Enquiry** button on the **Server Status** tab.

The status of the server will then be shown in the log window.

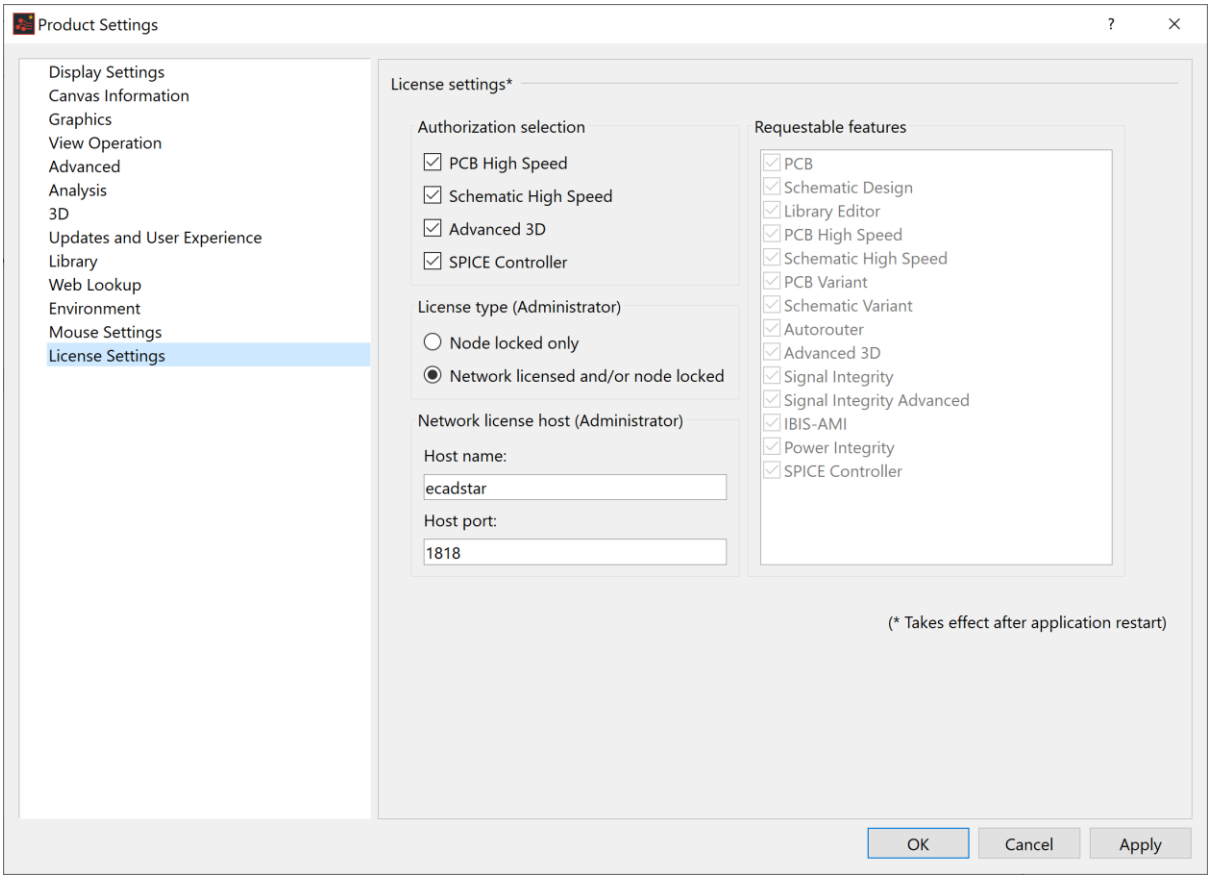


What the Clients Need to Do

When the Clients of a Network Licensed system install eCADSTAR, they must select **Network License** as the type of system they are installing, and enter the **Host Name** and **Host Port** - information which must match what has been set up on the Network Licensing software (see **Chapter 2. Installation**).

Upgrading A Previously Node Locked System

You can configure an existing eCADSTAR installation to use the Network License by changing the **License Settings** in the **Configuration->Product Settings** dialog on **the File** tab.



Chapter 3 – The License File

License File Format

The file shown below is **license.dat**. This results from merging the License file obtained from the distributor (**features.txt**) host name and port settings created by the Network License Manager. By carrying out this process you obtain the License file that supplies information to the License Manager daemon.

Apart from comments (which are preceded by a #), the License file contains the following types of entry:

SERVER - provides information that enables the clients to communicate with the server.

DAEMON - provides the name of the Vendor daemon thus enabling the License Manager daemon to communicate with the Vendor daemon. Optionally, this statement also contains the name and location of the Options file.

INCREMENT - lists the incremental feature Licenses that have been purchased; and which, therefore, can be issued to clients in the network.

Each entry is now described:

SERVER_<host name>_<software key node id>_<port_number>

(e.g. SERVER ICE REDAC_DONGLE=24EEBBF 1700)

where:

<host_name>	is the name which identifies the Server machine in the network. This name is entered by a Client during installation when Network Licensing is selected, e.g.: **ICE**
<software key node id>	is the code which must be matched by the software key so that the Network Licensing software can run, e.g.: **REDAC_DONGLE=24EEBBF**
<port number>	is a number which enables the clients and server in a eCADSTAR Network Licensing system to communicate. This number is entered by a Client during installation when Network Licensing is selected, e.g.: **1700**

DAEMON_<daemon name>_<daemon path>_[<options file path>]

(e.g. DAEMON zuken "C:\Program Files(x86)\eCADSTAR\eCADSTAR Network LicensingServer_[version]\zuken.exe" "C:\Program Files(x86) \eCADSTAR\ eCADSTAR Network Licensing Server [version]\options.txt")

where:

<daemon name>	is the name of the Vendor daemon. For Zuken incremental features this is called **zuken**.
<daemon path>	is the directory path which locates the Vendor daemon executable **zuken.exe**, e.g.: **C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing Server [Version]**
[<options file path>]	is the directory path which locates the **Options** file. This entry is only present when you use an Options file. **C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing Server [Version]\options.txt**

INCREMENT_<package>_<daemon>_<version>_<date>_<no of Licenses>_<protection code>_<vendor string code>_<sort>_<plarform>_<supersede>_<signature code>

(e.g. "INCREMENT ECS_PCB_BASE zuken 2020.000 30-jun-2021 5 \
8030C054FU7D24DBDB234" \
PLATFORMS="i86_n x64_n" SUPERSEDE ISSUED=13-may-2020 \
SIGN="0B1E 9CF4 C4E6 A36E FBEE 0222 680A A1A7 57B9 5B2A \
0C04 3F68 2259 02DA 28E8 0033 8413 E677 D2B9 67F9 C04A 7110 \
AC43 1D2F FA74 7CEC FD44 DF36 04B8 C4C3")

where:

<package type>	this identifies the package which contains the features to be licensed, e.g.: **ECS_PCB_BASE**
<daemon name>	is the name of the Vendor daemon. The vendor daemon issues the Licenses to the clients, e.g.: **zuken**
<version>	is the version number of the package, e.g.: **2020.000**

<date>	is the expiry date of the package. For eCADSTAR this end date is encoded into protection code, e.g.: **30-jun-2020**
<no of Licenses>	is the number of Licenses for use of the package that can be issued to clients, e.g.: **3**
<protection code>	is the code which protects the information in the INCREMENT line. This prevents the data in the line from being changed (e.g. increasing the number of Licenses), e.g.: 8030C050FU7D24DBCB234
<vendor string code>	is a code which provides additional protection for the information in the INCREMENT line. This prevents the data in the line from being changed (e.g. increasing the number of Licenses), e.g.: VENDOR_STRING=d90603e7f20732e9e1294ad09727dcf7
<sort>	provides a sort priority for INCREMENT lines with the same <package> in the license file. e.g.: sort=50
<platform>	is for specifying the platforms the INCREMENT line is supported for, e.g.: PLATFORMS="i86_n x64_n"
<supersede>	specifies the supplied INCREMENT line will supersede any previous versions of the INCREMENT line previous to the specified date, e.g.: SUPERSEDE ISSUED=13-may-2020

<signature code>	is a code which provides additional protection for the information in the INCREMENT line. This prevents the data in the line from being changed (e.g. increasing the number of Licenses), e.g.: SIGN="0D1E 9CF4 C4E6 A36E FBEE 0222 680A A1A7 57B9 5B2A 0C04 \ 3F68 2259 02DA 28B8 0033 8313 E677 D2B9 67F9 C04A 7110 AC43 \ 1D2F FA74 7CEC FD44 DF36 04B8 C4C3

Chapter 4 – The Options File

Introduction

The Options file enables you to control the allocation of Licenses. With this file you can:

- Enable the use of selected features by specific clients, thus denying the use of these features by other clients;
- Deny the use of selected features by specific clients;
- Reserve selected features for the sole use of specific clients;
- Control aspects of license borrowing.

