License Management Guide

ANSYS, Inc.
Southpointe
2600 Ansys Drive
Canonsburg, PA 15317
ansysinfo@ansys.com
http://www.ansys.com
(T) 724-746-3304
(F) 724-514-9494

Release 2025 R2
July 2025

ANSYS, Inc. and ANSYS Europe, Ltd. are UL registered ISO 9001: 2015 companies.

Copyright and Trademark Information

© 2025 ANSYS, Inc. Unauthorized use, distribution or duplication is prohibited.

ANSYS, Ansys Workbench, AUTODYN, CFX, FLUENT and any and all ANSYS, Inc. brand, product, service and feature names, logos and slogans are registered trademarks or trademarks of ANSYS, Inc. or its subsidiaries located in the United States or other countries. ICEM CFD is a trademark used by ANSYS, Inc. under license. CFX is a trademark of Sony Corporation in Japan. All other brand, product, service and feature names or trademarks are the property of their respective owners. FLEXlm and FLEXnet are trademarks of Flexera Software LLC.

Disclaimer Notice

THIS ANSYS SOFTWARE PRODUCT AND PROGRAM DOCUMENTATION INCLUDE TRADE SECRETS AND ARE CONFIDENTIAL AND PROPRIETARY PRODUCTS OF ANSYS, INC., ITS SUBSIDIARIES, OR LICENSORS. The software products and documentation are furnished by ANSYS, Inc., its subsidiaries, or affiliates under a software license agreement that contains provisions concerning non-disclosure, copying, length and nature of use, compliance with exporting laws, warranties, disclaimers, limitations of liability, and remedies, and other provisions. The software products and documentation may be used, disclosed, transferred, or copied only in accordance with the terms and conditions of that software license agreement.

ANSYS, Inc. and ANSYS Europe, Ltd. are UL registered ISO 9001: 2015 companies.

U.S. Government Rights

For U.S. Government users, except as specifically granted by the ANSYS, Inc. software license agreement, the use, duplication, or disclosure by the United States Government is subject to restrictions stated in the ANSYS, Inc. software license agreement and FAR 12.212 (for non-DOD licenses).

Third-Party Software

See the legal information in the product help files for the complete Legal Notice for ANSYS proprietary software and third-party software. If you are unable to access the Legal Notice, contact ANSYS, Inc.

Published in the U.S.A.

Table of Contents

1. Introduction ... 1
1.1. Explanation of Licensing Terms ... 3
1.1.1. The FlexNet License Manager Daemon (lmgrd) ... 4
1.1.2. The Vendor Daemon (ansyslmd) ... 4
1.1.3. Ansys Common Licensing (ACL) ... 4
1.1.4. Ansys Licensing Interconnect (ansysli_server) ... 5
1.1.5. The License File ... 5
1.1.5.1. Product to License Feature Mapping ... 5
1.1.5.2. License File Format ... 6
1.1.5.2.1. SERVER Lines ... 6
1.1.5.2.2. VENDOR Lines ... 7
1.1.5.2.3. INCREMENT Lines ... 7
1.1.6. The License Server Machines ... 8
1.1.6.1. Selecting License Server Machines ... 9
2. Licensing Installation and Setup ... 11
2.1. Accessing the Ansys License Manager Installation Software ... 11
2.1.1. Downloading the Installation Files ... 11
2.2. Installing the License Manager ... 12
2.2.1. License Manager Installation Prerequisites ... 13
2.2.2. License Manager Installation Instructions - Windows ... 14
2.2.3. License Manager Installation Instructions - Linux ... 16
2.2.4. Silent License Manager Installation Instructions ... 17
2.3. Uninstalling the Ansys License Manager ... 18
2.4. Adding Licenses ... 20
2.5. Configuring the License Server ... 21
2.5.1. Specifying Firewall Settings ... 21
2.6. License Server Administrative Functions ... 21
2.6.1. Starting the Ansys License Manager ... 21
2.6.2. Stopping the Ansys License Manager ... 22
2.6.3. Viewing FlexNet Licenses ... 22
2.6.4. Displaying the FlexNet License Status ... 22
2.7. Installing the Enterprise Licensing Package ... 22
2.7.1. Default Directory Structure ... 22
2.7.2. Files Provided with the Enterprise Licensing Package ... 24
2.7.3. Files created by the Licensing Interconnect ... 26
2.7.4. Files You Create for the Licensing Interconnect ... 28
2.7.5. Files Created for and by FlexNet ... 29
2.7.6. Installing the Enterprise Licensing Package for the First Time ... 30
2.7.7. Installing the Enterprise Licensing Package Subsequent Times ... 32
3. Post-Installation Instructions ... 35
3.1. Start the Ansys License Manager at System Boot Time ... 35
3.1.1. Boot Time Startup Instructions using systemd ... 35
3.2. Starting the Ansys Licensing Tomcat Server at System Boot Time ... 37
4. Configuration Options ... 39
4.1. Configuring TCP/IP ... 39
4.1.1. Changing the Default Ansys Licensing Interconnect and FlexNet Port Numbers ... 40
4.2. Advanced Licensing Configuration Options ... 41
4.3. Modify License Manager Startup Options ... 42
4.4. Create a Group (Linux Only) ... 42

