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Agilent Technologies

Licensing (For Administrators)

Advanced Design System
2013.06

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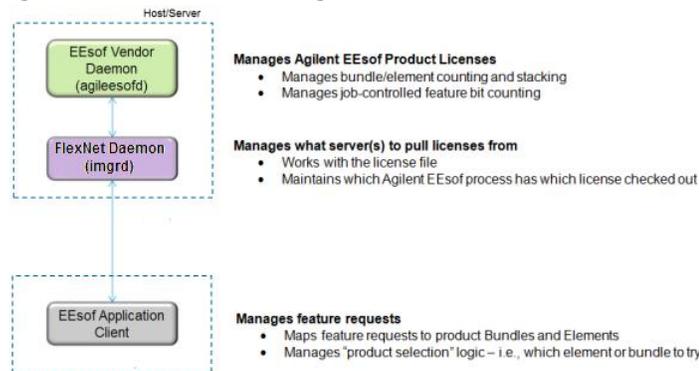
Chapter 1 – Licensing Overview

This section provides an overview of Agilent EEsof Licensing architecture.

Agilent EEsof licensing architecture comprises of three components to manage the licensing scheme:

- Agilent EEsof Vendor Daemon (***agileesofd***) to manage product licenses
- FlexNet Daemon (***lmgrd***) to manage servers
- Agilent EEsof Application Client to manage feature requests.

Figure: Agilent EEsof Licensing Architecture



Agilent EEsof licensing scheme supports only counted licenses that are either [node-locked](#) or [floating](#).

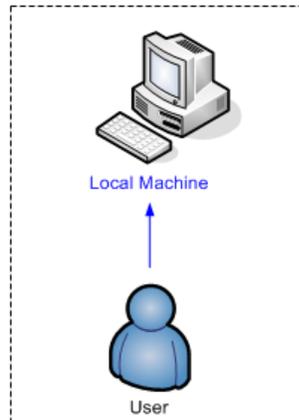
- [Node-locked Licenses](#)
- [Floating Licenses](#)
- [Understand Your License File](#)
- [Recognize License Type](#)

1.1 Nodelocked Licenses

1.1.1 Node-locked License

A **node-locked license** permits the software to run on only one machine. Both license server manager (**lmgrd**) and vendor daemon (**agileesofd**) run on the local machine for which the license is issued.

Figure: Nodelocked License Setup

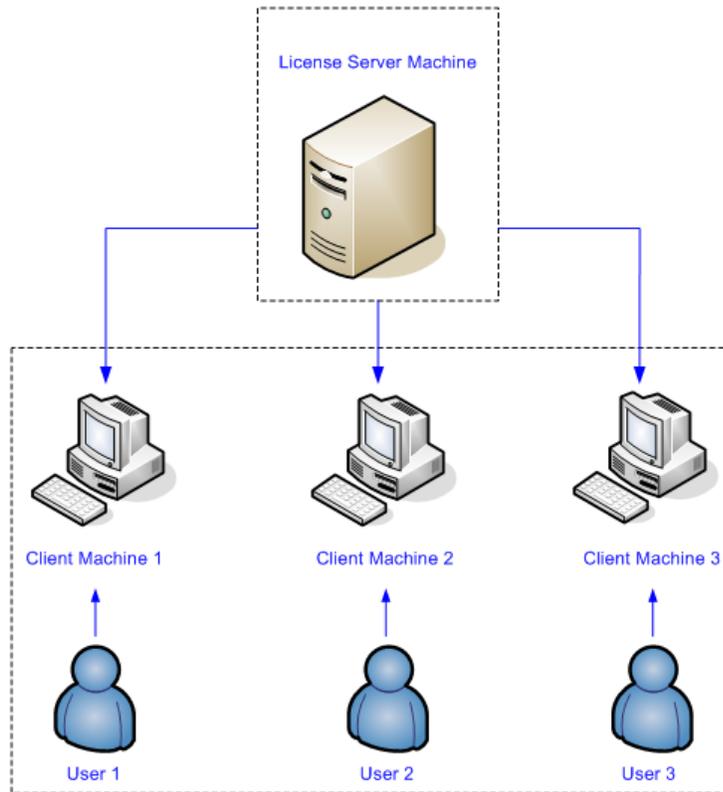


1.2 Float Software Licenses

1.2.1 Floating License

In case of a **floating (network) license**, the Agilent EEsof software application is installed on one or more client machines and uses the environment variable `<PRODUCT>_LICENSE_FILE` to point to the license server. Both license server manager (**lmgrd**) and vendor daemon (**agileesofd**) run on the license server system.

Figure: Floating License Setup



1.3 Understand Your License File

The license file contains codewords that allow you to use specific features of an Agilent EEsof product. A license file contains two major sections - License Summary Header and License Codewords.

1.3.1 License Summary Header

License summary header provides an overview of all the codewords included in the license file and setup instructions.

Sample License Summary Section

```
#####
#                               SUPPORT                               #
#####
#
#
# If you have questions regarding this license file, please contact
```

```

# EEsof Business Support Center: 800-507-6274 or eesof_bsc@agilent.com
#
#
# To understand or download Agilent EEsof licensing technology please visit
# http://www.agilent.com/find/eesof-flexnet-downloads
#
# To download Agilent EEsof Software please visit
# http://edocs.soco.agilent.com/display/downloads/Downloads
#
#
# If you are unable to set up your license file then please contact
# EEsof Technical Support:  US - 800-473-3763 or eesof-usa_support@agilent.com
#                               Asia - eesof-asia_support@agilent.com
#                               Australia:  1800-629-485
#                               China:      800-810-0189
#                               Hong Kong:  800-938-693
#                               India:      1800-11-2626
#                               Malaysia:   1800-888-848
#                               Singapore:  1800-375 8100
#                               Taiwan:     0800-047-866
#                               Thailand:    1800-375-8100
#                               Korea:      080-769-0800
#                               Europe - 1-800-473-EESOF (1-800-473-3673) or eesof-
#                               europe_support@agilent.com
#                               Japan - 81 (426) 60-8416 or eesof-
#                               japan_support@agilent.com
#
# or visit: http://www.agilent.com/find/eesof-support
#
#
# THIS LICENSE HAS BEEN GENERATED FOR HOSTID 68B599F512D7
#
#####
#                               LICENSE SUMMARY
#
# All "LICENSE pjc_XXX" lines are for EEsof license functionality only - Please
# ignore
#####
# This is a list of options contained in this license file
#
#License          Description
Expiration  Qty Version Hostid
#
#W2250BT-1F3      3 months node-locked license ADS Inclusive Bundle
05-JAN-2013  1  2.8      68B599F512D7
#LICENSE NAME b_inclusive
#
#
#####
#                               LEGAL
#

```

```
#####
# The Use of this license file is acceptance of Agilent EEs of Licensing usage
terms and conditions.
#
#####
#                               INSTRUCTIONS
#####
#
# License Setup for 2011+ version software:
#
# Windows Platforms:
#   1) Place this file on machine where file is intended: For MAC address tied
licenses, ensure this file is placed on the machine whose MAC address agrees with
#   the one appearing in the SERVER line of this file. For dongle tied
license, ensure this file is placed on the machine where the dongle is inserted.
#   2)      If this is a dongle tied license, insert your Agilent supplied USB
dongle
#   3)      Start your Agilent EEs of product. A license wizard will start to
guide you through the license setup.
#
#
# Linux/UNIX
#   1) Define {PRODUCT}_LICENSE_FILE in your license client environment where
PRODUCT=ADS, EMPRO, ICCAP, GENESYS, SYSTEMVUE, or GOLDENGATE
#   2) Place this file on the license server machine where file is intended:
For MAC address tied licenses, it is the machine whose MAC address
#   agrees with the one appearing in the SERVER line of this file. For
dongle tied license, it is the machine where the dongle is inserted.
#   (No dongle support for Linux 64bit systems)
#   3) Acquire FLEXnet v11.9 bits from either $HPPEESOF_DIR/EEs of_License_Tools
or from:
#
http://www.agilent.com/find/eesof-flexnet-downloads
#   4A) IF License server not previously installed: From FLEXnet folder, run
./lmgrd .c <Path-To-License-File> -l <Path-To-Flex-Output-File>
#   4B) IF License server previously installed: From FLEXnet folder, run
./lmutil lmreread .c <Path-To-License-File>
#
#
# LICENSE PATH INFORMATION
#
# Windows: No environment variable needed. License wizard sets this up
automatically. Value is entered into Windows Registry. Do not explicitly
# define License path environment variable.
#
# Linux/Unix: Define {PRODUCT}_LICENSE_FILE in your license client environment
where PRODUCT=ADS, EMPRO, ICCAP, or GOLDENGATE.
#   Example: ADS_LICENSE_FILE for Advanced Design System.
#
#
# License Setup for ADS Pre-2011 software AND NO 2011 installed
# Windows Platform:
#
```

```

#      1) If the EEsof License Tools Installer have been previous installed, skip
to step 5
#      2) Download Agilent EEsof License Tools Installer from
www.agilent.com/find/eesof-flexnet-downloads to temporarily place on local disk
#      3) Run as Administrator eesof_license_tools_installer_<date>.exe (this
installs EEsof License Tools)
#      4) Change directories to installation bin folder EEsof License Tools. For
example, C:\Program Files\agilent\EEsof_License_Tools\bin
#      5) Find the executable "aglmwizard.exe" and Run As Administrator.
#      6) Follow the steps in the license server to setup local license server.
#      7) In Windows System Properties, define AGILEESOFD_LICENSE_FILE to
@<machine-where-this-license-file-is-installed>
#
# Linux/UNIX
#      1) Define AGILEESOFD_LICENSE_FILE in your license client environment
#      2) Place this file on the license server machine where file is intended: For
MAC address tied licenses, it is the machine whose MAC address
#      agrees with the one appearing in the SERVER line of this file. For dongle
tied license, it is the machine where the dongle is inserted.
#      3) Acquire FLEXnet v11.9 bits from either $HPPEESOF_DIR/EEsof_License_Tools
or from: http://www.agilent.com/find/eesof-flexnet-downloads
#      4A) IF License server not previously installed: From FLEXnet folder, run
./lmgrd .c <Path-To-License-File> -l <Path-To-Flex-Output-File>
#      4B) IF License server previously installed: From FLEXnet folder, run
./lmutil lmreread .c <Path-To-License-File>
#
#
#####LICENSE KEYS START HERE#####
#
SERVER this_host 68B599F512D7
VENDOR agileesofd
#
INCREMENT b_inclusive agileesofd 2.8 05-jan-2013 uncounted \
    VENDOR_STRING="68B599F512D7P=#1,2,3,4,7,8,9,10,11,13,14,15,18,19,20,22,23,2
4,25,26,27,29,30,31,32,33,34,35,36,39,40,41,42,43,44,45,46,47,48,53,55,62,63,65,66
,67,68,69,105,106,107,108,109,110,111,113,115,116,121,122,123,124,126,128,131,132,
133,135,138,141,142,144,145,146,149,154,155,156,157,186,202,204,205,206,207,208,20
9,210,211,213,214,215,219,221,223,226,313D=#W2250BP,ADS_Inclusive;e_core,e_phys_la
yout,e_sim_harmonic,e_link_rfic,e_sim_trans_conv,e_sim_momentum,e_sim_sys,e_sim_ve
rilog_ams,e_sim_envelope,e_sim_verilog_a,e_sim_rf_arch,e_mdl_wireless_mature,e_mdl
_wireless_int,e_sim_fem \
    : IUIWQDZ PFXBHLF QXEZRXF KWEYDLF NGPHEBQ KRWZQGY EXT" HOSTID=68b599f512d7
ISSUER=LICENSEID=2760699 START=05-Oct-2012 SIGN="00A5 8C36 20E9 88BA 9FF6 00DB
888A E1F7 07D9 773B 1403 F314 4106 0152 C58C 47EA 2D5C 9B31 26B7 C5B5 B325"
INCREMENT pjc_b_inclusive agileesofd 2.8 05-jan-2013 uncounted
VENDOR_STRING="68B599F512D7 : XBQKRWZ QGYEXTU IWQDZPB 1ZWMDD WXYUGSH FUWXJEZ
RXFKWEY DLFNGPH E" HOSTID=68b599f512d7 ISSUER=LICENSEID=2760699 START=05-Oct-2012
SIGN="030D 8488 9159 BB01 1621 A72A 4939 D3E0 502D D4DE 3E01 2069 E5BC 28DE D8C2
0265 EAA6 E18F 49C6 F7D7 3C86"
#

```

```
#####LICENSE END#####
```

1.3.2 License Codewords

License codewords follow FlexNet format and contains the server, vendor, and increment lines.
Sample License Codewords Section

```
# sample license file
SERVER this_host D8D385997F8A
VENDOR agileesofd

INCREMENT b_core agileesofd 3.0 14-sep-2013 1
VENDOR_STRING="D8D385997F8AP=#1,7,8,13,14,25,27,66,67,105,110,116,131,132,156D=#W2
200BP,ADS_Core;e_core : MUFNCUI WQDZPFX QTBMCYE SW2TFGC OWKGNHJ UIB"
HOSTID=d8d385997f8a ISSUER=LICENSEID=1598592 START=19-Sep-2012 SIGN="033F C701
6926 5CB6 5505 F6EC D5EE E3FE F302 A765 9201 008B E71B FE5B 2308 EE8F D5C0 9374
AE0F 2F68 24CD"

INCREMENT pjc_b_core agileesofd 3.0 14-sep-2013 1 VENDOR_STRING="D8D385997F8A :
RQHSXF2 AQCOVERN H1FUYQN LMDYFPG SHFUWXJ EZRXYAU EQEFZHA" HOSTID=d8d385997f8a
ISSUER=LICENSEID=1598592 START=19-Sep-2012 SIGN="031A EA80 70C0 60D1 CAC4 B206
DD99 C63F DB63 9DB8 E901 B4E8 F500 45F4 25F1 0B27 ODD1 6919 3CEC 119F FD6F"
```

The following provides a brief overview of the syntax of the statements included in the License Codewords section. For further details, refer to the License File Syntax in [FlexNet Publisher's License Administration Guide](#).

The License Codewords section, usually contains three pieces of information: the `SERVER` line, the `VENDOR` line, and all the `INCREMENT` lines representing the licensed codewords.