Setting Up an Options File

An Options file is a simple ASCII file in which you type in the commands required. For example:

EXCLUDE ECS_3D_MCAD USER miker
EXCLUDE ECS_3D_MCAD USER davem
EXCLUDE ECS_3D_MCAD USER chrisw
RESERVE 1 ECS_PCB_VARIANTS USER peted
RESERVE 2 ECS_SCM_VARIANTS HOST ANSELLS

You can use a text editor such as **Notepad** to create it.

Once the file is created you must inform the Network Licensing system of its location by specifying its directory path in the **license.dat** file. For example:

DAEMON zuken "C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing Server [version]\zuken.exe" "C**:\Program Files(x86) \eCADSTAR \eCADSTAR Network Licensing Server [version]\options.txt**"

Options File Commands

The Options file can include the following commands:

Command	**EXCLUDE**
Description	To deny a client (USER), group of clients (GROUP), machine (HOST), or group of machines (HOST_GROUP) access to a specific feature. See **Rules of Preference** below.

Format	**EXCLUDE <feature name> <type> <name>** Where: **<feature names>** is the name of the feature being excluded. This name taken from the INCREMENT line which appears in the **license.dat** file; **<type>** is one of USER, HOST, GROUP or HOST_GROUP; **<name>** is the name of the client (USER), name or IP address of the host machine (HOST), group of clients (GROUP), or group of hosts (HOST_GROUP) to exclude. When using the IP address of the host machine, this can contain wildcard characters.
Example	**EXCLUDE ECS_3D_MCAD USER miker** **EXCLUDE ECS_3D_MCAD USER davem** **EXCLUDE ECS_3D_MCAD USER chrisw** **EXCLUDE ECS_3D_MCAD HOST 10.20.2.64** **EXCLUDE ECS_SCM_VARIANTS HOST 10.20.2.*** This example would exclude '**miker**', '**davem**', and '**chrisw**' from using the feature called '**ECS_3D_MCAD** '. **Tip:** Instead of using a separate line for each client to exclude (as shown above), you can use the GROUP statement to group the clients together - you can then use the GROUP name in one EXCLUDE statement.

Command	**EXCLUDEALL**
Description	To deny a client (USER), group of clients (GROUP), machine (HOST), or group of machines (HOST_GROUP) access to all features served by the Vendor daemon.
Format	**EXCLUDEALL <type> <name>** Where: **<type>** is one of USER, HOST, GROUP, HOST_GROUP; **<name>** is the name of the client (USER), name or IP address of the host machine (HOST), group of clients (GROUP), or group of hosts (HOST_GROUP) to be excluded access to the feature. When using the IP address of the host machine, this can contain wildcard characters.
Example	EXCLUDEALL HOST ANSELLS This statement would deny any user on the machine called ANSELLS access to all the features in the License file.

Command	**GROUP**
Description	To form a number of selected clients into a group. This group can then be used in the INCLUDE, INCLUDEALL, EXCLUDE, EXCLUDEALL, and RESERVE lines (see **<type>** in the formats above).
Format	**GROUP <groupname> <username list>** Where: **<groupname>** is the name you wish to give to the group being defined; **<username list>** are the names to be included in the group.
Example	To form a group called `Team1' out of miker, chrisw, and davem: GROUP Team1 miker chrisw davem

Command	**HOST_GROUP**
Description	To form a number of selected host names into a group. This group can then be used in the INCLUDE, INCLUDEALL, EXCLUDE, EXCLUDEALL, and RESERVE lines (see **<type>** in the formats above).
Format	**HOST_GROUP _<groupname>_<hostname list>** where: **<groupname>** is the name you wish to give to the group being defined; **<hostname list>** are the names of host machines to be included in the group.
Example	To form a group called Section1 out of the machines called ANSELLS, FALCON, GOOSE, enter: HOST_GROUP Section1 ANSELLS FALCON GOOSE

Command	**GROUPCASEINSENSITIVE**
Description	Controls if names and host names used in the **options** file are considered case sensitive or case insensitive. By default, the option is OFF and user and host names are considered case sensitive.
Format	**GROUPCASEINSENSITVE OFF|ON**
Example	To enable user and host names to be set to case insensitive: GROUPCASEINSENSITIVE ON

Command	**INCLUDE**
Description	To allow a client (USER), group of clients (GROUP), or machine (HOST) access to a particular feature. Anyone not in an INCLUDE statement will not be allowed to use the feature. See **Rules Of Precedence** below.
Format	**INCLUDE <feature name> <type>_<name>** where: **<feature name>** is the name of the feature being included. This name taken from the INCREMENT line which appears in the license.dat file; **<type>** is one of USER, HOST, or GROUP; **<name>** is the name of the client (USER) , name or IP address of the host machine (HOST), or group of clients (GROUP), to be included in the use of the feature. When using the IP address of the host machine, this can contain wildcard characters.
Example	INCLUDE ECS_SCM_VARIANTS USER miker INCLUDE ECS_SCM_VARIANTS USER davem INCLUDE ECS_SCM_VARIANTS HOST ANSELLS This statement would: • Allow miker to use the feature 'ECS_SCM_VARIANTS' on any machine in the network; Allow davem to use the feature 'ECS_SCM_VARIANTS' on any machine in the network; • Allow any user on the machine called ANSELLS to use the feature 'ECS_SCM_VARIANTS'. • Deny access to the feature 'ECS_SCM_VARIANTS' to anyone on the network except miker, davem, and any client using ANSELLS.

Command	**INCLUDEALL**
Description	To allow a client (USER), group of clients (GROUP), machine (HOST), or group of machines (HOST_GROUP) to access to all features served by the Vendor daemon. Anyone not in an INCLUDEALL statement will not be allowed to use the feature.
Format	**INCLUDEALL <type> <name>** Where: **<type>** is one of USER, HOST, GROUP, or HOST_GROUP; **<name>** is the name of the client (USER), name or IP address of the host machine (HOST), group of clients (GROUP), or group of machines (HOST_GROUP) to be included in the use of the feature.
Example	INCLUDEALL USER miker INCLUDEALL HOST ANSELLS This statement would: • Allow miker use of all the features in the License file • Allow any user on the machine ANSELLS to use all the features in the License file. Deny access to all the features in the License file to anyone on the network except miker and any client using ANSELLS.

Command	**MAX**
Description	Limits the license checkout usage from the **License Server** for a user or group.
Format	**MAX <count> <feature name> <type>** Where: **<count>** is the maximum number of licenses that can be checked out; **<feature names>** is the name of the feature being excluded. This name taken from the INCREMENT line which appears in the **license.dat** file; **<type>** is one of USER, HOST, GROUP, or HOST_GROUP; **<name>** is the name of the client (USER), name or IP address of the host machine (HOST), group of clients (GROUP), or group of hosts (hOST_GROUP) to exclude. When using the IP address of the host machine, this can contain wildcard characters. This option can also be ALL_USERS or ALL_GROUPS.