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

4.4.1. Defining Group Restrictions for the Licensing Interconnect ... 42
4.5. Specify User Privileges ... 43
4.5.1. Setting Idle Timeout ... 44
4.6. Setting Up Redundant (Triad) Servers ... 45
5. License Server Administration Using Ansys License Management Center ... 47
5.1. Ansys License Management Center Browser Requirements ... 47
5.2. Accessing the Ansys License Management Center ... 47
5.3. Using the Ansys License Management Center ... 48
5.3.1. Adding a License ... 48
5.3.2. Starting the Ansys License Manager ... 50
5.3.3. Stopping the Ansys License Manager ... 50
5.3.4. Rereading the License Manager Settings ... 51
5.3.5. Displaying the License Server Machine Hostid Information ... 52
5.3.6. Viewing FlexNet Licenses ... 52
5.3.7. Viewing the Licensing Interconnect Log ... 53
5.3.8. Viewing the FlexNet Debug Log ... 53
5.3.9. Viewing the Ansys License Management Center Log ... 54
5.3.10. Viewing the Current License Usage ... 55
5.3.11. Viewing the License Usage History ... 55
5.3.12. Viewing the Peak License Usage ... 56
5.3.13. Viewing License Denials ... 57
5.3.14. Displaying the FlexNet License Status ... 58
5.3.15. Gathering Diagnostic Information ... 59
5.3.15.1. Gathering Diagnostic Information outside of Ansys License Management Center ... 59
5.3.16. Displaying Queued Licenses ... 60
5.3.17. Specifying the License Manager Run Mode ... 61
5.3.18. Accessing the Help Options ... 62
5.4. Enabling Secure Connections to the Web Server (Optional) ... 62
5.4.1. Understanding Certificates ... 62
5.4.2. Configuring Tomcat Using Keytool ... 63
5.4.2.1. Preparing the Certificate Keystore ... 64
5.4.2.2. Editing the Tomcat Configuration File ... 64
5.5. Modifying the Tomcat Port Number ... 65
5.6. Changing the Version of Java Used by Ansys License Management Center ... 66
5.6.1. Changing the Java Version During a New Installation of Ansys License Manager ... 66
5.6.2. Changing the Java Version on an Existing Installation of Ansys License Manager ... 67
6. Using Dongles with the Ansys License Manager ... 69
6.1. Assumptions, Restrictions, and Notes ... 69
6.2. File Information and Supported Dongle Driver Versions ... 71
6.3. Supported Platforms ... 71
6.4. Windows Procedures ... 72
6.4.1. Installing/Updating the Dongle Driver on Windows ... 72
6.4.2. Removing an Existing Dongle Driver on Windows ... 74
6.5. Linux Procedures ... 75
6.5.1. Installing/Updating the Dongle Driver on Linux ... 75
6.5.2. Removing an Existing Dongle Driver on Linux ... 76
6.6. Dongle Troubleshooting ... 77
7. Advanced Procedures ... 79
7.1. Running FlexNet and the Licensing Interconnect Separately on Linux/UNIX ... 79
7.2. Running FlexNet and the Licensing Interconnect Separately on Windows ... 79
7.2.1. Installing the Licensing Interconnect as a Windows Service ... 79