SERVER Line Syntax

Agilent supports both single server and redundant servers, as per FlexNet standard configurations. In case of single server, the `SERVER` line syntax is:

```
SERVER this_host <hostid> [port]
```

In case of redundant servers, the `SERVER` line syntax is:

```
SERVER <hostname1> <hostid1> <port>
SERVER <hostname2> <hostid2> <port>
SERVER <hostname3> <hostid3> <port>
```

where,

- hostname1, hostname2, hostname3 are the system host names or IP address. String returned by the hostname or **uname -n** command on UNIX; or by the **ipconfig /all** command on Windows. Note that redundant servers should all have the same OS, that is, you cannot have one server on Solaris, and another on Linux.
- hostid, hostid1, hostid2, hostid2 are usually the string returned by the **Imhostid** command. This is specified in the issued license file by Agilent EEsof.
- Port is the TCP/IP port number to use. This is an optional field for single server configuration, but is a required field for redundant server configuration. A valid number is any unused port number between 0 and 64000. On UNIX, choose a port number greater than 1024, because anything less than or equal to 1024 are reserved. If no TCP/IP port number is specified, one of the default ports in the range of 27000 through 27009 is used.

this_host is the generic host name for the computer for which the node-locked license is issued, and can be used as is without replacing it with the real computer host name in that case.

VENDOR Line Syntax

The VENDOR line specifies the vendor daemon information. The VENDOR line syntax is:
 VENDOR agileesofd [<path_to_agileesofd> agileesofd] [[OPTIONS=]
 <options_file_path> agileesofd.opt] [[PORT=] port]

Example 1

```
VENDOR agileesofd
```

Example 2

```
VENDOR agileesofd C:\Program  
Files\Agilent\EEsof_License_Tools\bin\agileesofd C:\Program  
Files\Agilent\EEsof_License_Tools\bin\licenses\agileesofd.opt  
PORT=5346
```

where,

- agileesofd is the name of Agilent EEsof vendor daemon.
- C:\Program Files\Agilent\EEsof_License_Tools\bin\agileesofd is the full path-name to the vendor daemon executable.

- C:\Program Files\Agilent\EEsof_License_Tools\bin\licenses\agileesofd.opt is the full path-name to the FlexNet options file.
- 5346 is the specified TCP/IP port number for the vendor daemon.

INCREMENT Line Syntax

The INCREMENT line specifies information about a licensed codeword. Codeword name, vendor daemon name, license version, license expiration date, license count, and vendor string are some of the important information included. The INCREMENT line syntax is:

```
INCREMENT <feature> agileesofd <license_version> <license_expiry_date>
<license_count> VENDOR_STRING=<agilent_eesof_vendor_string>
[HOSTID=<hostid>] START=<license_start_date> SIGN=<encoded signature
to authenticate this INCREMENT line>
```

Example

```
INCREMENT b_core agileesofd 3.0 06-feb-2013 1 \
VENDOR_STRING="D8D385997F8AP=#1,7,8,13,14,25,27,66,67,105,110,116,131,132,156D=#W2
200BP,ADS_Core;e_core : \
MUFNCUI WQDZPFX QTBMCIYE SW2TFGC OWKGNHJ UIB" HOSTID=d8d385997f8a
ISSUER=LICENSEID=1598592 \
START=19-Sep-2012 SIGN="033F C701 6926 5CB6 5505 F6EC D5EE E3FE F302 A765 9201
008B E71B FE5B 2308 EE8F D5C0 9374 AE0F 2F68 24CD"
```

where,

- b_core is the name of the feature being licensed.
- agileesofd is the name of Agilent EEsof vendor daemon.
- 3.0 is the license version.
- 06-feb-2013 is the expiration date of license.
- 1 is the number of license(s).

1.4 Recognize License Type

You can determine the license type to be node-locked or floating by looking at the INCREMENT lines in your license file.

1.4.1 Node-locked License

The INCREMENT line corresponding to a **node-locked license** embeds the CPU ID of the **license server** machine or the FlexNet ID of the dongle in the `HOSTID=` part of the statement.

Example 1: Node-locked license tied to a CPU ID

```
SERVER this_host D8D385997F8A
VENDOR agileesofd

INCREMENT b_core agileesofd 3.0 14-sep-2013 1
VENDOR_STRING="D8D385997F8AP=#1,7,8,13,14,25,27,66,67,105,110,116,131,132,15
6D=#W2200BP,ADS_Core;e_core :
MUFNCUI WQDZPFX QTBMCIYE SW2TFGC OWKGNHJ UIB" HOSTID=d8d385997f8a
ISSUER=LICENSEID=1598592 START=19-Sep-2012
SIGN="033F C701 6926 5CB6 5505 F6EC D5EE E3FE F302 A765 9201 008B E71B FE5B
2308 EE8F D5C0 9374 AE0F 2F68 24CD"
```

As shown above, presence of `HOSTID=d8d385997f8a` indicates that codeword `b_core` is tied to a CPU of the ID `d8d385997f8a`.

Example 2: Node-locked license tied to a USB dongle

```
SERVER this_host FLEXID=10-0BEBBCD44
VENDOR agileesofd

INCREMENT b_core agileesofd 3.0 14-sep-2013 1
VENDOR_STRING="10-
0BEBBCD44P=#1,7,8,13,14,25,27,66,67,105,110,116,131,132,156D=#W2200BP,ADS_Cor
e;e_core :
MUFNCUI WQDZPFX QTBMCIYE SW2TFGC OWKGNHJ UIB" HOSTID=FLEXID=10-
0BEBBCD44 ISSUER=LICENSEID=1598593 START=19-Sep-2012
SIGN="002F CADB 63C8 0FCE DF16 BBA4 4AAB A335 B54F F121 3A02 79A9 D9A9
A701 F727 AAF8 791E 0615 BD0B D95F 87C5"
```

As shown above, presence of `HOSTID=FLEXID=10-0BEBBCD44` indicates that codeword `b_core` is tied to a dongle of the ID `10-0BEBBCD44`.

1.4.2 Floating License

An INCREMENT line that does have the HOSTID= identifier embedded in it indicates the license to be a **floating (network) license**.

Example 1: Floating license tied to a CPU ID

```
SERVER delly 001EC940F06A 27001
VENDOR agileesofd

INCREMENT b_cct_layout_momentum agileesofd 3.0 07-feb-2014 10 \
    VENDOR_STRING="001EC940F06AP=#1,2,3,4,7,8,9,10,11,13,14,18,19,20,22,23,24,2
5,26,27,55,62,63,65,66,67,68,105,106,107,108,109,110,111,115,116,131,132,133,135,1
54,155,156,1001007D=#W2214BT,ADS_Core+Layout+CircuitSim+MomentumG2;e_core,e_phys_l
ayout,e_sim_envelope,e_sim_harmonic,e_sim_momentum,e_sim_trans_conv \
    : CNRHDNH JB1CQEZ RXYAGCK RXFTSLT KBJMBHA JIYPOUK DFYPRWE \
    QGY1OEZ QGAUHJL U" START=10-aug-2012 SIGN="0118 C5B9 0443 57BB \
    CE05 08DB 0539 D627 D41B C8BC 8C00 5000 EA38 3BF4 B1A5 9E8D \
    06F3 E837 63C4 4B05 31DE"
```

As shown above, no HOSTID in the INCREMENT line indicates that codeword `b_cct_layout_momentum` is a floating license.

Chapter 2 – Licensing Attributes

Agilent EEs of [Licensing Behavior](#) is administered by the following attributes:

- [User-Display-Host \(UDH\)](#)
- [License Security](#)
- [License Counting](#)
- [Job Control](#)

2.1 User-Display-Host (UDH)

All Agilent EEs of licenses are counted, with User-Display-Host as the base of forming the license checkout identify. Each unique User-Display-Host consumes one count of a license. Additional licenses are required if user, display or host is changed. For example, the following cases would cause an additional count of license to be checked out:

- A second user logs on the same host. This is because `user` is changed.
- The user moves to another terminal and launches another session of the product. This is because display is changed.

2.2 License Security

All Agilent EEs of licenses are secured by codewords, which are tied to a CPU ID or a USB dongle.

- CPU ID: Specifies the unique ID of a computer. It uses the physical address (hostid) of your computer.
- USB Dongle: Uses the dongle ID (or the FlexNet ID) of your USB dongle.

Our licensing scheme supports counted node-locked licenses and floating licenses.

- Node-locked License: A node-locked license can be used on a specific computer to which the license is tied. It allows an Agilent EEs of Product to be used on a single computer with a single display by a single user. The user, license, and computer must physically co-locate.
- Floating (Network) License: A floating (network) license can be shared among multiple users across a computer network. Floating license support is provided for a single and

multiple servers (including distributed product servers, peak servers, and redundant servers). With a floating license, an individual feature contained in a bundle or element can be run locally or remotely by a single user.

Agilent's Licensing, on a best effort basis, supports remote access via Windows Remote Desktop, VNC, Citrix, and Exceed. A floating license is required for remote access. This functionality is not supported with a node-locked license.

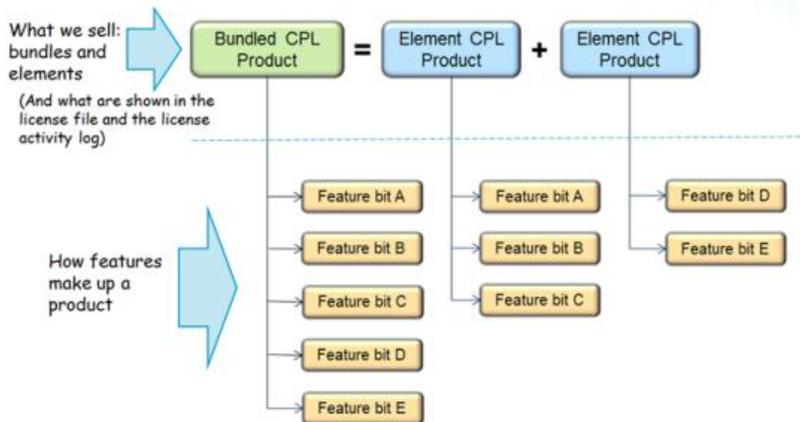
Example

A user starts an ADS session on Computer A. One core bundle with simulator license is checked out. If the same user tries to launch another ADS session using Remote Desktop, an additional license will be checked-out because the host has changed.

2.3 License Counting

Agilent EEsof licensing supports only counted licenses. The count associated with a license specifies the maximum concurrent use of that license. Each Agilent EEsof license comes in the form of a bundle or an element, which in turn contains one or more features.

Figure: Bundles and Elements Composition



When a license count limit is reached, that license is no longer available for additional use.

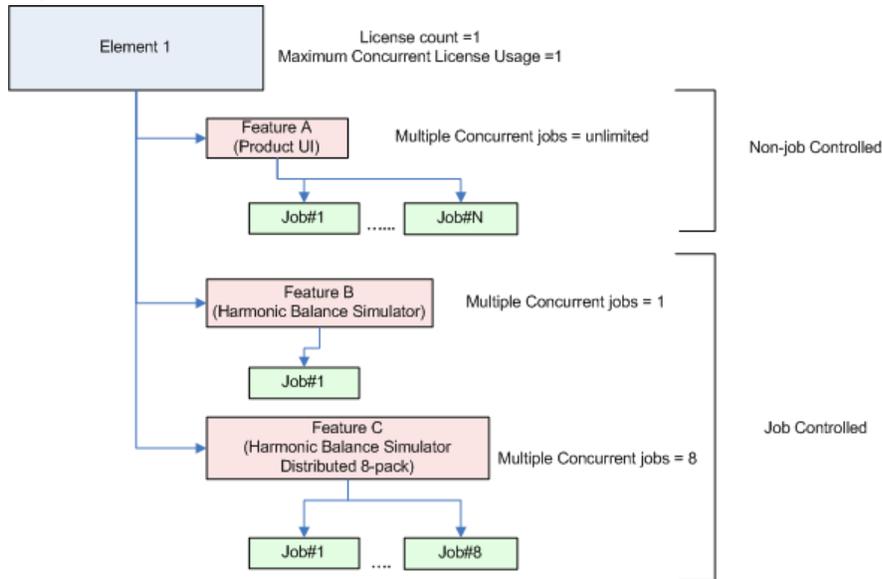
2.4 Job Control

Some features contained in a bundle or an element, are job controlled. Job control limits the concurrent use of a feature. Simulators and models are typically job controlled features. Most job controlled features have a job-control limit of one—Harmonic Balance simulator, Momentum simulator, LTE wireless library are examples of this class—and some have greater than one

limit to support parallel computing—Momentum turbo, 8-pack transient/convolution, quad-pack GoldenGate simulation are some of the examples of this type.

In Contrast to job controlled features, non job-controlled features entitle a single UDH to share one count of the license unlimited times. Environment GUI features are typically of this type.

Figure: Job Control of Features



2.5 License Codeword Version Compatibility

Couldn't find a page to include called: [License Codeword Version Compatibility Table](#)

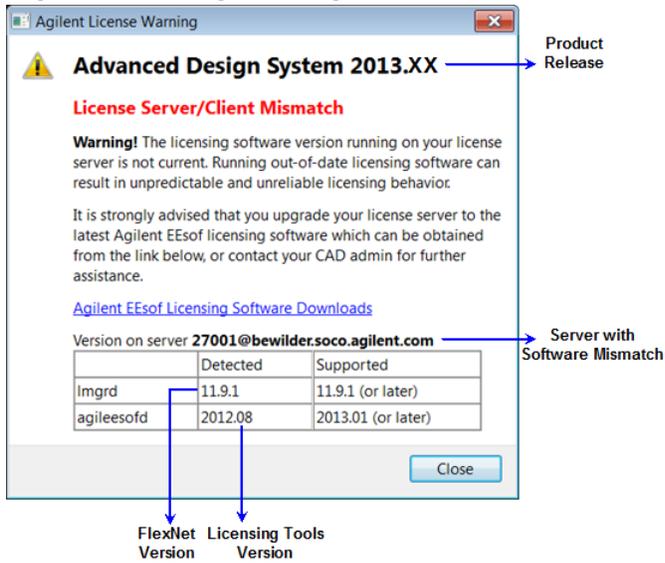
2.5.1 FlexNet Version

FlexNet has its own release version compatibility rule that must be followed to ensure proper licensing behavior. Following are a few basic compatibility rules:

1. **Imgrd** version must be greater than or equal to vendor daemon (**agileesofd**) version.
2. Vendor daemon (**agileesofd**) version must be greater than or equal to the software applications.