Example	MAX 3 ECS_SCM_VARIANTS USER davem MAX 4 ECS_3D_MCAD USER ALL_USERS MAX 5 ECS_SCM_VARIANTS HOST ANSELLS MAX 2 ECS_3D_MCAD GROUP ALL_GROUPS

Command	**RESERVE**
Description	To reserve a specified feature for the use of a client (USER), group of clients (GROUP), machine (HOST), group of machines (HOST_GROUP).
Format	**RESERVE <num. Licenses> <feature name> <type>_<name>** Where: **<num. license>** is the number of Licenses of the specified feature to be reserved; **<feature name>** is the name of the feature to be reserved. This name taken from the INCREMENT line which appears in the license.dat file; **<type>** is one of USER, HOST, GROUP, or HOST_GROUP; **<name>** is the name of the client (USER), name or IP address of the host machine (HOST), group of clients (GROUP), group of machines (HOST_GROUP) reserving the feature. When using the IP address of the host machine, this can contain wildcard characters.
Example	RESERVE 1 ECS_SCM_VARIANTS USER miker RESERVE 1 ECS_SCM_VARIANTS HOST ANSELLS These statements would: • Reserve an ECS_SCM_VARIANTS for miker - a license for this feature would always be available to miker. Reserve an ECS_SCM_VARIANTS for any user on the machine called ANSELLS.

Command	**LINGER**
Description	To allow the Vendor daemon to `hold onto' the license of a particular feature for a specified time interval after a client has exited from it and returned it to the daemon. This can be useful for short duration features that are used many times in sequence.
Format	**LINGER_<feature name>_<interval>** Where:

	<feature name> is the name of the feature being 'held onto'. This name taken from the INCREMENT line which appears in the license.dat file; **<interval>** is the length of time in seconds during which the Vendor daemon holds onto the feature.
Example	LINGER ECS_3D_MCAD 1800 This statement would hold onto the ECS_3D_MCAD feature for 1800 seconds after the client has stopped using the feature - the client can then re-use that feature within the 1800 seconds (e.g. after a 30-minute break).

Command	**AUTOMATIC_REREAD**
Description	Controls the automatic reread of licenses to check if any feature is discovered to have reached its expiry date. When not set a check of each license is performed at midnight each day to determine if any features have expired.
Format	**AUTOMATIC_REREAD OFF|ON**
Example	To turn off the automatic reread: AUTOMATC_REREAD OFF

Command	**NOLOG**
Description	To turn off the feature which logs the events carried out by the FLEXlm daemons. The License administrators might use this option to reduce the size of the lmgrd log file.
Format	**NOLOG <log_type>** Where: **<log_type>** is the log operation to be turned off. Can be IN, OUT, DENIED, QUEUED, or UNSUPPORTED.
Example	To turn off the logging of check-ins: NOLOG IN To turn off the logging of checkouts and queued requests: NOLOG DENIED To turn off the logging of unsupported messages in the debug log: NOLOG UNSUPPORTED

Command	**REPORTLOG**
Description	Is for specifying the location and name of a file to contain the report log for the Vendor daemon.
Format	**REPORTLOG_[+]<file name>** Where: **<file name>** is the name of the file to store the log. If you precede the file name with a `+' character, the file will be opened for the purpose of appending log entries. If there is no `+', the file will be overwritten each time the daemon is started. On Windows, where a path name includes spaces this must be encapsulated by double quotes.
Example	REPORTLOG C:\ProgramData\LicenseServer\server_logs.txt REPORTLOG +"C:\ProgramData\License Server\Server Logs.txt"

Command	**DEBUGLOG**
Description	Is for specifying a location and name of a file to contain the debug log for the Vendor daemon associated with this **options** file.
Format	**DEBUGLOG_[+]<file name>** Where: **<file name>** is the name of the file to store the log. If you precede the file name with a `+' character, the file will be opened for the purpose of appending log entries. If there is no `+', the file will be overwritten each time the daemon is started. On Windows, where a path name includes spaces this must be encapsulated by double quotes.
Example	DEBUGLOG C:\ProgramData\LicenseServer\debug_log.txt DEBUGLOG +"C:\ProgramData\License Server\Debug Logs.txt"

Options File Commands for Network License Borrower

The Options file can also include the following commands specifically to control the **License Server** requirements for the **Network License Borrower** feature when taking licenses from the **License Server**:

Command	**BORROW_LOWWATER**
Description	Specifies to maintain a minimum number of licenses that cannot be borrowed ensuring some are always available from the **License Server**.
Format	**BORROW_LOWWATER <feature name> <count>** where: **<feature name>** is the name of the feature being retained; **<count>** the number of licenses to be retained with the **License Server**.
Example	**BORROW_LOWWATER ECS_PCB_BASE 3** **BORROW_LOWWATER ECS_SCM_BASE 6** This example would retain 3 base PCB licenses and 6 base schematic licenses on the **License Server**.

Command	**MAX_BORROW_HOURS**
Description	Specifies the maximum time interval in hours that licenses can be borrowed from the **License Server**. The number of hours defined cannot be set to exceed the maximum hours default value which is 168 hours.
Format	**MAX_BORROW_HOURS <feature name> <hours>** Where: **<feature name>** is the name of the feature being borrowed; **<hours>** the number of hours the licenses can be borrowed for.
Example	**MAX_BORROW_HOURS ECS_PCB_BASE 20** **MAX_BORROW_HOURS ECS_SCM_BASE 15** This example would borrow base PCB licenses for 20 hours and base schematic licences for 15 hours from the **License Server**.

Command	**EXCLUDE_BORROW**
Description	Specifies to completely block licences from being borrowed from the **License Server**.
Format	**EXCLUDE_BORROW <feature name> <type> <name>** Where: **<feature name>** is the name of the feature being blocked from being borrowed.

	<type> is one of USER, HOST, GROUP, or HOST_GROUP; **<name>** is the name of the client (USER), name or IP address of the host machine (HOST), group of clients (GROUP), group of machines (HOST_GROUP) reserving the feature. When using the IP address of the host machine, this can contain wildcard characters.
Example	**EXCLUDE_BORROW ECS_PCB_BASE USER janz** **EXCLUDE_BORROW ECS_SCM_BASE GROUP RFEng** **EXCLUDE_BORROW ECS_PCB_BASE HOST PC1** **EXCLUDE_BORROW ECS_SCM_BASE HOSTGROUP IT** This example would exclude: • User janz from borrowing base PCB licenses; • Group RFEng from using the base schematic licenses; • Host computer PC1 from using a base PCB license; The Host Group IT from using base schematic licenses.

Command	**INCLUDE_BORROW**
Description	Specifies to allow defined licenses to be borrowed from the **License Server**. All non-specified USERS, HOSTS, GROUP and HOSTGROUPS are blocked from borrowing licences from the **License Server**.
Format	**INCLUDE_BORROW <feature name> <type> <name>** Where: **<feature name>** is the name of the feature being enabled to be borrowed. **<type>** is one of USER, HOST, GROUP, or HOST_GROUP; **<name>** is the name of the client (USER), name or IP address of the host machine (HOST), group of clients (GROUP), group of machines (HOST_GROUP) reserving the feature. When using the IP address of the host machine, this can contain wildcard characters.
Example	**INCLUDE_BORROW ECS_PCB_BASE USER janz** **INCLUDE_BORROW ECS_SCM_BASE GROUP RFEng** **INCLUDE_BORROW ECS_PCB_BASE HOST PC1** **INCLUDE_BORROW ECS_SCM_BASE HOSTGROUP IT** This example would allow:

	• User janz to borrow base PCB licenses; • Group RFEng to borrow the base schematic licenses; • Host computer PC1 to borrow base PCB license; • The Host Group IT to borrow base schematic licenses; All non-specified features cannot be borrowed when this command is included in the **options** file.

NOTE: The **EXCLUDE_BORROW** takes precedence over the **INCLUDE_BORROW** option. Please see **'Rules of Precedence'** below to understand how this will affect licensing operation when the above statements are used in the **options** file.