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

7.2.1.1. Specify Startup Options via the ansyslmd.ini File ... 80
7.2.1.2. Specify Startup Options via Command Line ... 81
7.2.1.3. Uninstalling the Service ... 81
7.3. Determining the Version Number of the Licensing Interconnect ... 81
7.4. Shutting Down the Licensing Interconnect ... 81
7.5. Rereading the Licensing Interconnect ... 82
7.6. Installing a New License File ... 82
7.7. Caching License Information from Another License Server ... 83
7.8. Improving Licensing Performance ... 83
7.8.1. Running a Standalone Licensing Interconnect ... 83
7.8.2. Balancing the Load on a Triad ... 84
7.9. Managing Triads ... 85
7.10. Understanding Port Numbers ... 86
7.11. Using Virus Scanners ... 87
7.12. License Reporting Tools ... 87
7.13. Enabling License Manager Privacy Controls ... 87
8. Enterprise Licensing Reference ... 89
8.1. Environment Variables ... 89
8.2. Licensing Interconnect Command Options ... 90
8.3. ansyslmd.ini Keywords ... 104
8.4. Glossary ... 120
9. Troubleshooting ... 123
9.1. Gathering Diagnostic Information ... 123
9.2. Problem Situations ... 123
9.2.1. License Manager Will Not Start ... 123
9.2.1.1. License Manager Will Not Start After Adding a License File ... 124
9.2.2. License Manager Will Not Stop ... 125
9.2.3. **Unable to stop the license server with the default lmutil.exe** ... 125
9.2.4. License Manager Will Not Stop in a Three-Server Environment ... 126
9.2.5. License Manager Installation's Licensing Configuration Step to Update Site Preferences (Product Order) Fails ... 126
9.2.6. The Application Does Not Show the Correct License(s) ... 127
9.2.7. FlexNet Log File Shows Unexpected Messages When the License Manager Is Stopped ... 127
9.2.8. Unable to Check Out Licenses ... 128
9.2.9. Jobs Abort When a License Manager Goes Down in Three-Server Environment ... 128
9.2.10. Licensing Log File Not Created ... 129
9.2.11. Queuing Does Not Work ... 129
9.2.12. No Licensing Interconnect or FlexNet Path Available from Display the License Status Option ... 130
9.2.13. Unable to Retrieve License Preferences in ANSLIC_ADMIN ... 130
9.2.14. Cannot Enter Data in Text Fields ... 131
9.2.15. See a "File Not Found" Message When Running a Licensing Utility ... 131
9.2.16. Cannot See Attached Dongle ... 131
9.2.17. Unable to Run a Bookmarked Version Ansys License Management Center ... 132
9.2.18. Unable to View PDF Files in Ansys License Management Center ... 132
9.2.19. Unable to Search PDF Files in Ansys License Management Center ... 132
9.2.20. Starting Ansys License Management Center Causes Error Messages (Linux Only) ... 132
9.2.21. Manually Changing the Tomcat Port Number ... 133
9.2.22. Cannot Access a License After Disconnecting from VPN ... 133
9.2.23. The Ansys Licensing Interconnect Shuts Down Unexpectedly ... 133

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

9.2.24. I See CHECKIN/CHECKOUT Actions for Names that do Not Correspond to License Features in the License File 133
9.3. Licensing Error Messages 134
9.4. License Manager Installation Directory Errors 140
9.5. Ansys License Borrowing Errors 141
9.6. FlexNet License Log File Errors 141
9.7. Contacting Technical Support 143
9.8. Interpreting the ansysli_server.log File 143
9.8.1. Log File Keywords 143
9.9. Log File Error Messages 146
Glossary 149

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

List of Tables

1.1. FlexNet Versions 1
3.1. Tomcat Automatic Startup Instructions 38
3.2. Removing Tomcat Automatic Startup Instructions 38
4.1. Configuring TCP/IP 39
6.1. 64-bit Windows File Information and Supported Dongle Driver Version 71
6.2. 64-bit Linux File Information and Supported Dongle Driver Version 71
6.3. 64-bit Windows Support 71
6.4. 64-bit Linux Support 71
8.1. Cipher Compatibility with Ansys Releases 91

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information
of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 1: Introduction

This document contains detailed instructions relating to the administration of the Ansys License Manager.