The *License Server/Client Mismatch* warning message is displayed when the installed version of license server (**Imgrd**) and vendor daemon (**agileesofd**) appears to be older than the minimum required version. This warning message also displays the minimum required version.

Figure: Warning Message in ADS for Example



Refer to [FlexNet Publisher's License Administration Guide](#) for further details.

Chapter 3 – Setting Up Licenses on Windows

This section describes how to set up a [node-locked license](#) or a [floating \(network\) license](#) on Windows.

Both node-locked and floating licenses require [license server](#) to get installed and started. For a node-locked license, license server and the client machine are the same machine (that is, your local machine). For a floating license, these can be separate machines.

- [Node-locked License](#)
- [Floating \(Network\) License](#)

3.1 Setting Up Nodelocked License on Windows

On Windows, the **License Setup Wizard** offers the easiest way to set up your [node-locked license](#). We strongly recommend you to use the **License Setup Wizard**, especially when you have multiple Agilent EEsof products installed on one computer. For more information, refer to [Quick Install-Windows](#). This section describes how to set up a node-locked license manually, should you decide not to use the **License Setup Wizard**.

Important

Do not perform manual setup steps with the **License Setup Wizard**. Choose one method or the other. **License Setup Wizard** may not be able to replace what you set up manually due to Administrator Privilege differences.

3.1.1 Manual Setup Instructions for a Node-locked License

The following instructions assume that you have already installed [Agilent EEsof Licensing Tools](#) in `C:\Program Files\Agilent\EEsof_License_Tools` folder. In case you have not yet installed the tools, run the Agilent EEsof Licensing Tools installer on the machine to which the license is tied to.

Make sure to save the license file on the same machine where you install the Agilent software.

- [License tied to a CPU ID](#)

- [License tied to a USB Dongle](#)

License tied to a CPU ID

The following 3-step process shows how to manually set up a counted license that is tied to a CPU ID.

Step 1: Start License Server Managers

Start the FlexNet license server managers (*lmgrd* and *agileesofd*) on the computer to which the license is tied as follows:

1. Open the MS-DOS command prompt and change directory to the following path:
`C:\Program Files\Agilent\EEsof_License_Tools\bin.`
2. Specify the full path and location of the license file and the license log file, respectively, by typing the following command:
`lmgrd.exe -c <license file path> -l <license log file path>`
where,
 - <license file path> specifies one or more full path-names to the license file(s).
 - <license log file path> is the full path-name to the debug log file.

The spaces in path-names requires double quotes around the path-names.

Example

```
lmgrd.exe -c "C:\Program  
Files\Agilent\EEsof_License_Tools\licenses\license.lic" -l  
"C:\Users\Public\my_server_log.txt"
```

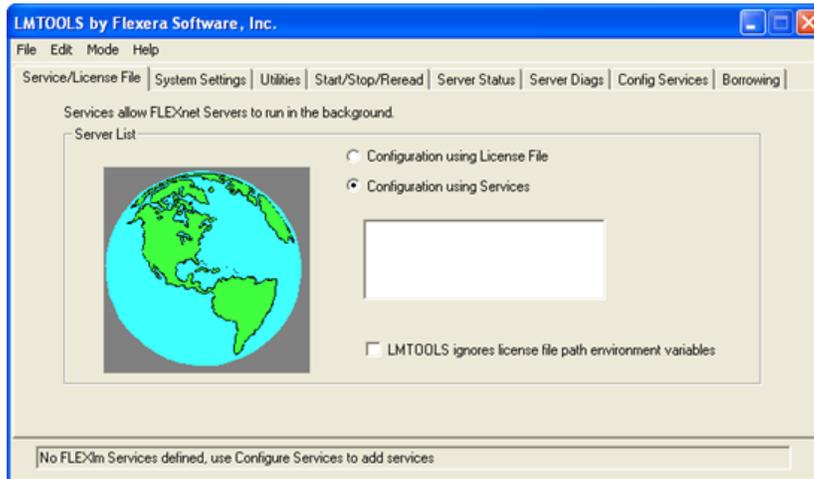
Step 2: Create Windows Service

To automate the restart of the license server managers upon PC reboot, configure a Windows Service as follows:

You must have Administrator Privileges to configure a Windows Service. The service will run under the Local System account.

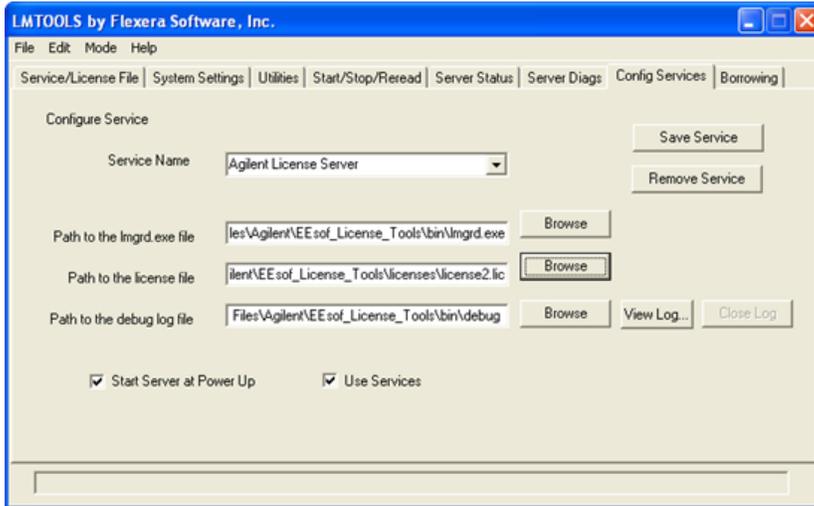
1. Run the *lmtools.exe* from `C:\Program Files\Agilent\EEsof_License_Tools\bin.` The **lmtools** utility window is displayed.

2. In the **Service/License File** tab, select the **Configuration using Services** option.



3. Click the **Config Services** tab and enter the following details:
- Service Name:** Type the service name (for example, *EESof EDA License Server*).
 - Path to the `lmgrd.exe` file:** Click **Browse** and specify the path to the `lmgrd.exe` file on the license server (for example, *C:\Program Files\Agilent\EESof_License_Tools\bin\lmgrd.exe*).
 - Path to the license file:** Click **Browse** and specify the path to the license file on license server (for example, *C:\Program Files\Agilent\EESof_License_Tools\licenses\license.lic*).
If you have multiple license files for serving multiple Agilent EESof products, you should include them all.
 - Path to the debug log file:** Click **Browse** and specify the path to the debug log file on license server (for example, *C:\Users\Public\my_server_log.txt*).
4. Select the **Use Services** option.
5. Select the **Start Server at Power Up** option.

- Click **Save Service**. The following figure shows the configured services in the **Imtools** window.



- To verify that the service is created, click the **Start/Stop/Reread** tab and observe that your service shows up in the **FlexNet license services installed on this computer** list.

Troubleshooting Tip

To verify if the license managers are running, click again on the **Config Services** tab later and click **View Log**. A log window appears that confirms whether *Imgrd* and *agileesofd* are up and running.

Step 3: Set Product Environment Variable

Set the environment variable `<PRODUCT>_LICENSE_FILE` to point the machine running the license server managers (*Imgrd* and *agileesofd*).

- Select **Start > Control Panel > System**. Click **Advanced system settings**. The **System Properties** dialog box appears and the **Advanced** tab is selected by default).
- Click **Environment Variables**.
- In the **Environment Variables** dialog box, add the product specific environment variable `<PRODUCT>_LICENSE_FILE` as a new system variable. For example, for SystemVue, it is **SYSTEMVUE_LICENSE_FILE**, for ADS, it is **ADS_LICENSE_FILE**, for EMPro, it is **EMPRO_LICENSE_FILE** and so on. For details, refer to [License Environment Variables](#) section.
- In the **New System Variable** dialog box, set the value to be the same as what you specified in the `--c` argument when you start *Imgrd*. To use the example illustrated in [Step 1](#), second bullet, this value would be `C:\Program Files\Agilent\EEsof_License_Tools\licenses\license.lic`.

5. Repeat 3 and 4 for each Agilent EEsof product you have installed on your computer.

License tied to USB Dongle

The following 4-step process shows how to manually set up a counted license that is tied to a USB dongle.

You can move a dongle between systems after performing this license setup process for each computer you intend to run Agilent EEsof product(s) using the dongle license(s). If multiple dongles are swapped from one computer to another, be sure to include all the licenses associated with those dongles during the setup process.

Step 1: Attach Dongle

Make sure that the dongle is securely attached to the USB port of your computer. Some systems may require up-to a few minutes to detect the dongle, therefore, make sure to keep sufficient time before the next step.

Step 2: Install USB Dongle Drivers

The USB Dongle drivers need to be installed once on each computer that is intended to run Agilent EEsof product(s) with dongle license(s).

The USB dongle drivers can be found under the license installation tree. To install the drivers, run the **FLEXid_Dongle_Driver_Installer.exe** from *C:\Program Files\Agilent\EEsof_License_Tools\bin*. You may be required to restart your local machine after the installation is complete.

If you are using Wibu Key Dongle, make sure to select the **FLEXid 10 Drivers** option.

Step 3: Start License Server Manager and Create Windows Service

Follow the steps 1 and 2 described in the [License tied to CPU ID](#) section.

Step 4: Set Product Environment Variable

Follow the step 3 described in the [License tied to CPU ID](#) section.

3.2 Setting Up Floating License on Windows

Setting up floating licenses on Windows is a two-step process where both server-side setup and client-side setup are needed.

Step 1: Server-side setup

Repeat the following steps for each license server you have.

- For licenses tied to a CPU ID, follow the steps 1 and 2 described in the [Setting up Node-locked License on Windows](#) section.
- For licenses tied to a USB Dongle, follow steps 1 through 3 described in the [Setting up Node-locked License on Windows](#) section.

Step 2: Client-side setup

Once the license is configured successfully for all the license servers, configure each client computer to point to the network license server. **License Setup Wizard** offers the easiest method to get this done. Alternatively, you can perform this step manually by following step 3 of [Setting up Node-locked License on Windows](#) section. Make sure to specify the network license server in the format of `port@host.domain`.

Example

`27001@myServer.myCompany.com`

In case a license server is down or is running slow, it is recommended to remove it from the server list using the **License Setup Wizard** to avoid any performance degradation caused by the dead/slow servers.

Chapter 4 – Setting Up Licenses on Linux and Solaris

This section describes how to set up a node-locked license or a floating (network) license on Linux and Solaris.

Both node-locked and floating licenses require [license server](#) to get installed and started. For a node-locked license, license server and the client machine are the same machine (that is, your local machine). For a floating license, these can be separate machines.

- [Node-locked License](#)
- [Floating \(Network\) License](#)

4.1 Setting Up Nodelocked License on Linux and Solaris

This section describes how to set up a node-locked license on Linux and Solaris. In case of multiple Agilent EEsof Products,

Important

Agilent EEsof products no longer run on the Solaris platform; however we still support Solaris as the license server system.

4.1.1 License Setup Instructions for a Node-locked License

The following instructions assume that you have already installed [Agilent EEsof Licensing Tools](#) either in the EEsof product installation tree, or in a dedicated location. The former happens automatically when you install Agilent EEsof product on the Linux platform; the latter happens when you separately download the Agilent EEsof Licensing Tools from Agilent download website and install the package to a dedicated location. In the former case, you can find all the licensing tools and binaries under `<PRODUCT_INSTALL_DIR>/Licensing/<license tools version>/linux_x86_[32|64]/bin` directory. In the latter case, you can find all the licensing tools and binaries in the `<LIC_INSTALL_DIR>/bin` directory. For convenience, `<LIC_PATH>` is used in the rest of this chapter to represent the directory where the licensing libraries and executables are located.

Make sure to save the license file on the same machine where you install the Agilent software.

- [License tied to a CPU ID](#)
- [License tied to a USB Dongle](#)

License tied to CPU ID

The following 3-step process shows how to manually set up a counted license that is tied to a CPU ID.

Step 1: Start License Server Managers (*lmgrd* and *agileesofd*)

Start the license server managers (*lmgrd* and *agileesofd*) on the machine to which the license is tied as follows:

1. Change the directory to the <LIC_PATH>
2. Run the following command to start *lmgrd*:
`./lmgrd -c <license file path> -l <license log file path>`
where,
 - <license file path> specifies one or more full path-names to the license file(s).
 - <license log file path> is the full path-name to the debug log file.

Step 2: Automate FlexNet License Server Startup

To automate the License Server managers' startup upon system reboot, add something similar to the following sample script in the system boot services directory or */etc/rc.d/init.d*.

```
#!/bin/sh
#
# Sample FlexNet startup script for restarting EEsof License Server
#
### BEGIN INIT INFO
# Provides: eesof license server
# Required-Start: $network
# Required-Stop:
# Default-Start: 3 4 5
# Default-Stop:
# Description: Start EEsof License Server
### END INIT INFO
```

```
PATH=/bin:/usr/bin
export PATH
#
# Under the following example licensing invoking line, change /opt/ADS to the path
of your license installation directory
#
su licadmin -c "/opt/ADS/Licensing/2013.01/linux_x86_64/lmgrd -c
/opt/ADS/Licenses/license.lic -l /opt/ADS/Licenses/ads_server_log.txt"
echo "Starting Agilent EEsof FlexNet license daemon....."
sleep 5
```

All the references to `/opt/ADS/...` shown above should be replaced with the actual path of `<LIC_PATH>`.

Once you implement your version of the FlexNet startup script using the above sample, follow the steps below to complete the automation:

1. Change to the system boot services directory: `/etc/rc.d/init.d`
2. Create a startup script in the system boot services directory: `EEsof_lmgrd_restart`
3. Insert your FlexNet startup script into this script.
4. Set the permissions for this script, as shown:

```
chmod 755 EEsof_lmgrd_restart
chown root EEsof_lmgrd_restart
chgrp sys EEsof_lmgrd_restart
```

5. For license servers, run the command: `/sbin/chkconfig --add EEsof_lmgrd_restart`

Step 3: Set Product Environment Variable

Set the product specific environment variable `<PRODUCT>_LICENSE_FILE` to point to the machine running the license server managers (*lmgrd* and *agileesofd*). For example, for ADS, it is `ADS_LICENSE_FILE`, for GoldenGate, it is `GOLDENGATE_LICENSE_FILE` and so on. For details, refer to [License Environment Variables](#) section.