Rules of Precedence

Before you can customise the Options file effectively, you must understand the rules of precedence that apply when you use both INCLUDE and EXCLUDE statements:

The following will help you:

- If there is only an EXCLUDE list, the clients who are not on the list will be able to use the feature;
- If there is only an INCLUDE list, only those clients on the list will be able to use the feature;
- If there is neither an EXCLUDE nor INCLUDE list, all clients can use the feature;

The EXCLUDE list is checked before the INCLUDE list; so, a client who is on both lists will not be allowed to use the feature.

Once you create an INCLUDE or EXCLUDE list, all other clients are `implicitly' outside the group specified by the EXCLUDE or INCLUDE statements. This enables you, to control Licenses without having to `explicitly' name each client that you wish to allow or deny access to. In other words, you can either:

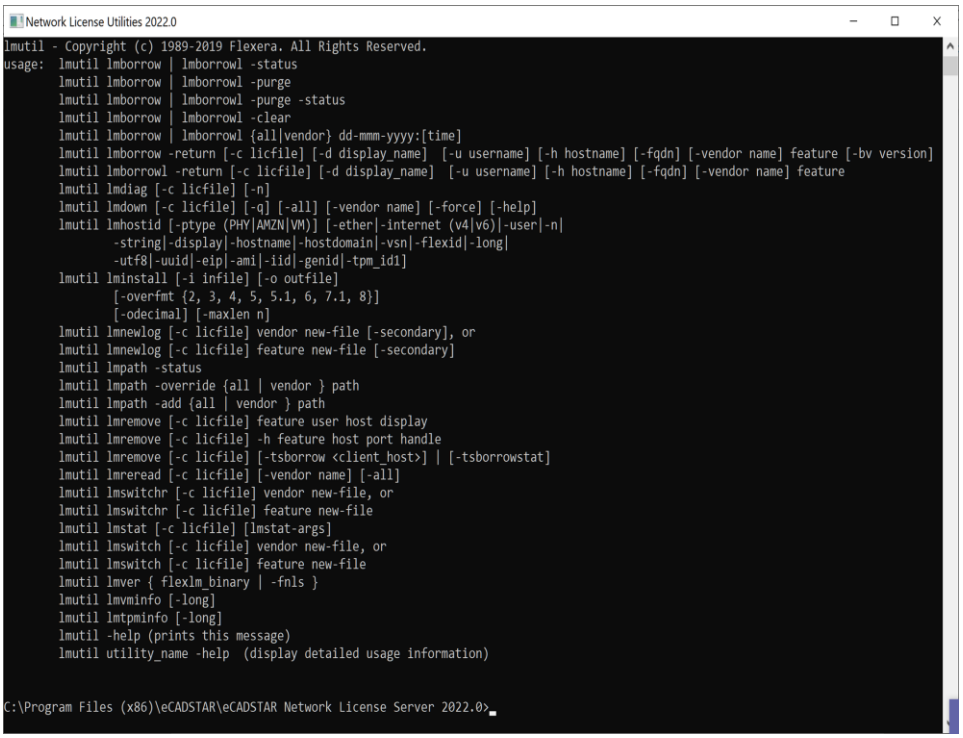
- Give most clients access and list only the exceptions; **or**
- Severely limit access and list only those clients that can have license to specified features.

Chapter 5 – The License Administration Tools

Introduction

These tools are obtained by selecting the **Network License Utilities** in the **eCADSTAR Network License Server [Version]** programs group:

The following window is displayed:



The prompt is where you enter the commands. The available commands are listed at the top of the window.

The commands **lmgrd** and **lmdown** can be controlled by the options **Start Network Licensing** and **Stop Network Licensing** available within the **eCADSTAR Network License Server [Version]** group.

When you enter a command, it is in the format:

lmutil <command> [optional parameters and switches]

The use and format of the commands which are relevant to an eCADSTAR Network License Server installation are now described.

lmdiag

Use **lmdiag** for diagnosing problems when you cannot book out a license to a client.

Format:

Lmutil lmdiag [-c <license file>] [-n] [feature name]

where:

[-c <license file>]	is an optional switch for specifying the name of the License file. If this switch is not entered, lmdiag looks for the environment variable: **LM_LICENSE_FILE** If that environment variable is not set, lmdiag looks for the following file: **C:\flexlm\license.dat**
[-n]	is an optional switch which cause the command to run in the non-interactive mode; lmdiag will not prompt for any input in this mode.
[feature name]	is an optional switch which allows you to diagnose problems in the specified feature only. If there is no **[feature name]**, lmdiag will check all features in the License file.

If **lmdiag** cannot connect to the License Manager server, you will be given the option of running 'extended connection diagnostics'. This attempts to connect to each port on the license server node and can detect whether the port number in the License file is correct. If the Vendor daemon for the feature being checked is connected, **lmdiag** will indicate the correct port number for the License file to correct the problem.

lmremove

Use **lmremove** to remove a client's license for a particular feature. For example, when a client is running a Licensed feature that crashes, the client's license sometimes remains checked out, and unavailable to any other client; **lmremove** can be used to return the license to the pool of available Licenses.

Format:

Lmutil lmremove [-c <license file>] <feature name> <client name> <host name>

where:

[-c <license file>]	is an optional switch for specifying the name of the License file. If this switch is not entered, lmremove looks for the environment variable: **LM_LICENSE_FILE** If that environment variable is not set, lmremove looks for the following file: **C:\flexlm\license.dat**
<feature name>	is a mandatory parameter which specifies the name of the feature for which the license is to be removed.
<client name>	is a mandatory parameter which specifies the name of the client who is to have a license removed.
<host name>	is a mandatory parameter which identifies the name of the server machine which is doing the license removing.

For example:

lmutil lmremove ECS_3D_MCAD miker OAK

would cause the server called **OAK** to remove the license for the ECS_3D_MCAD from the client called **miker**.

lmreread

Use lmreread to reread the License file in order to start any new Vendor daemons or issue new feature Licenses that have been added to the file. This saves you having to close down and restart the Network Licensing system.

Format:

Lmutil lmreread [-c <license file>]

where:

[-c <license file>]	is an optional switch for specifying the name of the License file. If this switch is not entered, lmreread looks for the environment variable: **LM_LICENSE_FILE** If that environment variable is not set, lmreread looks for the following file: **C:\flexlm\license.dat**

lmstat

Use lmstat to monitor the status of all network Licensing activities, including:

- Which daemons are running (entering lmstat without any switches will display this information);
- Which clients are using individual features;
- Which clients are using features served by a specific daemon.

Format:

lmutil lmstat [-a] [-S <daemon>] [-f <feature>] [-I <feature>] [-s_<server>]

[-c <license file>] [-A]

where:

[-a]	is for displaying all information.
[-S <daemon>]	is for listing all clients using features Licensed by the named daemon.
[-f <feature>]	is for listing all clients using the names features
[-I <feature>]	is for displaying information about the named feature(s).

[-s <server>]	is for displaying the status of server node(s).
[-c <license file>]	is an optional switch for specifying the name of the License file. If this switch is not entered, lmreread looks for the environment variable: **LM_LICENSE_FILE** If that environment variable is not set, lmreread looks for the following file: **C:\flexlm\license.dat**
[-A]	is for listing all active Licenses.

Chapter 6 – License Borrowing

Introduction

eCADSTAR supports the **License Borrowing** feature available with **Network Licensing**.

License Borrowing is a feature that allows a user to run licensed software on a PC that is not connected permanently to the **License Server** on the network.

When making a request to borrow a licensed feature, the user must be connected to the **License Server** on the network.

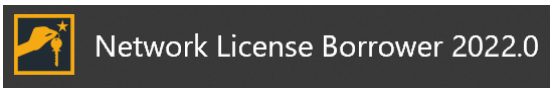
After the licensed features have been borrowed, the user can disconnect the PC from the network and continue to use the software for the length of time the license was borrowed for.