License administration functions are performed via the **Ansys License Management Center**. For more information on the usingthis tool, see License Server Administration Using Ansys License Management Center (p. 47).

Supported Hardware Platforms

This document details information about running the Ansys License Manager on the hardware platforms listed below. The name in parentheses indicates the directory name for each platform (referred to as *<platform>* throughout this document).

- Linux x64 (linx64)
- Windows x64 (winx64)

For specific operating system requirements, refer to the installation guide for the platform you are running. For platform support information, see the Platform Support section of the Ansys Website.

Intended Audience

The *Ansys License Management Guide* is intended for the person responsible for licensing administration of Ansys, Inc. products at a site. This person is typically the system administrator.

FlexNet Usage

Ansys, Inc. uses the FlexNet license manager for all of its licensed products. FlexNet is best known for its ability to allow software licenses to be available (or float) anywhere on a network.

The Ansys License Manager uses the following versions of FlexNet:

Table 1.1: FlexNet Versions

Platform	FlexNet Version	LMGRD Version
Windows	Version 11.19.0.1	11.19.0.1
Linux	Version 11.19.0.1	11.19.0.1

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Compatibility with Other FlexNet-Licensed Software

Because of FlexNet's popularity, you may have FlexNet licenses from more than one vendor. We do not recommend or support running the Ansys License Manager with license files that have been combined with other software vendors' license files.

Summary of New and Changed Features

Listed below is a summary of those licensing items that are either new or have been changed since the last release. For a list of all major new and changed features of any product, see the Release Notes document for that product.

General Licensing:

- Ansys Motion Enterprise product now includes access to 4 CPU cores at no additional cost
- The Mechanical Design Type in AEDT enables four Solution Setups:
  - Transient Thermal and Steady-State Thermal requires Icepak Premium or Electronics Enterprise license
  - Modal and Structural requires Mechanical Pro/Premium/Enterprise

Desktop:

- The Ansys License Manager has been updated to FlexNet Publisher client version 11.19.7.0.
- The Ansys License Manager has been updated to OpenSSL version: 3.0.15.
- The Ansys License Manager has been updated to JavaL version: 17.0.14.
- The Ansys License Manager has been updated to Tomcat version: 10.1.39.
- Added support for IPv6.

Web:

- Added access to a range of academic products.
- Added access to Ansys Totem-SC Worker Group.
- Added access to the following Startup Program bundles:
  - Electromagnetics Bundle
  - Embedded Software Bundle
  - Optics and Photonics Bundle
  - Semiconductor Analog and Mixed Signal Bundle
  - Semiconductor Digital and AMS Bundle
  - Structural and Fluids Bundle

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- The Ansys Licensing Portal has added a new Shared Web Licensing peak service usage report.
- The Ansys Licensing Portal Web Transactions Table has been enhanced.
- Paid and unpaid licenses are shown on maximum simultaneous usage charts.

Licensing Portal and ID Portal:

- Column orders are now remembered between sessions.
- Enhancements present consistent actions on Users and Groups pages.

Links to FlexNet

For more information on using FlexNet refer to the *FlexNet License Administration Guide*. You can access this document from the **Ansys License Management Center**.

Summary of New and Changed Features

Listed below is a summary of those licensing items that are either new or have been changed since the last release. For a list of all major new and changed features of any product, see the *Release Notes* document for that product.

- Ansys License Manger has been updated to version 11.19.4.2.
- The location of the FlexNet Debug Log file has been moved. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, the license.log can be found in "C:\ProgramData\AnsysLmd\".
- The License Management Center "Viewing the Licensing Interconnect Log" and "Specifying the License Manager Run Mode" options have been removed. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, you will not see this option.