This environment variable can be set in the user login startup file such as **.cshrc** (for C shell) or **.profile** (for Bourne shell) in the **\$HOME** directory. Alternatively, these variables can be set using command-line as well.

csh, tcsh, cshrc command for setting <PRODUCT>_LICENSE_FILE

```
setenv <PRODUCT>_LICENSE_FILE <license file pathname>
```

Example Product=ADS

```
setenv ADS_LICENSE_FILE $HOME/Agilent/Licenses/license.lic
```

ksh, bash command for setting <PRODUCT>_LICENSE_FILE

```
export <PRODUCT>_LICENSE_FILE=<license file pathname>
```

Example Product=GoldenGate

```
export GOLDENGATE_LICENSE_FILE=$HOME/Agilent/Licenses/license.lic
```

Repeat this step for each Agilent EEsof product you have installed on your Linux computer.

To use multiple Agilent EEsof Products at the same time, setup the license by merging license files for each product and starting up the License Server Managers as described in [step 1](#).

License tied to USB Dongle

Dongles are only supported for the Linux platform; they are not supported on the Solaris platform. For the Linux platform, the following 4-step process shows how to manually set up a counted license tied to a USB dongle.

You can move a dongle between systems after performing this license setup process for each computer you intend to run Agilent EEsof product(s) using the dongle license(s). If multiple dongles are swapped from one computer to another, make sure to include all the licenses associated with those dongles during the setup process.

Step 1: Attach Dongle

Make sure that the dongle is securely attached to the USB port of your computer. Some systems may require up-to a few minutes to detect the dongle, therefore, make sure to keep sufficient time before the next step.

You can move a dongle between systems by placing a copy of its associated license file on each system and moving the USB dongle from one system to another. Each system must

have the license(s) setup for use.

Step 2: Install USB Dongle Drivers

The USB Dongle drivers need to be installed once on each computer that is intended to run Agilent EEsof product(s) with dongle license(s). By default, the USB dongle drivers are bundled with the product installation files. They are available in the `dongle_sup` directory once you **untar** the installation image.

To install these drivers on your local machine, follow these steps with the appropriate drivers from the table below:

1. Disconnect the USB dongle from your local machine.
2. Change directory to `dongle_sup` under the directory you want to **untar** the installation image to.
3. Use the Red Hat Package Manager (RPM) to install the drivers. For example, to install 64-bit Flex-10 Wibu dongle driver, execute the following command:

```
rpm -i WkRt-Lin64-6.0.501-1.x86_64.rpm
```

The following table shows all available dongle drivers being packaged in the installation image.

Operating System	Device Manufacturer	FLEXID	Driver Installation File
Red Hat® Linux 32-bit	Aladdin Knowledge Systems	9	aksusbd-redhat-1.8.1-3.i386.rpm
Red Hat® Linux 32-bit	Wibu Systems AG	10	WkRt-Lin-6.0.501-1.i386.rpm
Red Hat® Linux 64-bit	Aladdin Knowledge Systems	9	aksusbd-redhat-1.14-3.i386.rpm
Red Hat® Linux 64-bit	Wibu Systems AG	10	WkRt-Lin64-6.0.501-1.x86_64.rpm
SUSE® Linux 32-bit	Aladdin Knowledge Systems	9	aksusbd-suse-1.8.1-3.i386.rpm
SUSE® Linux 32-bit	Wibu Systems AG	10	WkRt-Lin-6.0.501-1.i386.rpm
SUSE® Linux 64-bit	Aladdin Knowledge Systems	9	aksusbd-suse-1.14-3.i386.rpm
SUSE® Linux 64-bit	Wibu Systems AG	10	WkRt-Lin64-6.0.501-1.x86_64.rpm

4. Connect the USB dongle again to your local machine.
5. Open command prompt, change directory to <LIC_PATH>, and type these commands to check if the FlexNet ID of the USB dongle is correct.

Imutil Imhostid -flexid

Step 3: Start License Server Manager and Automate License Server Manager Restart

Follow the steps 1 and 2 described in [License tied to CPU ID](#) section.

Step 4: Set Product Environment Variable

Follow the step 3 described in [License tied to CPU ID](#) section.

4.2 Setting Up Floating License on Linux and Solaris

Setting up floating license on Linux or Solaris is a two-step process where both server-side setup and client-side setup are needed.

Step1: Server-side setup

Repeat the following steps for each license server you have.

- For licenses tied to a CPU ID, follow the steps 1 and 2 described in [Setting up Node-locked Licenses on Linux and Solaris](#) section.
- For licenses tied to a USB Dongle, follow steps 1 through 3 described in [Setting up Node-locked Licenses on Linux and Solaris](#) section.

Step 2: Client-side setup

Once the license is configured successfully for all the license servers, configure each client computer to point to the network license server. **License Setup Wizard** offers the easiest method to get this done Alternatively, you can perform this step manually by following step 3 of [Setting up Node-locked License on Linux and Solaris](#) section. Make sure to specify the network license server in the format of `port@host.domain`.

Example

`27001@myServer.myCompany.com`

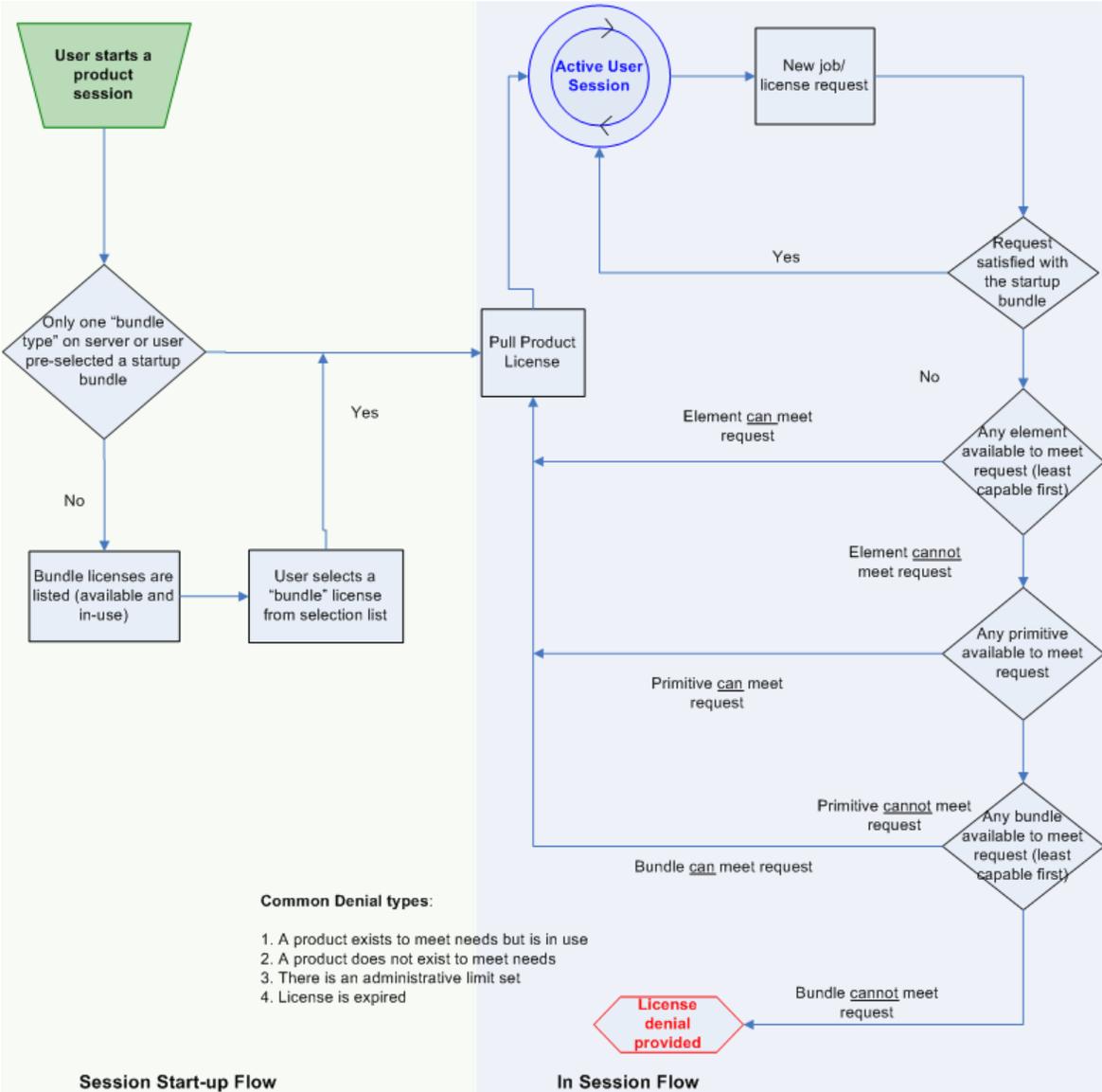
In case a license server is down or is running slow, it is recommended to remove it from the server list using the **License Setup Wizard** to avoid any performance degradation caused by the dead/slow servers.

Chapter 5 – Licensing Behavior

This section outlines the Agilent EEs of licensing behavior at the start-up of a product session, as well as during an active session.

Licensing **Hot Swapping** is not supported by Agilent EEs of Licensing scheme.

Figure: EEs of Licensing Behavior



5.1 Session Start-up Flow

While initiating an Agilent EEsof product session, if only one type of a **bundle** license is available on the license server, it is checked out and the software session starts immediately. However, if there are multiple bundle types to choose from, the **Product Selector** window is displayed, which allows the user to choose the most appropriate license to start with. You can preselect a license as the default for future sessions. To do so, in the **Product Selector** dialog box, select the license and check **Always try to start with this selection** option. Once checked, new start-up will automatically attempt to check-out the preselected license without displaying **Product Selector** in subsequent sessions. If the pre-selected license is denied, and more than one license is available to start the software, then **Product Selector** dialog box will be displayed once again.

For more details on **Product Selector**, refer to the [Product Selector](#) section.

CAD administrators can assign a startup bundle for a user and/or suppress the **Product Selector** from appearing by using the following environment variables:

- <PRODUCT>_PRODSEL_AUTOSTART
- <PRODUCT>_PRODSEL_PREVIOUS

Refer to [License Environment Variables](#) section for more details.

5.2 Active or In-Session Flow

Once the start-up license is checked out, all subsequent license requests follow the logic depicted in the diagram above. In a nutshell, the start-up license is always attempted first; if fails, **Elements**, Primitives, and Bundles are attempted in that order; also, within each group, the least capable is attempted before the more capable ones.

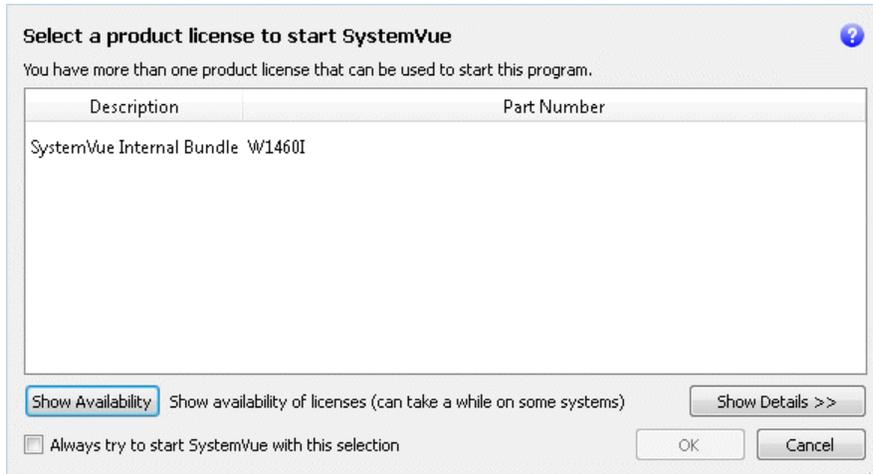
FlexNet provides additional controls, such as EXCLUDE, MAXIMUM, for the CAD Administrators to limit the license usage. For details, refer to the [FlexNet Publisher's License Administration Guide](#).

5.3 Product Selector

The **Product Selector** displays a list of licenses that can be used to start an Agilent EEsof software. The **Product Selector** dialog box only appears if multiple licenses are available to start and Agilent EEsof software. It does not appear if there is only one license present, or if you

have already preselected a startup license previously and that license is available. You can select a license from the list, as illustrated.

Figure: Product=SystemVue Product Selector for Example



5.3.1 Using Product Selector

You can use **Product Selector** to perform the following tasks:

- [View License Description and Part Number](#)
- [Check License Availability](#)
- [Select Product License](#)
- [Change Default Startup License](#)

View License Description and Part Number

The **Product Selector** window displays all the licenses that can start the software of interest like ADS.

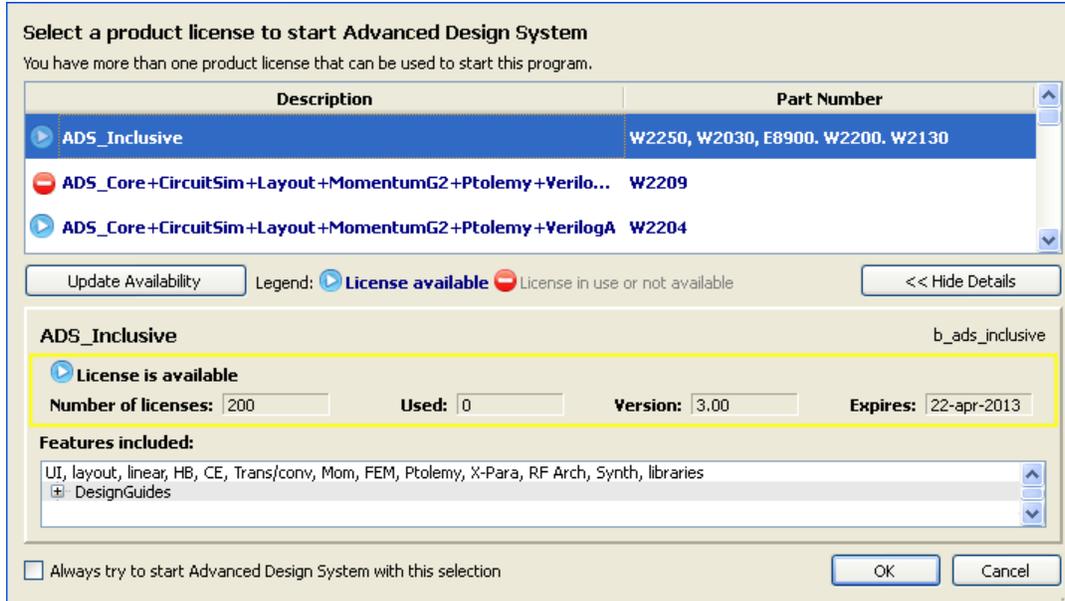
Check License Availability

To check if the selected license is available on the server, click **Show Availability**. The availability of each license is displayed with the following convention:

🟢 denotes that the license is available for use, while 🛑 shows that the license is unavailable. Unavailable licenses cannot be selected.