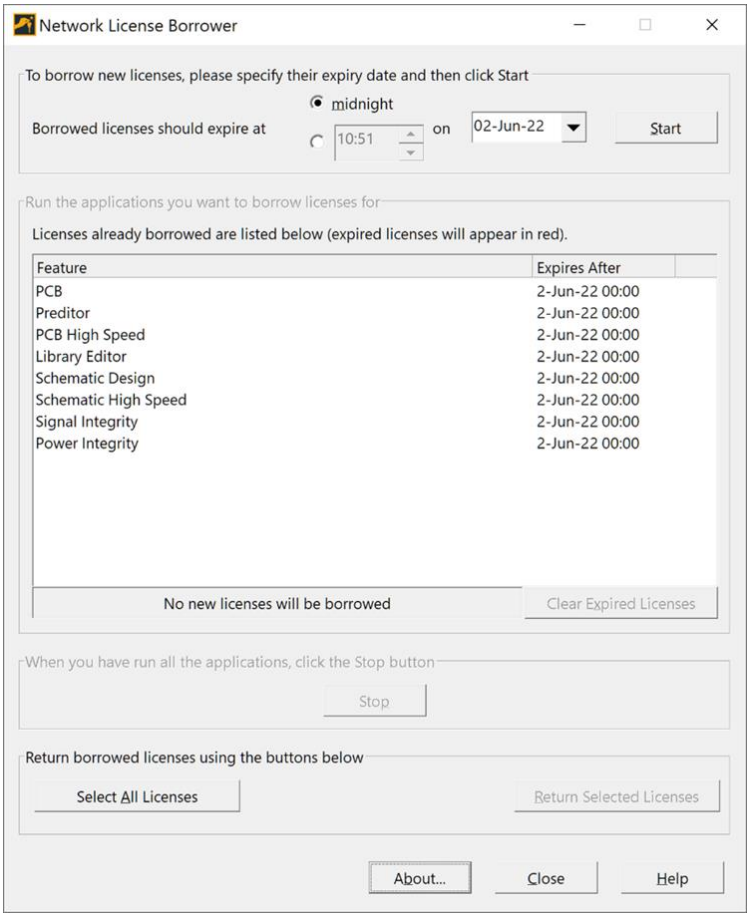
During this time, the licensed features are not available from the pool of licenses for other users from the **License Server**.

After the borrowed license time expires the licensed features are checked back into the pool of licenses available for other users from the **License Server**.

For **eCADSTAR** the **Network License Borrower** tool is included as part of the **eCADSTAR** software installation.

Once installed, the tool is launched from the **eCADSTAR** program group on the **Windows Start** menu.





For detailed description of the **Network License Borrower** dialog and operation of borrowing licenses, please refer to the online documentation. The online documentation can be launched from the **Network License Borrower** dialog by clicking the **Help** button.

NOTE: The **options** file for the **License Server** can be configured to control some aspects in relation to the **Network License Borrowing** feature within **eCADSTAR**, these **options** are described in '**Chapter 4 – The Options File'** of this document.

Licenses for Applications

The following table indicates the required feature that will need to be borrowed from the **License Server** to ensure remote access from the network containing the **License Server** can be performed. This table represents typically operations that can be performed, note the list is not exhaustive in all combinations of features that you may require to perform your design operations remotely.

To ensure the require licenses are borrowed, please exit all required **eCADSTAR** applications before starting the **Network License Borrower** process. Any license

features acquired before starting the **Network License Borrower** process will not be considered for usage when the computer is not connected to the network containing a valid **network license server.**

Operation	**Required Features**	**How to Borrow**
Edit a **Library**	Library Editor	Launch the Library Editor. Open a library.
Edit a **Part** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit a **Footprint** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit a **Footprint** in a library with **Advanced 3D** support	Library Editor Advanced 3D	Launch the Library Editor. 'Advanced 3D' enabled in License Settings of Product Settings dialog. Open a library. Edit a footprint.
Edit a **Symbol** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit the **Layers** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit the **Pads** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit the **Padstacks** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit the **Design Rules** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit the **Technologies** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit **E-Net Definition** in a library	Library Editor	Launch the Library Editor. Open a library.

Edit **Attributes** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit **Assignments** in a library	Library Editor	Launch the Library Editor. Open a library.
Edit **Design Environment** in a library	Library Editor	Launch the Library Editor. Open a library.
Operation	**Required Features**	**How to Borrow**
Edit a non high-speed **Schematic** design	Schematic Design	Launch the Schematic Editor. Open a schematic.
Edit a high-speed **Schematic** design	Schematic Design Schematic High Speed	Launch the Schematic Editor. 'Schematic High Speed' enabled in License Settings of Product Settings dialog. Open a schematic.
Edit a **Schematic** design with **Variants**	Schematic Design Schematic Variant	Launch the Schematic Editor. Open a schematic. Perform a variant command.
Back Annotate to a **Schematic** design from **PCB** design	Schematic Design	Launch the Schematic Editor. Open a schematic.
Back Annotate to a **Schematic** design with **Variants** from **PCB** design	Schematic Design Schematic Variant	Launch the Schematic Editor. Open a schematic. Perform the Back Annotation command.
Operation	**Required Features**	**How to Borrow**
Edit a non high-speed **PCB** design	PCB Preditor	Launch the PCB Editor. Open a PCB design.
Edit a high-speed **PCB** design	PCB Preditor PCB High Speed	Launch the PCB Editor. 'PCB High Speed' enabled in License Settings of Product Settings dialog.

		Open a PCB.
Edit a **PCB** design with **Advanced 3D** support	PCB Preditor Advanced 3D	Launch the PCB Editor. 'Advanced 3D' enabled in License Settings of Product Settings dialog. Open a PCB. Load 3D models.
Edit a **PCB** with **Variants**	PCB Preditor	Launch PCB Editor. Open a PCB with variants.
Create a new **PCB** design from **schematic** design	PCB Preditor Schematic Design	Launch PCB Editor. Start New Design Wizard. Complete New Design Wizard to create PCB.
Create a new **PCB** design from **schematic** design with **Variants**	PCB Preditor Schematic Design PCB Variant	Launch PCB Editor. Start New Design Wizard. Complete New Design Wizard to create PCB.
Forward annotate to a **PCB** design from **schematic** design	PCB Preditor Schematic Design	Launch PCB Editor. Start Forward Annotation Wizard. Complete Forward Annotation Wizard.
Forward annotate to a **PCB** design from **schematic** design with **Variants**	PCB Preditor Schematic Design PCB Variant	Launch PCB Editor. Start Forward Annotation Wizard. Complete Forward Annotation Wizard.
Import a **Gerber** file into the **eCADSTAR** PCB Design.	PCB Preditor Photo Import	Launch the PCB Editor. Open the design requiring the import of Gerber data. Select ribbon item Manufacture > Manufacturing Input > Photo Data
Use the **Autorouter** on a non high-speed PCB Design.	PCB Preditor Autorouter	Launch the PCB Editor. Open the design to be autorouted. Select ribbon item Net/Route > Autorouting > Autorouter

Operation	**Required Features**	**How to Borrow**
Launch **Electrical Editor** from the **Start** menu	Signal Integrity	Launch Electrical Editor from the Start menu.
Launch **Electrical Editor** from the **Start** menu and running an advanced simulation process. See NOTE at end of table for list of advanced simulation processes.	Signal Integrity Signal Integrity Advanced	Launch Electrical Editor from Start menu. Open/create a scenario. Launch an advanced simulation process.
Launch **Electrical Editor** from the **Start** menu and running an IBIS AMI process.	Signal Integrity Signal Integrity Advanced IBIS-AMI	Launch Electrical Editor from Start menu. Open/create a scenario. Launch an IBIS AMI process.
Launch **Analysis Results Viewer** from the **Start** menu for SI Results	Signal Integrity	Launch Analysis Results Viewer from the Start menu. Open a SI srdb results file.
Launch **Analysis Results Viewer** from the **Start** menu for PI Results	Power Integrity	Launch Analysis Results Viewer from the Start menu. Open a PI srdb results file.
Launch **PI EMI Analysis** from the **Start** menu	Power Integrity	Launch Analysis Results Viewer from the Start menu.
Launch **Electrical Editor** from within the **Schematic** design	Schematic Design Schematic High Speed Signal Integrity	Launch Schematic Editor. Open schematic design. Launch the Electrical Editor.
Launch **Electrical Editor** from within the **Schematic** design and run an advanced simulation process. See NOTE at end of table for list of	Schematic Design Schematic High Speed Signal Integrity Signal Integrity Advanced	Launch Schematic Editor. Open schematic design. Launch the Electrical Editor. Launch an advanced simulation process.