To view the details of the available license, select the license and click **Show Details**. The bottom pane appears and displays the following information: number of licenses, licenses used, license version, and license expiry date, .., and so on.

Figure: Product=ADS Product Selector for Example



Select Product License

You can select an available license in **Product Selector** to start the software. Only one license can be selected at a given time.

You can assign pre-selected license as a default choice for future sessions. This license is used automatically whenever a new session invoked. To pre-select a startup license, select the pre-selected license and check **Always try to start with this selection**. Once checked, in subsequent sessions, software startup will automatically attempt to check out the pre-selected license without displaying **Product Selector**. If the pre-selected license is denied and more than one license are available to start the session, then the **Product Selector** dialog box will be displayed once again.

Change Default Startup License

You can change the default startup license by using the [License Manager](#). Launch the **License Manager** tool and select **Change the default product license**. Upon which the **Product Selector** is displayed. Either uncheck the **Always try to start with this selection** option to reset the default to None, or simply select another license as the new default.

Chapter 6 – Licensing Tools

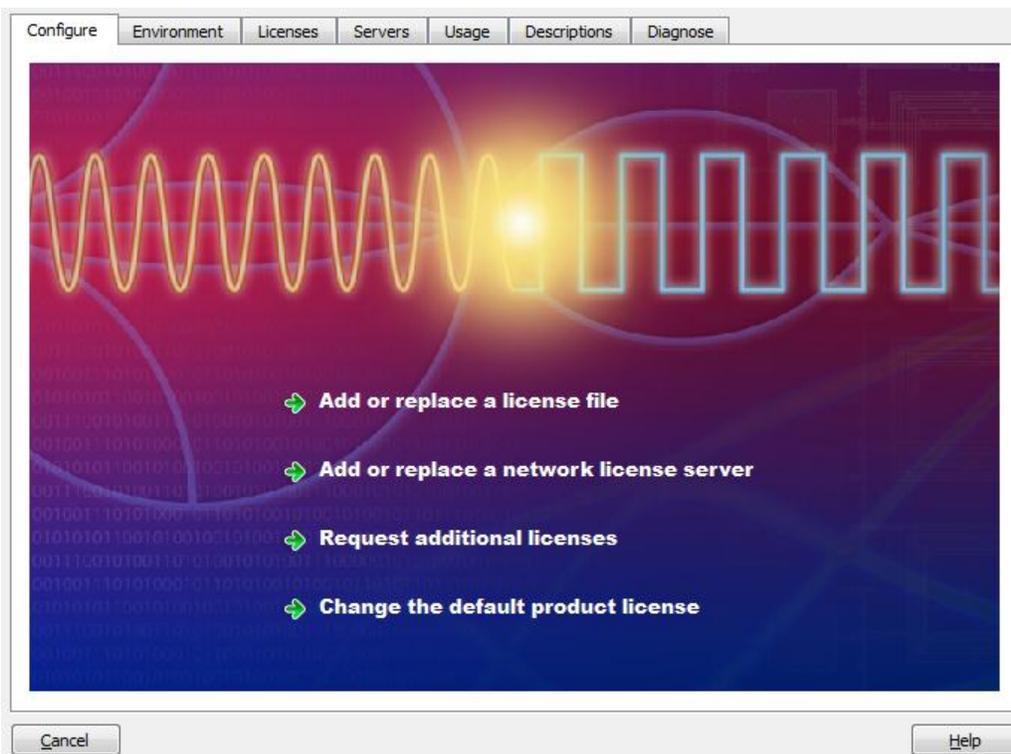
Agilent EEsof Licensing comes with several tools to help you manage EEsof licenses:

- [License Manager](#)
- [Product Selector](#)
- License Setup Wizard

6.1 License Manager

The **License Manager** has been introduced in the Product releases starting October 2012. It is one-stop shop for all licensing tools.

Figure: License Manager



It provides an interface to:

- Configure Licenses, such as add or replace a license file, add or replace a network license server, request for additional licenses, and change the default product startup license.
- Show Environment Variables related to licensing. Your computer host name, IP address, FlexNet version are some of the examples.
- Identify all the license features found in your license setup. Codeword version, number of features used, expiration date are presented as well.
- List all the license servers set up in your configuration.
- Provide information about bundles and elements that are available or in use. You can sort the usage by the codewords or by Users.
- Describe what capabilities are enabled by each license in your licensing pool.
- Perform a real-time and systematic license setup trouble-shooting and produce a detail report on the health of the configuration.

The **License Manager** can be accessed from the Product **Main Window** as follows:
Tools > License Manager.

Chapter 7 – Advanced Licensing Configuration Options

This section provides information on various advanced licensing configuration options

- [Accessing Licenses through a Firewall](#)
- [Creating Options File](#)
- [License Environment Variables](#)
- [Multiple Server Configurations](#)
- [Remote and Distributed Simulation Licenses](#)

7.1 Accessing Licenses through a Firewall

You can checkout FlexNet licenses through a firewall (or router) as per your license agreement. To enable license checkout, configure your firewall to allow TCP/IP communication through the TCP ports used by the license manager daemon (*lmgrd*) or vendor daemon (*agileesofd*).

Step 1. Specify TCP Port Numbers

Specify a TCP port number for *lmgrd* on the `SERVER` line and for *agileesofd* on the `VENDOR` lines. Be sure to stop and restart the license servers after you modify the port numbers.

Example

```
SERVER myserver 00809AC7123F8 27000  
VENDOR agileesofd c:\apps\flexnet\vendors\agileesofd port=1705
```

Step 2. Configure Firewall

[Configure your firewall \(or router\)](#) to allow TCP communication through the TCP ports you specified in Step 1.

Step 3. Set Environment Variable

At the client-side, set the `<PRODUCT>_LICENSE_FILE` environment variable to the port number assigned to the license server, as shown:

```
<PRODUCT>_LICENSE_FILE=27000@myserver.myDomain
```

After you set the environment variable, clients outside of the firewall will be able to access licenses from your server.

Some clients may timeout before they can connect to a license server through a firewall setup on Windows. The default timeout period is 0.1 second. If you need a longer timeout period, you can modify FlexNet environment variable `FLEXLM_TIMEOUT` to a larger value. Refer to [FlexNet Publisher's License Administrator Guide](#) for details

7.2 Creating Options File

An **Options** file allows administrators to control the following licensing parameters of FlexNet:

- Restricts and/or reserves the use of features based on user, hostname, or display name.
- Controls the level of information logged about license usage.

- You can create an **Options** file using any text editor.
- Ideally, you should keep this file in the same directory as your license file.

For details on how to create an Options file, refer to the [FlexNet Publisher's License Administration Guide](#).

7.3 License Environment Variables

This section describes the environment variables specific to Agilent EEsof licensing scheme. At most two locations are used to resolve these environment variables, and in the order shown below:

1. System Environment for the user
2. Unified License Configuration Location:

Operating System	Key Name
Windows XP/7	HKEY_CURRENT_USER\Software\Agilent\EEsof License Configuration
Unix	\$HOME/.eesoflic
Variable Name	Description

Operating System	Key Name
<PRODUCT>_LICENSE_FILE	<p>Specifies the list of license files/servers to search when a license is requested by a given Agilent EEsof Software.</p> <p>Each Agilent EEsof software has a dedicated variable to serve this purpose:</p> <ul style="list-style-type: none"> • ADS_LICENSE_FILE • ICCAP_LICENSE_FILE • EMPRO_LICENSE_FILE • GENESYS_LICENSE_FILE • SYSTEMVUE_LICENSE_FILE • GOLDENGATE_LICENSE_FILE • AMA_LICENSE_FILE • MBP_LICENSE_FILE • MQA_LICENSE_FILE <p>It is automatically set by the License Setup Wizard. The license file path must not contain any special characters like , @ and semicolon(;) on Window or a colon(:) on Linux.</p> <p>These are used as separator characters.</p> <div style="border: 1px solid black; background-color: #e6f2ff; padding: 10px; margin-top: 10px;"> <p>Note</p> <p>It is recommended to use the License Manager to set the <PRODUCT>_LICENSE_FILE variable. If the <PRODUCT>_LICENSE_FILE variable is set to a new license file (or if the contents of a license file are changed), then the license server managers (Imgrd and agileeosfd) must be restarted for the change to take effect. This will be done automatically by the License Manager. If the license server managers are not restarted, then the EEsof software may not be able to checkout a license. For information on starting the license</p> </div>

Operating System	Key Name
	<p>server managers, refer to Setting Up Licenses on Windows or Setting Up Licenses on Linux and Solaris.</p>
EESOF_INSTALL_SKIP_LICSETUP	<p>This environmental variable gives the CAD administrators the ability to turn off the License Setup Wizard invocation at the end of Agilent EEsof product installation process. Set this variable to on or 1 to turn off the wizard invocation.</p>
<PRODUCT>_PRODSEL_PREVIOUS	<p>Product Selector automatically records the name of the license selected to start the software session in this variable. This variable can be used in conjunction with <PRODUCT>_PRODSEL_AUTOSTART variable to pre-select a license as the default startup license; when the pre-selected license is available at the startup of the next software session, the Product Selector dialog box does not get displayed. Each Agilent EEsof software has a dedicated variable to serve this purpose:</p> <ul style="list-style-type: none"> • ADS_PRODSEL_PREVIOUS • IC-CAP_PRODSEL_PREVIOUS • EMPro_PRODSEL_PREVIOUS • SystemVue_PRODSEL_PREVIOUS • Genesys_PRODSEL_PREVIOUS • GoldenGate_PRODSEL_PREVIOUS • AMA_PRODSEL_PREVIOUS • MBP_PRODSEL_PREVIOUS • MQA_PRODSEL_PREVIOUS
<PRODUCT>_PRODSEL_AUTOSTART	<p>It automatically records the state of the check-box "Always try to start with this selection. It is set to TRUE when check-box is checked. This variable can be used in conjunction with <PRODUCT>_PRODSEL_PREVIOUS</p>

Operating System	Key Name
	<p>variable to pre-select a license as the default startup license. When this variable is set to a value other than 0 or FALSE, the value recorded in <PRODUCT>_PRODSEL_PREVIOUS is used automatically when a new software session is started. In case, where there is only one license in the licensing pool qualified to start the new session, this variable has no effect;</p> <p>in all the other cases, if no <PRODUCT>_PRODSEL_PREVIOUS is specified or if the new session cannot be started with the specified license, the Production Selector dialog will be displayed.</p> <p>Each Agilent EEsof software has a dedicated variable to serve this purpose:</p> <ul style="list-style-type: none"> • ADS_PRODSEL_AUTO • IC-CAP_PRODSEL_AUTO • EMPro_PROSEL_AUTO • SystemVue_PRODSEL_AUTO • Genesys_PRODSEL_AUTO • GoldenGate_PRODSEL_AUTO • AMA_PRODSEL_AUTO • MBP_PRODSEL_AUTO • MQA_PRODSEL_AUTO
AGILEESOFD_DEBUG_MODE	<p>Turns on the debug mode in vendor daemon by setting this variable to full. Since this variable is only read at server startup, you need to stop and restart the license server managers to allow this setting to take effect.</p> <p>Alternatively, you can turn on vendor daemon without having to stop and restart the license server managers. To do so, follow these steps:</p> <ol style="list-style-type: none"> 1. cd <LIC_PATH> 2. aglmutil -c @myServer.myDomain <cr> 3. ads_schematic <cr>

Operating System	Key Name
	4. <code>-vdump <cr></code>
HPEESOF_DEBUG_MODE	Controls the client-side licensing debug mode. Any value other than OFF turns on the client-level debugging. Debug messages are written to <code>stderr</code> unless <code>AGLM_DEBUG_LOG</code> is set. This value should be set before you start the Agilent EEsof software of interest.
AGLM_DEBUG_LOG	Sets the name of the client-side licensing debug log file. This should be used in conjunction with <code>HPEESOF_DEBUG_MODE</code> variable.
AGLMERR	Suppresses error and warning messages. The value is a list of keywords. If any of the keywords appear in the error message, the license denial popup message is suppressed.

7.4 Multiple Server Configurations

Agilent EEsof licensing scheme supports all the popular server configurations supported by FlexNet. This includes the redundant servers as well as the multiple servers. Refer to the [FlexNet Publisher's License Administration Guide](#) for details.

7.5 Remote and Distributed Simulation Licenses

Agilent EEsof supports remote and distributed simulations for Circuit and Momentum Simulators. Remote simulation requires a floating license in the licensing pool; the distributed simulations, usually run remotely, requires special distributed licenses.

7.5.1 Remote Simulation Licenses

Where supported by the product, a floating simulation license is used to run a single simulation on a remote machine.

For more details on Remote Simulations for:

- ADS Circuit Remote Simulation, see [Circuit Remote Simulation](#)
- ADS Transient, Convolution Simulation, see [Transient and Convolution Simulation](#)
- ADS Momentum Remote Simulation, see [Using the Job Manager](#)
- GG Circuit Remote Simulation, see [gg47: remote Simulation]
-

7.5.2 Distributed Simulation Licenses

Distributed simulation allows you to run multiple simulation jobs in parallel usually on multiple machines remotely. Simulation Manager is used to launch distributed simulations for Transient, Convolution, S-Parameters and Channel Simulators along with Batch Simulators in ADS and circuit Simulators in GoldenGate (GG). Job Manager is used to run distributed simulations for Momentum in ADS and GG.

Following types of Distributed Simulation licenses are offered:

- [Distributed Computing N-pack Simulation License](#)
- [Quad-pack Simulation License \(GoldenGate Only\)](#)

Distributed Computing N-pack Simulation License

Where supported, Agilent EEsof offers distributed N-pack (or Turbo) licenses to support a cost-effective method to accelerate simulation sweeps, where N is the number of concurrent parallel jobs supported (typically, N = 8). This is a reserve license up-front model in which simulation controller reserves simulation licenses up-front and only launches as many simulation jobs as granted.

A distributed N-pack license supports N parallel simulation jobs which perform a sweep of multiple parameters on a single circuit (like frequency, power, temperature, a variable, Monte Carlo, or corner analysis).

A standard simulation license is checked out first before an N-pack distributed license. The standard license acts as a controller. If you require more than N sweep points to be simulated, multiple count of N-pack licenses can be stacked to accommodate greater parallelism.

A distributed computing N-pack license is limited to the same simulation type (that is, Momentum, Transient, and so on).

A distributed computing N-pack license feature bits are bundled together and cannot be shared between users or different circuits.

In case of a Distributed Computing N-pack Simulation license, the N-pack license is checked out at the initiation of a distributed simulation (if available) and is released only once the sweep jobs are complete. As jobs are completed the license is still reserved to complete additional jobs, if needed on the existing sweep. This guarantees that the sweep is complete and also guarantees a reasonable rate of job acceleration. For example, you have only one count of 8-pack distributed license in the licensing pool and you want to distribute the sweep to 12 jobs. In this case, 8 jobs will start in parallel and as each job finishes, the remaining jobs (4) will start automatically using the same 8-pack license.

In case, when no N-pack license is available, Momentum uses the standard license obtained and run simulations using all the sweeps are completed sequentially. On the other hand, in case of transient, convolution and channel simulator, multiple jobs are launched as per request and each job pulls the standard simulation license.

For more details on distributed simulation on:

- ADS Circuit Distributed Simulation, see [Distributed Simulation Using Simulation Manager](#)
- ADS EM Simulation, see [Using the Job Manager](#)

Quad-pack Simulation License (GoldenGate Only)

Quad-pack Simulation Licenses support 4 simultaneous simulation jobs of multiple types (transient, harmonic balance, circuit envelope tied to the license) which can be used to sweep multiple parameters of one or more circuits. The Quad-pack Simulation licenses do not require standard simulation licenses to be pulled first. This is a first-come, first serve licensing model, with all jobs launched at the same time having equal opportunity to have the licenses granted.

In contrast to Distributed Computing N-pack Simulation license, when a user requests for, say, 20 jobs, but only two counts of the quad-pack licenses are available. In that case, all 20 jobs are launched at once, but only 8 are granted with the quad-pack licenses and able to perform the simulations; the other 12 jobs wait until quad-pack license is released by the first 8 jobs, and each will start its simulation once granted with the license.

For more details on Distributed Simulations in case of GG, refer to [GG Circuit Distributed Simulation]

7.5.3 License Retry

All simulations launched remotely have the license auto-retry set for one-hour by default. Within that period, the previously failed license checkout request is attempted again in every 2 minutes, until either the license is granted, or the retry period times out.

Chapter 8 – Licensing FAQs

The following table lists the Frequently Asked Questions (FAQs) on Licensing.

Question	Answer
<p>Where can I find different licensing tools such as <code>lmgrd</code>, <code>lmutil</code>, etc.?</p>	<p>Windows: C:\Program Files\Agilent\EEsof_License_Tools\bin folder</p> <p>Linux (32-bit): <PRODUCT_INSTALL_DIR>/Licensing/<license tools version>/linux_x86_32/ directory</p> <p>Linux (64-bit): <PRODUCT_INSTALL_DIR>/Licensing/<license tools version>/linux_x86_32_64/ directory</p> <p>On the Linux and Solaris platform, if you choose to install licensing tools to a dedicated location outside of any Agilent EEsof product installation tree, then you can find all the licensing tools and binaries in <LIC_INSTALL_DIR>/bin/ directory.</p>
<p>Where should I copy my license file?</p>	<p>On the Windows platform, Agilent recommends you to copy your license file to C:\Program Files\Agilent\License\EEsof folder.</p>
<p>Can I change the port number in my license file?</p>	<p>You should not modify your local node-locked license file. If you do want to use a specific port number for all of your license files, then you need to modify them all to have the same port number, in order for the License Setup Wizard to recognize them and process them properly. Refer to Accessing Licenses through a Firewall section in the Advanced Licensing Configuration chapter.</p>
<p>Can I access the license activity log file?</p>	<p>For the local node-locked license set up by the License Setup Wizard, you can find out the location of the license activity log by either of the following method:</p> <ol style="list-style-type: none"> 1. Start the License Setup Wizard and click Details. Click on the link shown for the license log file opens the log file in a text editor.

Question	Answer
	<p>2. Start the License Manager, and go to the “Environment” tab. The entry for <code>AGILEESOFD_SERVER_LOGFILE</code> contains the clickable link that opens up the log file in a text editor.</p> <p>For the floating license set up on the network license server, consult your CAD Admin to find out where the log file is located.</p>
<p>I am using valid Combo License but I still get "License Denial" message.</p>	<p>The license checkout denials could be recorded in the license activity log when you use a combo license file that contains both version 2.8 and 3.0 licenses. You can ignore these messages as they don't have any impact on using the product.</p>
<p>Why do I need to set environment variable <code><PRODUCT>_LICENSE_FILE</code>?</p>	<p><code><PRODUCT>_LICENSE_FILE</code> is used by each Agilent EEsof product to identify the licensing configuration for that product. Refer to License Environment Variables section in the Advanced Licensing Configuration chapter for more details.</p>
<p>Why am I getting "License Denial" message?</p>	<p>Occasionally you may receive a license denial message unexpectedly. When that happens, you should check to see if there are any "run-away" EEsof processes that need to be killed, because those run-away eesof processes might be holding on to the license.</p>
<p>Why should I turn off <code>FLEXLM_TIMEOUT</code>?</p>	<p><code>FLEXLM_TIMEOUT</code> has uncertain effect on the License Setup Wizard, and should be turned off or set to a reasonable value. A timeout equivalent to less than a minute-during the License Setup Wizard session is recommended.</p>
<p>Do I need to explicitly specify TCP/IP port?</p>	<p>Not specifying the TCP/IP port for the license server during license setup may lead to unexpected behavior and/or license checkout failure on the Windows platform. Therefore, it is highly recommended to always explicitly specify</p>

Question	Answer
	the TCP/IP port associated with each license server.
What license version do I need?	Check Product Release Notes first. Refer to License Version to Software Release Compatibility Table for details on license version to use.
What do I do to clean my existing license setup?	When you suspect that your license setup is outdated or behaving weirdly, a quick way to clean up your existing license setup and force a reload and recreation of the license servers and service on the Windows platform is the following: <ul style="list-style-type: none"> • Start the License Setup Wizard. • Choose "I want to add or replace my license file" and click "Clear" followed by "Next" to clear your previous license file setup. • Choose "I want to add or replace my license server" and click "Clear" followed by "Next" to clear your previous license server setup. If your existing license setup is still not cleaned up completely, run <code>lmttools</code> located in the <code><LIC_PATH></code> folder to clear the Windows Service related to Agilent EESof licensing: "EESof EDA License Server", which can be found in the "Start/Stop/Reread" tab.
How do I determine if I am using the latest agileesofd vendor daemon?	To determine the <i>agileesofd</i> vendor daemon, you must check the following: <ul style="list-style-type: none"> • The startup information for the version string <code>(agileesofd)EESOF 2013 (XXX)</code>, shown in the example below. • Compare the date stamp with what is installed. It must be dated 01/25/2013. <pre style="border: 1px dashed gray; padding: 5px;"> 12:04:48 (lmgrd) ----- ----- 12:04:48 (lmgrd) Please Note: 12:04:48 (lmgrd) 12:04:48 (lmgrd) This log is </pre>

Question	Answer
	<p>intended for debug purposes only.</p> <p>12:04:48 (lmgrd) In order to capture accurate license usage data</p> <p>12:04:48 (lmgrd) into an organized repository,</p> <p>12:04:48 (lmgrd) please enable report logging. Use Flexera Software, Inc.'s</p> <p>12:04:48 (lmgrd) software license administration solution,</p> <p>12:04:48 (lmgrd) FLEXnet Manager, to readily gain visibility</p> <p>12:04:48 (lmgrd) into license usage data and to create</p> <p>12:04:48 (lmgrd) insightful reports on critical information like</p> <p>12:04:48 (lmgrd) license availability and usage. FLEXnet Manager</p> <p>12:04:48 (lmgrd) can be fully automated to run these reports on</p> <p>12:04:48 (lmgrd) schedule and can be used to track license</p> <p>12:04:48 (lmgrd) servers and usage across a heterogeneous</p> <p>12:04:48 (lmgrd) network of servers including Windows NT, Linux</p> <p>12:04:48 (lmgrd) and UNIX. Contact Flexera Software, Inc. at</p> <p>12:04:48 (lmgrd) www.flexerasoftware.com for more details on how to</p> <p>12:04:48 (lmgrd) obtain an evaluation copy of FLEXnet Manager</p> <p>12:04:48 (lmgrd) for your enterprise.</p> <p>12:04:48 (lmgrd)</p> <p>12:04:48 (lmgrd) -----</p> <p>12:04:48 (lmgrd)</p> <p>12:04:48 (lmgrd)</p>

Question	Answer
	<pre> 12:04:48 (lmgrd) pid 15608 12:04:48 (lmgrd) Detecting other license server manager (lmgrd) processes... 12:04:49 (lmgrd) Done rereading 12:04:49 (lmgrd) FLEXnet Licensing (v11.9.1.0 build 89952 x64_n6) started on CNU2022LK9 (IBM PC) (10/12/2012) 12:04:49 (lmgrd) Copyright (c) 1988-2010 Flexera Software, Inc. All Rights Reserved. 12:04:49 (lmgrd) US Patents 5,390,297 and 5,671,412. 12:04:49 (lmgrd) World Wide Web: http://www.flexerasoftware.com 12:04:49 (lmgrd) License file(s): b_core_elements.lic 12:04:49 (lmgrd) lmgrd tcp-port 27000 12:04:49 (lmgrd) Starting vendor daemons ... 12:04:49 (lmgrd) Started agileesofd (pid 14976) 12:04:49 (agileesofd) Server started on CNU2022LK9 for: b_iccap_inclusive 12:04:49 (agileesofd) pjc_b_iccap_inclusive e_iccap_core_env pjc_e_iccap_core_env 12:04:49 (agileesofd) e_iccap_analysis e_iccap_bsim3 pjc_e_iccap_bsim4 12:04:49 (agileesofd) pjc_e_iccap_analysis pjc_e_iccap_bsim3 12:04:49 (agileesofd) EXTERNAL FILTERS are OFF 12:04:49 (lmgrd) agileesofd using TCP-port 57901 12:04:49 (agileesofd) EESOF 2013 (01/25/2013) 12:04:50 (agileesofd) TCP_NODELAY NOT enabled </pre>
How do I Find Flex ID of Hardware Key?	<p>You need the nodelocked ID of your hardware security key to get licenses from Agilent EEsof. It might also be useful to access this</p>

Question	Answer
	<p>information when you place a call to Technical Support. There are two ways to check this:</p> <ul style="list-style-type: none">• Before you install the hardware key on your PC, you can read the ID directly from the key.• If you have installed the hardware key on your PC, and have also already installed your licenses and the FLEXnet software, enter the following command to check the nodelocked ID: <code>lmutil lmhostid -flexid</code>• Start Tools > License Manager and Select Environment Tab

Chapter 9 – Troubleshooting Tips

This section discusses a troubleshooting flow to diagnose license failures. The most important thing to understand is that licensing works with a server machine and client machine. A third party tool, FlexNet Publisher by Flexera software makes it possible. The server machine (that runs license server) offers licenses held in a pool. The client machine (that runs the Agilent EEsof application) communicates with and requests licenses from the license server machine. It should be noted that the license server and the license client can be the same machine.

License problems can be categorized into the following:

- One or more problems with the license server setup
- One or more problems with the license client setup
- A combination of first two types
- A communication problem between license server and license client

9.1 Prerequisites

FlexNet utilities, run from the command line, are a fundamental tool used in the license troubleshooting process. Further, many of the FlexNet utility commands make reference to the license server machine (and this is regardless if the license server is a local machine or remote one). Given this, to perform the troubleshooting process, one needs to know:

- [Where to access the FlexNet utilities for command line use](#)
- [How to reference license server](#)
- [Product specific licensing settings](#)

9.1.1 Where to Access the FlexNet utilities for Command Line Use

Windows

1. Invoke **License Manager** from Agilent EEsof Software's Main Windows' Tools menu.
2. Select the **Environment** tab.
3. In the **Environment** tab, look for the variable, `HPEESOF_LIC_DIR`. Make note of this path (for example, `C:\Program Files\agilent\EEsof_License_Tools`)

4. Open up a command prompt window
5. Change directories as follows:
6. `cd <Path from step 3>\bin`

Linux

1. Assuming that you have installed 2012.xx version of an Agilent EEsof product onto `<PRODUCT_INSTALL_DIR>`, you can find FlexNet utilities under `<PRODUCT_INSTALL_DIR>/Licensing/2012.08/linux_x86[32|64]/bin` directory.
2. Alternatively, if you have installed Agilent EEsof Licensing package onto a dedicated directory, `<LIC_INSTALL_DIR>`, you can find FlexNet utilities under `<LIC_INSTALL_DIR>/bin` directory.

Solaris

Assuming that you have installed Agilent EEsof Licensing package onto a dedicated directory, `<LIC_INSTALL_DIR>`, you can find FlexNet utilities under `<LIC_INSTALL_DIR>/bin` directory.

9.1.2 How to Reference License Server

For debugging use of FlexNet with Agilent EEsof Products, `port@license-server-machine` is typically used. This is a generic representation for the license server.

- `port` is a TCP port number that is optionally assigned for the license server.
- `license-server-name` is the name of the license server machine. This can be a remote machine or local machine. However, it should be noted that this can also be the IP address of the machine.