advanced simulation processes.		
Launch **Electrical Editor** from within the **Schematic** design and run an **IBIS AMI** process.	Schematic Design Schematic High Speed Signal Integrity Signal Integrity Advanced IBIS-AMI	Launch Schematic Editor. Open schematic design. Launch the Electrical Editor. Launch an IBIS AMI process.
Launch **Electrical Editor** from within the **PCB** design	PCB Preditor PCB High Speed Signal Integrity	Launch PCB Editor. Open PCB design. Launch the Electrical Editor.
Launch **PI EMI Analysis** from within the **PCB** design	PCB Preditor PCB High Speed Power Integrity	Launch PCB Editor. Open PCB design. Launch the PI EMI Analysis.
Run **SI Analysis** from within the **PCB** design	PCB Preditor PCB High Speed Signal Inegrity	Launch PCB Editor. Open PCB Design. Launch the SI Analysis.
Run **Advanced simulation process** from within the **PCB** design	PCB Preditor PCB High Speed Signal Integrity Signal Integrity Advanced	Launch PCB Editor. Open PCB Design. Launch an advanced simulation process. See NOTE2.
Run **IBIS AMI process** from within the **PCB** design.	PCB Preditor PCB High Speed Signal Integrity Signal Integrity Advanced IBIS-AMI	Launch the PCB Editor. Open PCB Design. Launch Electrical Editor. Launch an IBIS-AMI process.
Launch **Analysis Results Viewer** from within the **PCB** design on existing results.	PCB Preditor PCB High Speed Signal Integrity	Launch the PCB Editor. Open PCB Design. Launch Constraint Browser. Update simulation status.
Operation	**Required Features**	**How to Borrow**
Migrate **CADSTAR Schematic Design** to **eCADSTAR**	CADSTAR Migration eCADSTAR Migration Schematic Design	Launch the Schematic Editor. Launch the CADSTAR

	Library Editor	Design Migration dialog. Select a CADSTAR archive file for the schematic to migrate. Deselect the PCB archive option. Progress through the migration wizard and ensure the Results option is displayed and confirms a successful migration.
Migrate **CADSTAR PCB Design** to **eCADSTAR**	CADSTAR Migration eCADSTAR Migration PCB	Launch the PCB Editor. Launch the CADSTAR Design Migration dialog. Select a CADSTAR archive file for the PCB to migrate. Deselect the Schematic archive option. Progress through the migration wizard and ensure the Results option is displayed and confirms a successful migration.
Migrate **CADSTAR Library** to **eCADSTAR**	CADSTAR Migration eCADSTAR Migration Library Editor	Launch the Library Editor. Launch the CADSTAR Library Migration dialog. Select a CADSTAR library directory for the library to migrate. Optionally, chooses the required archive files for the library migration. Progress through the migration wizard and ensure the Results option is displayed and confirms a successful migration.

NOTE: Advanced simulation processes are:

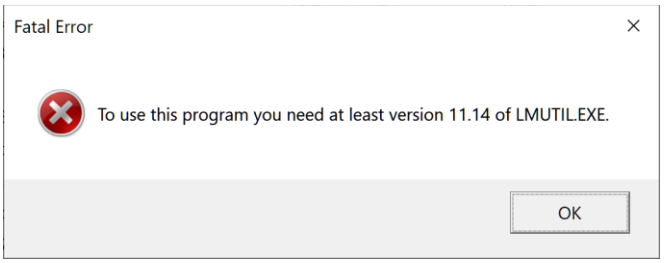
- FD Analysis
- TDR Analysis
- HSPICE Simulation
- SPICE/HSPUI Export

NOTE2: For advanced simulation processes HSPICE simulation and SPICE/HSPUI Export to be performed in PCB Editor they can only be launched from within the Electrical Editor.

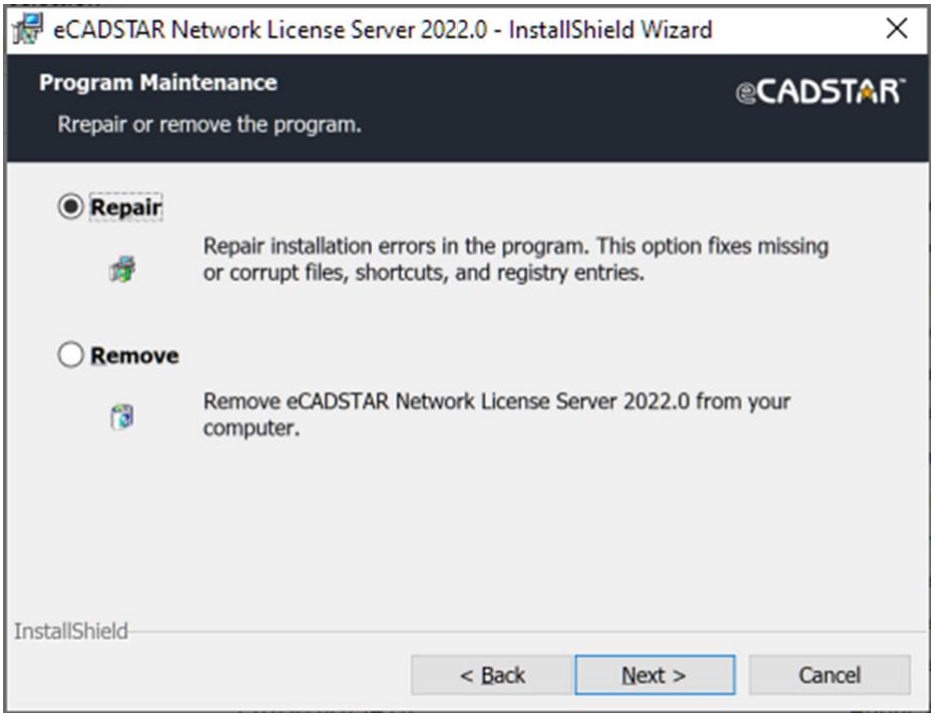
Troubleshooting

During the usage of operation of the **Network License Borrower** problems may be encountered. These problems are described in this section with solutions on how to resolve them.

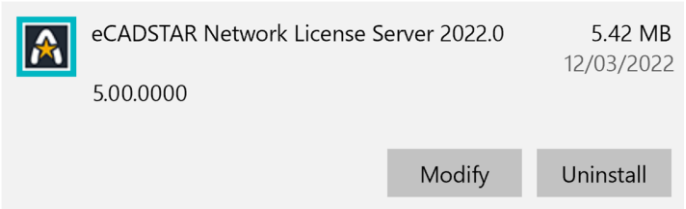
- **Fatal Error – Incorrect lmutil.exe version**



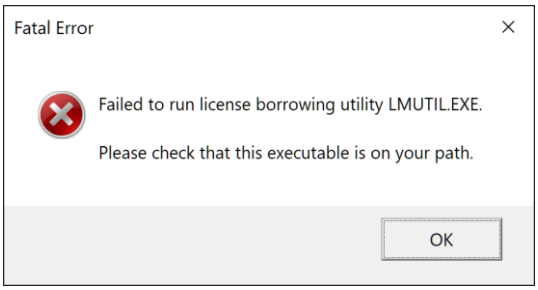
An incorrect version of the **lmutil.exe** file is present within the **eCADSTAR** installation on the PC. The minimum version required to use **Network License Borrower** with **eCADSTAR** is **11.14**.
To resolve this fatal error, please correct the installation by performing a **Repair** operation from the **eCADSTAR** install wizard.



The installer can be started by selecting the **Modify** option for the application in the **Windows Apps & features** dialog.



- **Fatal Error – Incorrect lmutil.exe version**

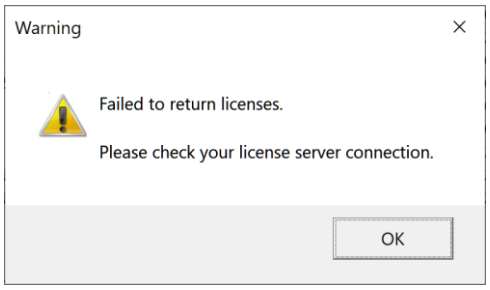


The file **lmutil.exe** cannot be found for the **Network License Borrower** during runtime. This will occur if the **lmutil.exe** file cannot be found for the environment setting **%PATH%** of the PC.

NOTE: The **lmutil.exe** file exists in the same installation directory as the **Network License Borrower** application, this is considered part of the **%PATH%** environment setting for the application.

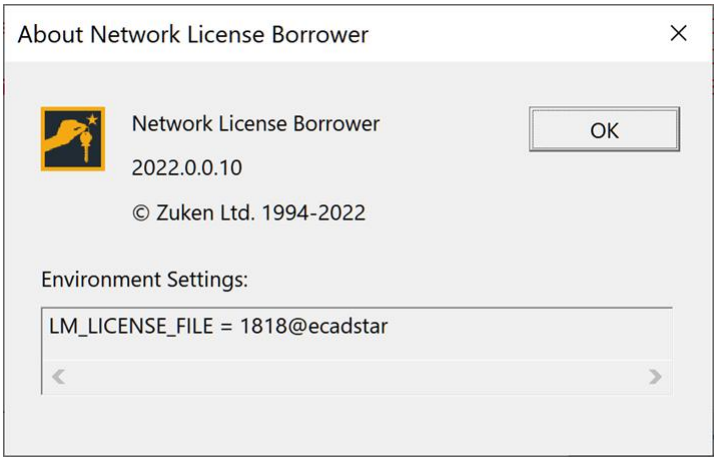
Therefore, if running the **Network License Borrower** from a **Command Prompt** and this message is displayed then it is likely the **lmutil.exe** file is missing from the installation directory. The **eCADSTAR** installation should be repaired, as described above.
If the **Network License Borrower** is started from the **Windows Start** menu then an automatic **Repair** of the **eCADSTAR** installation is performed and the **lmutil.exe** file is restored to the **eCADSTAR** installation.

- **Warning – Failure to return licenses**



The **Network License Borrower** cannot successfully return unwanted borrowed licenses to the server before the license expiry.
This may occur due to any of the following conditions:

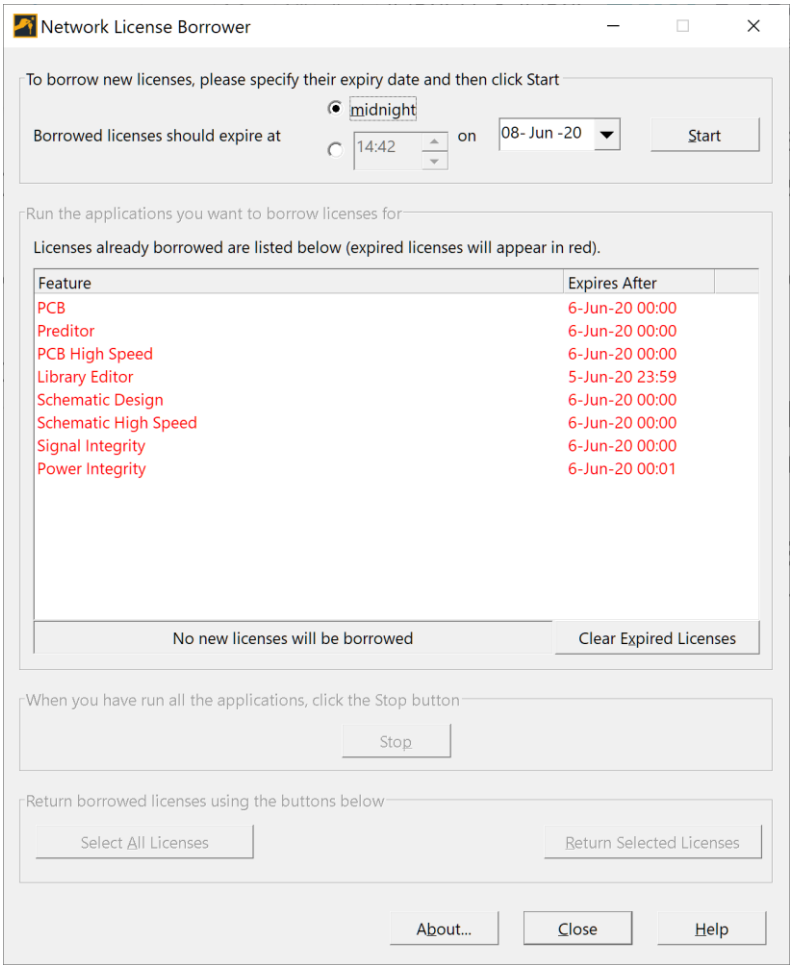
1. Your PC is not connected to the network which contains the **License Server**. Please connect to the network containing the **License Server**.
2. The **License Server Settings** for the **Network License Borrower** are different to the **License Server**. Please check the **Network License Borrower - About** dialog to confirm the settings.



3. The **License Server** may not be running and cannot be accessed by the **Network License Borrower** to return the

licences. Please ensure the **License Server** is running.

- **Other operational issues**
  - No Licenses can be borrowed
    1. Please ensure the PC is connected to the network that contains the **License Server**.
    2. Ensure that the **Start** button of the **Network License Server** has been enabled and the borrowing process is active.
    3. Ensure that the **License Server Settings** are referencing the **License Server** from which to borrow the license.
    4. Ensure there are available licenses free to be borrowed from the **License Server**.
  - Applications no longer work with the borrowed licenses
    1. Ensure the borrowed licenses have not expired. The expired licenses will be highlighted in **Red** within the **Network License Borrower** dialog. The expired licenses can be cleared from the dialog by selecting the **Clear Expired Licenses** button. Alternatively, the expired licenses will be removed from the dialog when a new license borrow session is performed.



Chapter 7 – Appendix A – License Server Troubleshooting Guide

Checking license.dat

The file called **license.dat** should contain two sections:

- The **Server** lines - for example:

  ```
  SERVER WEBSTERS REDAC_DONGLE=24EEBBF 1700
  DAEMON zuken "C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing Server 2020.0\zuken.exe"
  ```

  where:

  WEBSTERS is the DNS Host name or computer name (if DNS is not set up).

24EEBBF is the Key Number listed in the features.txt file

- The **Increment** lines

```
INCREMENT ECS_3D_MCAD zuken 2020.000 30-jun-21 3 1C81F6518CA1CF40E988 ""
```