Examples

```
@MyLocalPC
27001@RemoteLicenseServer.myDomain
@192.168.0.102
```

9.1.3 Product specific license settings

The steps that follow will reference `<Product>_LICENSE_FILE`.

`<Product>_LICENSE_FILE` can be one of the following depending upon which Agilent EEsof product you are using:

- ADS_LICENSE_FILE
- EMPRO_LICENSE_FILE
- ICCAP_LICENSE_FILE
- GENESYS_LICENSE_FILE
- SYSTEMVUE_LICENSE_FILE
- GOLDENGATE_LICENSE_FILE
- MBP_LICENSE_FILE
- MQA_LICENSE_FILE
- AMA_LICENSE_FILE

9.2 Troubleshooting Flow and Process

This section covers the suggested troubleshooting flow as follows:

Step 1: Verify license server machine is running, FlexNet daemon versions, license server communications

Step 2: Verify client is able to access license server machine

Step 3: Verify pool and accessibility of available licenses

- If your Agilent-EEsof application is unable to start, start with [Step 1](#).
- If your Agilent-EEsof application is able to run but you have a license problem during application runtime, start with [Step 3](#).

9.2.1 Step 1: Verify license server machine is running, FlexNet daemon versions, license server communications

Run the following FlexNet lmutility:

```
lmutil lmstat -c <port>@<license-server-machine>
```

```
C:\Program Files\Agilent\EEsof_License_Tools\bin>lmutil lmstat -c 27001@jujube
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
Flexible License Manager status on Mon 4/16/2012 15:44

[Detecting lmgrd processes...]
License server status: 27001@jujube
  License file(s) on jujube: /hfs/d1/local/ADS2011_10/EEsof_License_Tools/linux_x86/./master.lic:
    jujube: license server UP (MASTER) v11.9
Vendor daemon status (on jujube):
agileesofd: UP v11.9
```

In the above, a status query is performed on license server 27001@jujube (jujube is the name of the license server machine). The following information is obtained:

1. License file for server is located on the license server machine at `/hfs/d1/local/ADS2011_10/EEsof_License_Tools/master.lic`.
2. `lmgrd` is UP meaning that it is running.
3. `agileesofd` is UP meaning that it is running.
4. Version number for both `lmgrd` and `agileesofd` is `v11.9.1` each.

As part of initial troubleshooting, you must ensure that the path to license file is correct, ***lmgrd*** and ***agileesofd*** are both UP, the version numbers for ***lmgrd*** and ***agileesofd*** are both `v11.9.1` for each. To use this troubleshooting flow, go through the list of conditions in the given sequence. Jump to different subsequent conditions as guided.

CONDITION 1: Running `lmutil lmstat -c <port>@<license-server>` displays something as following:

```
C:\Documents and Settings\mrubin>lmutil lmstat -c @myserver
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
Flexible License Manager status on Sat 5/5/2012 21:11

[Detecting lmgrd processes...]
Error getting status: License server machine is down or not responding. (-96,7:1
1001 "Comm. error")

C:\Documents and Settings\mrubin>
```

If the path to license file is not shown and information about ***lmgrd*** and ***agileesofd*** is not given, then one or more of the following possible problems may exist. If the above message is not seen or presented differently or license path is given with ***lmgrd*** and ***agileesofd*** being UP, move to the next [condition](#).

1. USB dongle not plugged in: If license server uses a license file that is tied to a USB dongle, check to see if dongle is plugged in appropriately.
2. USB dongle driver not installed: If license server uses a license file that is tied to a USB dongle, check that the dongle driver is installed by running FlexNet command: `lmutil lmhostid --flexid`. If "missing dongle driver" is reported, follow the [Dongle License Installation](#) instruction to install it.
3. Wrong License Server Name is used in command: Ensure that you have the correct name of the license server. Depending upon your DNS configuration in place, it may be necessary to provide fully qualified domain name (for example, `@computername.companydomainname.com`) or the IP Address of the license server machine (for example, `@130.29.167.44`). If using a local license server, the local

machine name may be replaced with `localhost` (for example, `lmutil lmstat -c @localhost`).

4. Network connectivity (Remote license servers): Ping remote license server to ensure it is on the network. Not getting a ping respond could mean the machine is physically disconnected from the network or turned off.
5. License server not running: There could be several causes for this. However, before investigating further, for Windows machine, it is advisable to restart the machine where **License Setup Wizard** was run.
 - a. Check process on the license server for presence of **lmgrd** and **agileesofd**. If any of them is missing, follow the [Install License Server](#) instructions to start the same.
 - b. Examine license file and ensure CPU ID in the installed license file matches with CPU ID of the machine. Run the FlexNet command: **lmutil lmhostid** to acquire the CPU ID of machine so that the CPU ID in the license file can be matched up with the CPU ID of the machine.
6. Only one **agileesofd** process may be running at a time on a license server machine. Check processes on the machine for presence of already running instance of **agileesofd**. This could be due to multiple services (Windows or Linux) previously set up on the same machine. If this applies, explore the services on the machine to ensure that only one exists for Agilent EEsof software.
 - a. Running on unsupported platform: License servers are supported on the supported operating systems for our products. Ensure that the license server is on a [supported operating system](#). It must be noted that Virtual machines (for example, VMWare, Windows virtual machine) and Linux distributions other than Red Hat Enterprise Linux or Novell SuSE are not supported (for example, Ubuntu, Fedora).
 - b. License Path problem:
 - On Windows: Run **License Setup Wizard**: Verify if the wizard show that the correct license file is being pointed to.
 - On Linux: Check if license file specified in `lmgrd` invocation been moved or deleted or the correct file is used in **lmgrd** command.
 - c. FlexNet communications blocked: See [special section](#) on dealing with blocked FlexNet communications.

CONDITION 2: Running `lmutil lmstat -c <port>@<license-server>` reports `lmgrd` being UP, `agileesofd` being UP but does not report that both `lmgrd` and `agileesofd`

versions are v11.9.1, as follows:

```
C:\Program Files\Agilent\EEsof_License_Tools\bin>lmutil lmstat -c 27001@maple.ulv.agilent.com
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
Flexible License Manager status on Sat 5/5/2012 21:33

[Detecting lmgrd processes...]
License server status: 27001@maple
  License file(s) on maple: /hfs/d1/local/ADS200901/licenses/bin/linux_x86_64/../../master.lic
  maple: license server UP (MASTER) v11.6

Vendor daemon status (on maple):
agileesofd: UP v11.6

C:\Program Files\Agilent\EEsof_License_Tools\bin>
```

If lmgrd and agileesofd are reported UP with version v11.9.1, move to the next [condition](#).

The FlexNet lmgrd and agileesofd daemons have to be upgraded to FlexNet v11.9.1 for both lmgrd and agileesofd on the license server machine. The bits can be acquired at <http://www.agilent.com/find/eesof-flexnet-downloads>.

CONDITION 3: Running `lmutil lmstat -c <port>@<license-server>` reports lmgrd being UP, agileesofd being UP, lmgrd and agileesofd versions are v11.9.1, but reports the wrong path and/or license file:

1. Determine the correct location of the license file.
2. On Windows: Re-run **License Setup Wizard** to re-configure for correct license file.
On Linux: Stop and re-start license server with correct license file.

9.2.2 Step 2: Verify client is able to access license server

At this stage in the debugging process, the license server is presumed to be working correctly and focus is shifted to the client side. To remind again, both server and client can be the same machine. These are the items to check on the license client machine:

1. [License Path specified for the Agilent EEsof application](#)
2. [Remote server only: Communications problem from client machine to remote server](#)

License Path specified for the Agilent EEsof application

The Agilent EEsof software application obtains licenses from the license server machines that are specified in the license path. Each Agilent EEsof application has a dedicated variable for holding the license path information. This variable is written to the Windows registry on

Windows or entered into one's environment on Linux. It takes on the format of `<PRODUCT>_LICENSE_FILE`.

Important

`<PRODUCT>_LICENSE_FILE` can be one of the following depending upon which product you are using:

- `ADS_LICENSE_FILE`
- `EMPRO_LICENSE_FILE`
- `ICCAP_LICENSE_FILE`
- `GENESYS_LICENSE_FILE`
- `SYSTEMVUE_LICENSE_FILE`
- `GOLDENGATE_LICENSE_FILE`
- `MBP_LICENSE_FILE`
- `MQA_LICENSE_FILE`
- `AMA_LICENSE_FILE`

On Windows

1. Invoke **License Manager** from Agilent EEs of Software, **Main Window > Tools** menu.
2. Select the **Environment** tab.
3. In the **Environment** tab, look for the variable with the name resembling `<PRODUCT>_LICENSE_FILE` format.

Verify if `<PRODUCT>_LICENSE_FILE` either points to the correct remote license server (for example, `port@license-server-machine` or `@license-server-machine`), or the path is correct pointing to the correct local license file on the machine? If not, run **License Setup Wizard** to correct this.

Important

`<PRODUCT>_LICENSE_FILE` is not explicitly defined in the **Windows System Properties**. This was done for earlier versions of the software but should not be done with the current version. Doing so will interfere with **License Setup Wizard**.

On Linux

Find out what `<PRODUCT>_LICENSE_FILE` is set to by `echo $ADS_LICENSE_FILE` command for example.

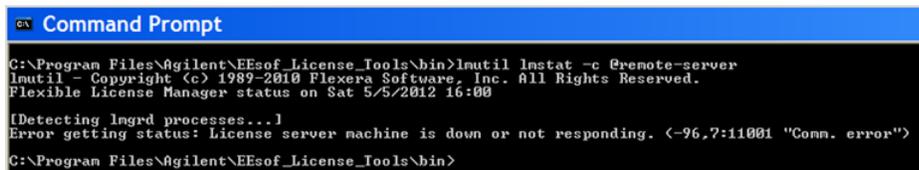
Verify if `<PRODUCT>_LICENSE_FILE` either points to the correct remote license server (for example, `port@license-server-machine` or `@license-server-machine`), or the path is correct pointing to the correct local license file on the machine. On Linux, special care is needed

because this variable may have been declared somewhere in the environment startup files such as .adsrc, .eesofpvmprofile, or .flexlmrc.

Communications problem from client machine to remote server (Remote Server Only)

This only needs to be checked if license server is a remote machine or if *lmutil lmstat* was not previously run as described in the section [Verify license server machine is running, FlexNet daemon versions, license server communications](#).

Run `lmutil lmstat -c port@license-server-machine` or `lmutil lmstat -c @license-server-machine`. If the following output is seen,



```

C:\Program Files\Agilent\EEsof_License_Tools\bin>lmutil lmstat -c @remote-server
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
Flexible License Manager status on Sat 5/5/2012 16:00

[Detecting lmgrd processes...]
Error getting status: License server machine is down or not responding. (-96,7:11001 "Comm. error")
C:\Program Files\Agilent\EEsof_License_Tools\bin>

```

AND it has been verified that the remote license server is running, then FlexNet communications are blocked: See [special section](#) on dealing with blocked FLEXnet communications.

9.2.3 Step 3: Verify pool and accessibility of available licenses

In this stage of the troubleshooting flow, the license server is presumed to be running with correct *lmgrd* and *agileesofd* version v11.9, and the License path has been correctly set. However, license denials are preventing the access to software or access to features of the software. The following items are checked in this section:

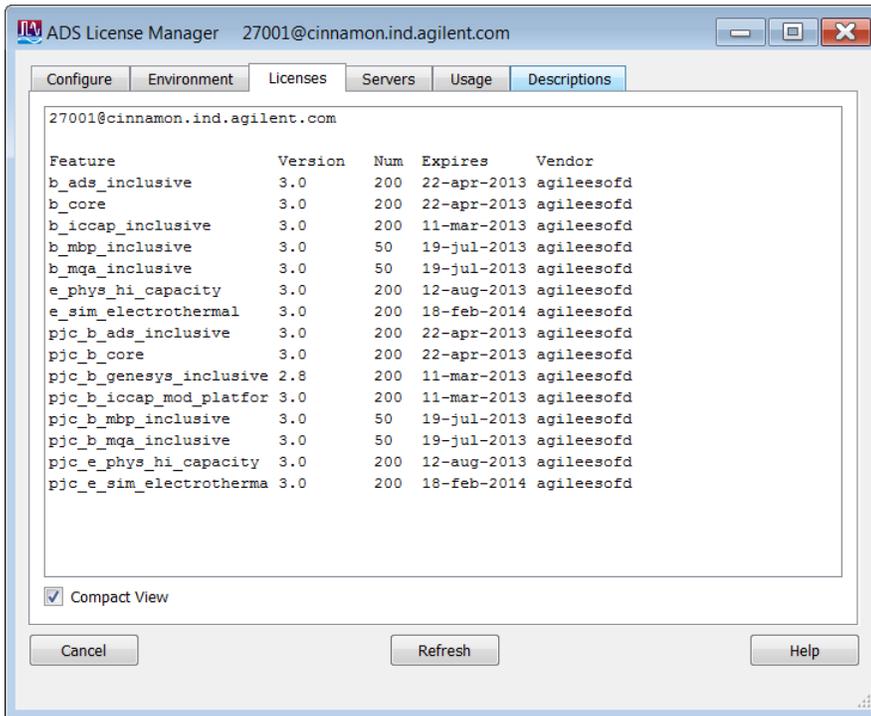
1. [The pool of available licenses has the correct features, license version number, expiration date.](#)
2. [Multiple end user license server only: The pool of available licenses has licenses available \(for example, someone else might have checked out a license that is needed\).](#)
3. [Remote server only: License file does not have floating licenses.](#)

The pool of available licenses has the correct features, license version number, expiration date

This section checks the licenses in the license pool for correct features, correct license version number, and unexpired licenses. Wrong features, wrong license versions, and expired licenses can result in license denials.

On Windows

1. Invoke **License Manager** from Agilent EEsof Software **Main Windows > Tools** menu.
2. Select the **Licenses** tab. Example below has Product=ADS.