Starting Network Licensing in a DOS Window

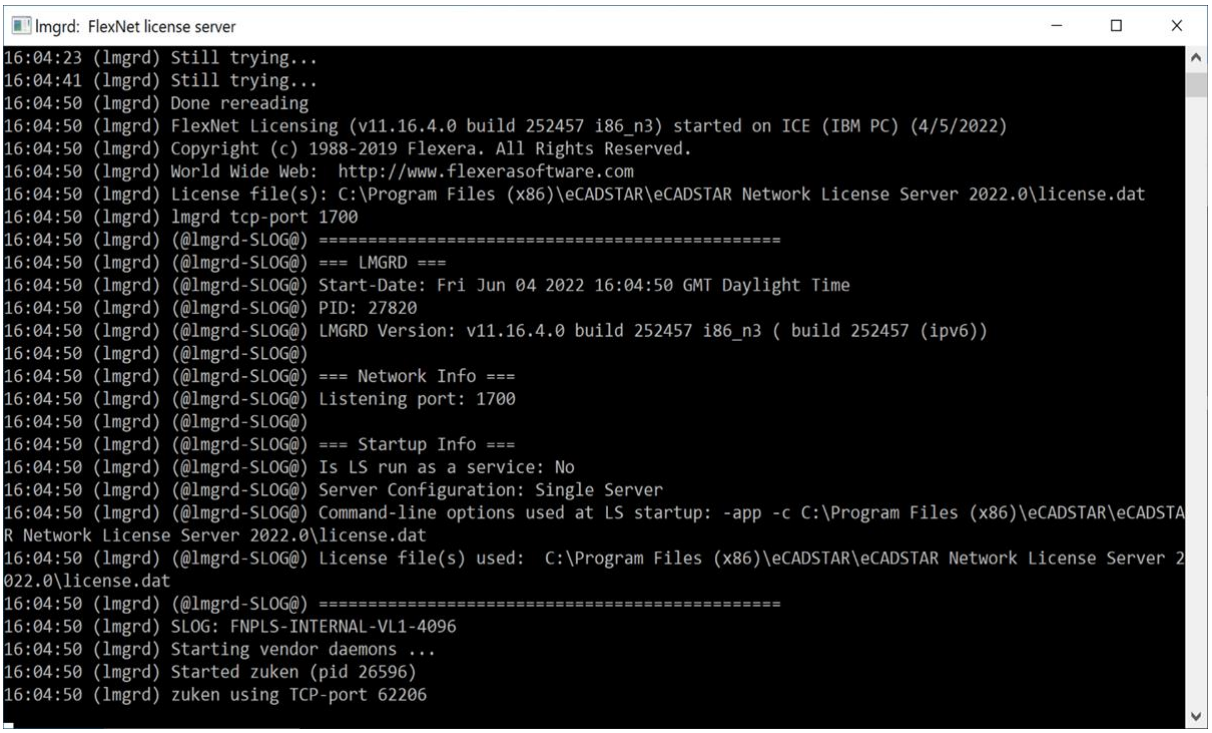
If an error occurs, after you have started the Network Licensing software using the **Start Network Licensing** option, the window shuts down before you get an opportunity to see the error message

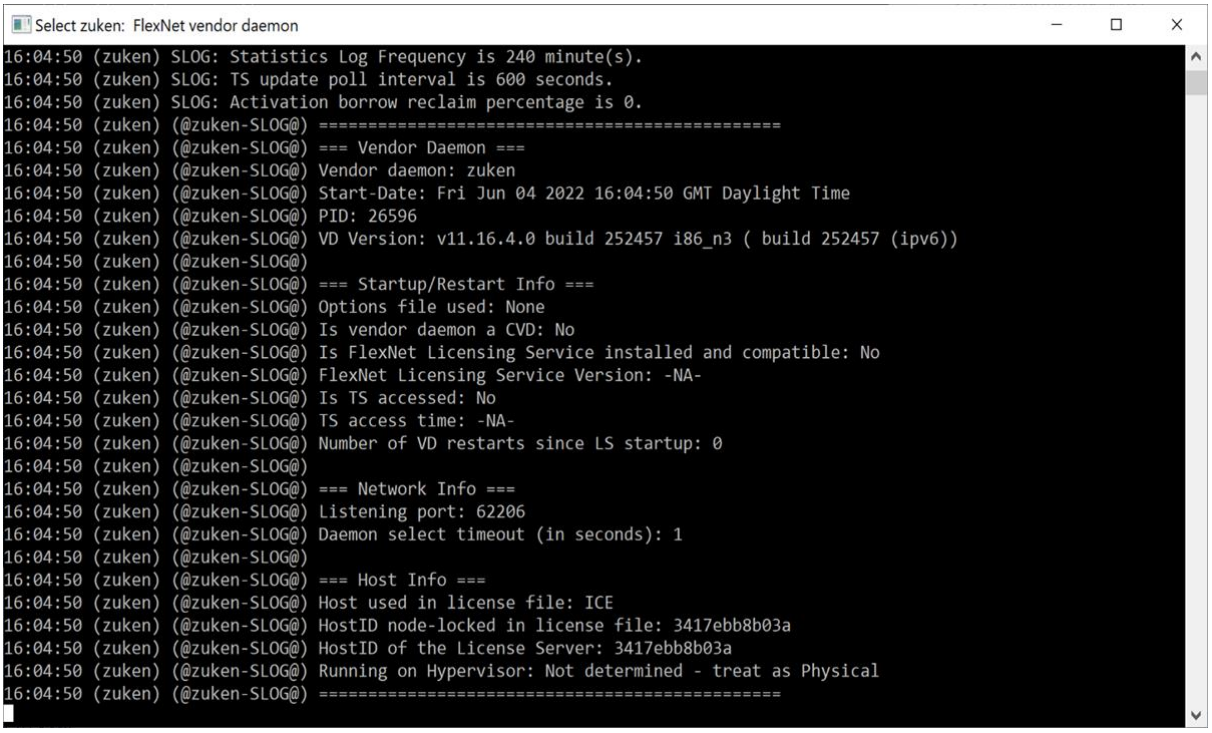
Using the command below, you can see what is happening if an error occurs:

1. *Open a **Command Prompt** window*
2. *Change Directory to the directory in which the network Licensing software is installed (usually C:\Program Files(x86) \eCADSTAR \CADSTAR Network Licensing Server 2020.0)*
3. *Enter **lmgrd -app -c license.dat***

   This starts the license in the **Command Prompt** window.

If all is OK, the lmgrd and vendor windows will be displayed:





If you get any other display, it gives feedback as to what the problem may be.

If you need a printout of the message:

4. *Type* ***lmgrd -app -c license.dat > error.txt***

If the prompt does not return after issuing this command, you must stop the server by selecting the **Stop Network Licensing** option.

Don't just close the **Command Prompt** window.

Typical Error Messages

Example 1.

```
13:24:30 (zuken) Invalid license key (inconsistent encryption code for "ECS_LIB_BASE")
13:24:30 (zuken) Invalid license key (inconsistent encryption code for "ECS_SCM_BASE")
13:24:30 (zuken) Server started on WEBSTERS
13:24:30 (zuken) Wrong hostid on SERVER line for license file:
13:24:30 (zuken)     license.dat
13:24:30 (zuken) SERVER line says REDAC_DONGLE= 17e16f2, hostid is REDAC_DONGLE=24EEBBF
13:24:30 (zuken) Invalid hostid on SERVER line
```

This indicates that the PC's dongle is different to the one referred to in **license.dat**. The **features.txt** file should contain both the Network License and Software Key ID as the first line, e.g.

 # Key no: 24eebbf (3b55)

^ ^

| |

Network License number --- ------- Security Key ID

Ensure that you are using the appropriate **features.txt** file for your current dongle.

Example 2.

```
13:26:40 (lmgrd) "websters": Not a valid server hostname, exiting.
13:26:40 (lmgrd) Valid server hosts are: "OXFORD"
13:26:40 (lmgrd) Using license file "license.dat"
```

This indicates that the PC's DNS hostname is 'websters', but license.dat contains a server name of 'OXFORD'. In this case, 'OXFORD' would have been introduced when using the **Network License Manager** utility.

Note: On some Operating Systems the PC hostname can be case sensitive. The **Network License Manager** utility only allows 'upper case' text to be entered, so it may be necessary to edit license.dat after it has been created.

Checking The \flexlm Directory

It is useful to look in the **flexlm** directory (this is automatically created if it doesn't exist). There should be two files, although in practice there may be more:

zuken

This is an empty file which signals to FLEXlm that the **zuken** daemon is running and prevents other daemons of the same name from running.

lmgrd.<number>

The **<number>** is the process ID number and, when everything is working correctly, the file looks similar to below:

```
PID=123
STARTED=Wed Feb 16 13:32:22 2022
STAMPED=Wed Feb 16 13:32:22 2022
LMGRD=C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing Server 2022.0
LICENSE_FILE=C:\Program Files(x86)\eCADSTAR\eCADSTAR Network Licensing
Server2022.0\license.dat
TCP_PORT=170
```

END OF DOCUMENT