On Linux

Execute FlexNet utility to get to this information:

```
lmutil lmstat -c <port>@<license-server> -i
```

```

jujube 30: lmutil lmstat -c 27001@trident.scs -i
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
Flexible License Manager status on Sat 5/5/2012 16:31

NOTE: lmstat -i does not give information from the server,
      but only reads the license file. For this reason,
      lmstat -a is recommended instead.

Feature          Version  # licenses  Expires      Vendor
-----
b_ads_inclusive  3.0      200         13-sep-2013  agileesofd
b_empro_fem_fdt  3.0      200         13-sep-2013  agileesofd
b_genesys_inclu  3.0      200         13-sep-2013  agileesofd
b_gg_inclusive   3.0      200         13-sep-2013  agileesofd
b_iccap_inclusi  3.0      100         13-sep-2013  agileesofd
b_sv_internal    3.0      100         13-sep-2013  agileesofd
e_sim_cct_accel  3.0      100         24-sep-2013  agileesofd
gg_qpdkv         3.0      200         13-sep-2013  agileesofd
p_sim_momentum   3.0      200         21-oct-2013  agileesofd
pjc_b_ads_inclu  3.0      200         13-sep-2013  agileesofd
pjc_b_empro_fem  3.0      200         13-sep-2013  agileesofd
pjc_b_genesys_i  3.0      200         13-sep-2013  agileesofd
pjc_b_gg_inclu   3.0      200         13-sep-2013  agileesofd
pjc_b_iccap_incl 3.0      100         13-sep-2013  agileesofd
pjc_b_sv_intern  3.0      100         13-sep-2013  agileesofd
pjc_e_sim_cct_a  3.0      100         24-sep-2013  agileesofd
pjc_p_sim_mome   3.0      200         21-oct-2013  agileesofd
jujube 31:

```

In the above platform illustrations (Windows, Linux), a query is performed on license servers 27001@cinnamon.ind and 27001@trident.scs, respectively (where, cinnamon.ind and trident.scs are the name of the license server machines). The following information is obtained:

1. A listing of the features the license pool offers.
2. All features are version 3.0 licenses.
3. There are 200 licenses for each feature.
4. Licenses expire on September 13, 2012.
5. Features are those belonging to agileesofd vendor daemon.

Given the above, the following items should be confirmed:

1.
 - a. **Features** - Do the features appearing agree with what you believe are the features you own?
 - b. **Version number** - Ensure that the version number of software you are running or trying to run correlates to its associated license version number:

Software Version	License Version
2012 and 2 versions back	3.0
2011 and 2 versions back	2.9

Software Version	License Version
2010 and 2 versions back	2.8

For example, if you are trying to run ADS 2012.08 on your machine but point to a license server with v2.9 codewords, a license denial will occur.

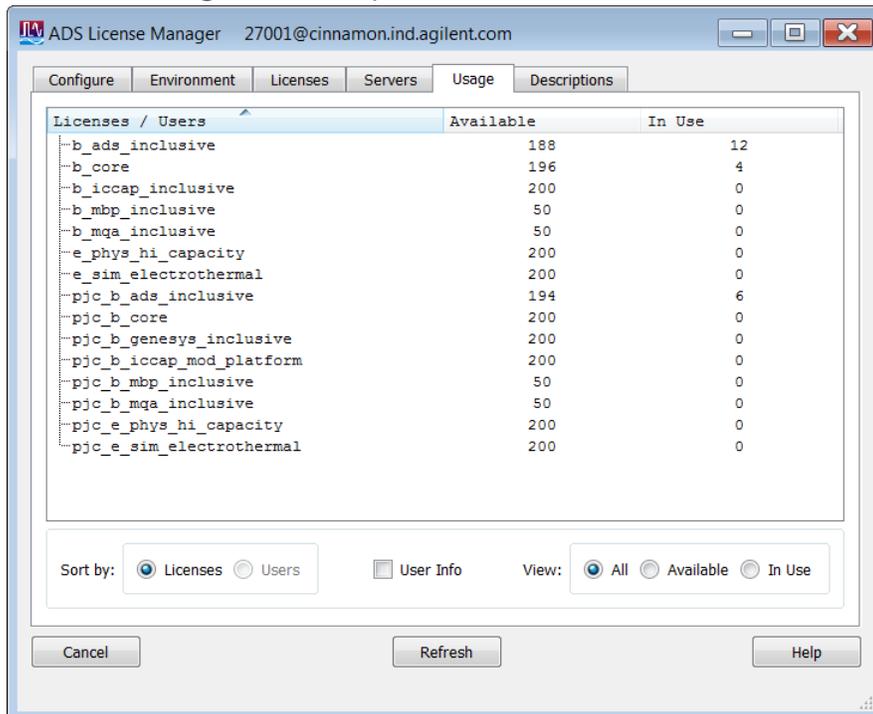
- c. **Number of Licenses** - Are the number of licenses 1 or greater for needed licenses?
- d. **License Expiration** - Are the licenses current and not expired?

Multiple end user license server only: The license pool has licenses available (for example, someone else has checked out a license that is needed)

This section covers problems where licenses needed are in the license pool but are in use by other users. Skip this, if you are the only user of the license server.

On Windows

1. Invoke **License Manager** from Agilent EEsof Software **Main Windows > Tools** menu.
2. Select the **Usage** tab. Example below has Product=ADS.



On Linux

Execute FlexNet utility to get to this information:

```
lmutil lmstat -c <port>@<license-server> -a
```

```

jujube 32: lmutil lmstat -c 27001@trident.scs -a
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
Flexible License Manager status on Sat 5/5/2012 16:32

License server status: 27001@trident.scs.agilent.com
License file(s) on trident.scs.agilent.com: /a/new/scs/shimmer/d1/build/flexln/Licenses/trident.scs.agilent.com/agil
eesofd.lic:
trident.scs.agilent.com: license server UP (MASTER) v11.9

Vendor daemon status (on trident.scs.agilent.com):
agileesofd: UP v11.9
Feature usage info:
Users of b_ads_inclusive: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of b_enpro_fen_fdt_d_comp: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of b_genesys_inclusive: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of b_gg_inclusive: <Total of 200 licenses issued; Total of 9 licenses in use>
  "b_gg_inclusive" v3.0, vendor: agileesofd
  floating license
    annoury linbic 130.27.97.191:0 (v3.0) (trident.scs.agilent.com/27001 2136), start Wed 5/2 3:39
    bafisher uuuzela 130.29.167.47:0 (v2.9) (trident.scs.agilent.com/27001 15460), start Tue 4/24 17:14
    dargollo argollo-xp64 2CE9495XCT (v2.9) (trident.scs.agilent.com/27001 1806), start Mon 4/23 12:35
    dowhenner linbic 130.27.97.491:0 (v3.0) (trident.scs.agilent.com/27001 1907), start Mon 4/23 12:35
    fkusidlo lnx10 127.0.0.2:0 (v2.9) (trident.scs.agilent.com/27001 5468), start Thu 5/3 22:34
    nbunt mike 141.121.51.16:0 (v3.0) (trident.scs.agilent.com/27001 14242), start Wed 5/2 15:44
    nveremey piranha 127.0.0.118:0 (v2.8) (trident.scs.agilent.com/27001 7050), start Thu 5/3 10:17
    pmanhan brushfire 130.27.97.83:0 (v3.0) (trident.scs.agilent.com/27001 11814), start Fri 5/4 14:26
    sankasar trident 130.27.97.72:0 (v3.0) (trident.scs.agilent.com/27001 3911), start Wed 4/25 13:22
Users of b_iccap_inclusive: <Total of 100 licenses issued; Total of 0 licenses in use>
Users of b_sv_internal: <Total of 100 licenses issued; Total of 0 licenses in use>
Users of e_sin_cct_accel: <Total of 100 licenses issued; Total of 0 licenses in use>
Users of gg_qpdkv: <Total of 200 licenses issued; Total of 1 license in use>
  "gg_qpdkv" v3.0, vendor: agileesofd
  floating license
    kedhavan cashew 146.223.124.242:0 (v2.9) (trident.scs.agilent.com/27001 4184), start Mon 4/30 23:02
Users of p_sin_momentum: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of pjc_b_ads_inclusive: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of pjc_b_enpro_fen_fdt_d_comp: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of pjc_b_genesys_inclusive: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of pjc_b_gg_inclusive: <Total of 200 licenses issued; Total of 0 licenses in use>
Users of pjc_b_iccap_inclusive: <Total of 100 licenses issued; Total of 0 licenses in use>
Users of pjc_b_sv_internal: <Total of 100 licenses issued; Total of 0 licenses in use>
Users of pjc_e_sin_cct_accel: <Total of 100 licenses issued; Total of 0 licenses in use>
Users of pjc_p_sin_momentum: <Total of 200 licenses issued; Total of 0 licenses in use>
jujube 32:

```

In the above platform dependent illustrations (Windows, Linux), a query is performed on license server a query is performed on license servers 27001@cinnamon.ind and 27001@trident.scs, respectively (where, cinnamon.ind and trident.scs are the name of the license server machines). The following information is obtained:

1. A listing of the features in the pool.
2. The users using the features.
3. For each feature, the total number of licenses per feature versus how many licenses in use.

Given the above, a determination should be made if the license that is needed is in use by other users.

Remote server only: License server has one or more node-locked licenses

In some instances, the license server is working, the client setup is correct, licenses are available for use (not in use by others), licenses version show correct version and are not expired, but a license still cannot be checked out. This can be caused by accidental installation of a node-locked license file tied to the CPU ID of the machine intended to be the network (floating) license server. To verify this, the following steps are performed:

1. Perform procedure described in [MULTIPLE END USER LICENSE SERVER ONLY: The pool of available licenses has licenses available](#) step to get a listing of licenses on server.

Licenses / Users	Available	In Use
b_ads_inclusive	200	0
b_empro_fem_fdtc_comp	200	0
b_genesys_inclusive	200	0
b_gg_inclusive	191	9
b_iccap_inclusive	100	0
b_sv_internal	100	0
e_sim_cct_accel	100	0
gg_qpdkv	199	1
p_sim_momentum	200	0
pjc_b_ads_inclusive	200	0
pjc_b_empro_fem_fdtc_comp	200	0
pjc_b_genesys_inclusive	200	0
pjc_b_gg_inclusive	200	0
pjc_b_iccap_inclusive	100	0
pjc_b_sv_internal	100	0
pjc_e_sim_cct_accel	100	0
pjc_p_sim_momentum	200	0

2. Alternatively, run the FlexNet Utility, `lmutil lmdiag -c @license-server <feature-name to be checked>`

```
C:\Program Files\Agilent\EEsof_License_Tools\bin>lmutil lmdiag -c 27001@trident.scs b_ads_inclusive
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
FLEXnet diagnostics on Sat 5/5/2012 23:08

-----
License file: 27001@trident.scs
-----
"b_ads_inclusive" v3.0, vendor: agilesofd
License server: trident.scs.agilent.com
floating license starts: 1-jan-1990, expires: 13-sep-2013
This license can be checked out
-----
C:\Program Files\Agilent\EEsof_License_Tools\bin>
```

In case of node-locked licenses, you will see in the last line, "This license cannot be checked out". In the example above, it shows `b_ads_inclusive` can be checked out, inferring a correct network license file has been installed.

9.3 FlexNet Communications Problems

This section should not be consulted unless it has been ascertained that the license server, local or remote, is running.

FlexNet communications can be blocked and/or interfered with by third party programs. This section addresses how to resolve these issues. FlexNet communication blockage and/or interference is most typically caused due to firewalls, and less often, with antivirus software,

which is covered here. However, it can also be caused from VPN tunnel programs and/or other third party programs. Blockage/interference from those programs is beyond the scope of this.

Since, firewall and antivirus software is a typical cause for FlexNet communication problems, this should be investigated first. The quickest way to make this determination is to temporarily disable firewall and antivirus software.

Important

Ensure that disabling any security software (for example, firewall, antivirus) is done in such a manner that it does not cause harm to your system. Agilent cannot be held responsible for the harm caused. It is also recommended that you work with local IT support professional.

The test is performed by methodically running `lmutil lmstat -c @license-server` across different permutations of disabling firewall and antivirus software. When `lmstat` reports license path, `lmgrd` and `agileesofd` vendor daemons UP after a firewall or antivirus disablement. This is a positive test result. `lmstat` result shown when no communications blockage:

```
C:\Program Files\Agilent\EEsof_License_Tools\bin>lmutil lmstat -c 27001@trident.scs
lmutil - Copyright (c) 1989-2010 Flexera Software, Inc. All Rights Reserved.
Flexible License Manager status on Sat 5/4/2012 23:43

[Detecting lmgrd processes...]
License server status: 27001@trident.scs.agilent.com
License file(s) on trident.scs.agilent.com: /a/new/scs/shinner/dl/build/flexln/Licenses/trident.scs.agilent.com/agil
eesofd.lic:
trident.scs.agilent.com: license server UP (MASTER) v11.9
Vendor daemon status (on trident.scs.agilent.com):
agileesofd: UP v11.9
C:\Program Files\Agilent\EEsof_License_Tools\bin>
```

Below is an example test matrix. It is recommended to start with Firewall disabling first.

	Client Firewall	Server Firewall	Client Antivirus	Server Antivirus
Test 1	off	on	on	on
Test 2	on	off	on	on
Test 3	off	off	on	on
Test 4	off	off	off	on
Test 5	off	off	off	off

If both firewall and antivirus, on server and client machines, are simultaneously disabled (in other words, all security software on license client and server turned off) and `lmstat` does not give a positive result, then some third party software might be causing the issue. Request your IT professional to check the same.

If after running the above tests, an interfering firewall and/or antivirus is determined; exceptions must be made into these tools so that the FlexNet software functions properly. The steps to do this are covered here. However, due to the wide variation in firewall and antivirus user interfaces and use models, only generic instructions are provided.



1. Edit the current license file on license server machine. A port number should be added for both the license manager daemon `lmgrd` and the `agileesofd` vendor daemon. These are shown below.

```
SERVER this_host B8AC6F80C09D 27005
VENDOR agileesofd PORT=5346
#
INCREMENT b_hb_layout_momentum agileesofd 2.9 31-mar-2013 1
VENDOR_STRING&hellip;..
```

Stop and re-start license server so that these changes can take effect.

2. Firewall and Antivirus exclusions:
 - a. Firewall: Specify TCP port numbers 27005 and 5346 to be allowed through firewall for both License server and License client machines
 - b. Firewall and/or Antivirus: Configure following executables as exclusions:
C:\Program Files\Agilent\EEsof_License_Tools\bin\agileesofd.exe
C:\Program Files\Agilent\EEsof_License_Files\bin\lmgrd.exe