1.1. Explanation of Licensing Terms

The main components of Ansys licensing are:

- The Ansys License Manager, including:
  - FlexNet license manager daemon (`lmgrd`)
  - Vendor daemon (`ansyslmd`)

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

– Licensing Interconnect (`ansysli_server`) -- Also includes `ansysli_monitor`, which ensures that the license server is functioning correctly and attempts to correct the situation if the license server is not running or is unresponsive.

> **Note:**
>
> The Licensing Interconnect is required for Ansys product releases 2020 R2 and below. Ansys Common Licensing replaces the Licensing Interconnect for Ansys product release 2021 R1 and above.

- License files
- License server machines

These components are explained in more detail in the following sections.

The Ansys License Manager monitors what products are being run, who is running them, and from what computer system. It grants or denies permission to run products. When an Ansys product begins, it requests permission to execute from a license server. The Ansys License Manager checks the pool of available licenses and grants the request only if the required licenses are available. For each request that is granted, the licenses are removed from the pool. As each product execution ends, its licenses are returned to the pool.

1.1.1. The FlexNet License Manager Daemon (lmgrd)

`lmgrd` is one of the FlexNet components of the Ansys License Manager. Its primary purpose is to start and maintain the vendor daemon (`ansyslmd`). It also refers application checkout requests to the vendor daemon (`ansyslmd`).

`lmgrd` must be running on the license server machine to run Ansys, Inc. products.

1.1.2. The Vendor Daemon (ansyslmd)

Each vendor who has a FlexNet-licensed product on the network has one process, called the vendor daemon. The vendor daemon keeps track of how many licenses are checked out, and who has them. The Ansys vendor daemon is `ansyslmd`.

Client programs, including `ansysli_server` and `ansyscl`, communicate with `ansyslmd`, usually through TCP/IP network communications. The vendor daemon (`ansyslmd`) is started by `lmgrd`. The vendor daemon `ansyslmd` must be running on the license server machine to run Ansys, Inc. products.

1.1.3. Ansys Common Licensing (ACL)

> **Note:**
>
> Ansys Common Licensing replaces the Licensing Interconnect for Ansys product release 2021 R1 and above.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

The communication between the Ansys applications and FlexNet occurs through an intermediary process called Ansys Common Licensing (ACL). ACL is nearly transparent and is launched when any Ansys product starts. You should not see any noticeable difference in your day-to-day operation of Ansys products.

1.1.4. Ansys Licensing Interconnect (ansysli_server)

Note:

The Licensing Interconnect is required for Ansys product releases 2020 R2 and below. Ansys Common Licensing replaces the Licensing Interconnect for Ansys product release 2021 R1 and above.

The Ansys Licensing Interconnect (`ansysli_server`) is an intermediary process that communicates with the FlexNet component of the license manager to authenticate and process all license requests. In a typical configuration, the Ansys Licensing Interconnect starts the FlexNet component `lmgrd`, which then starts `ansyslmd`.

With the Licensing Interconnect, your license file and license options file are still applicable and in effect. Using an intermediary process allows us to seamlessly integrate our full range of product offerings to continually offer you access to the latest products with minimal disruption to your licensing environment. It also allows us a platform on which to enhance important licensing features.

The Licensing Interconnect must be running on the license server machine to run Ansys, Inc. products.

1.1.5. The License File

Licensing data is stored in a text file called the license file. The license file is created by Ansys, Inc. and is installed by the license administrator. It contains information about the server machines and vendor daemon, and at least one line of data (called INCREMENT lines) for each licensed product. Each INCREMENT line contains a license key based on the data in that line and other vendor-specific information.

1.1.5.1. Product to License Feature Mapping

"Product to License Feature Mapping" refers to which license features are included with each product. A complete list of the products and license features can be found in the, Ansys, Inc. Product to License Feature Mapping table.

To access this table:

1. Log onto the Ansys Customer Portal.
2. Click **Downloads**>**Installation and Licensing Help and Tutorials**.
3. Click **Licensing**. The most up-to-date Ansys, Inc. Product to License Feature Mapping table can be found here.

Note that the information contained in the Product to License Feature Mapping table was previously included in the Product Variable Table section of the Ansys Licensing Guide.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

1.1.5.2. License File Format

License files usually begin with a SERVER line followed by a VENDOR line, followed by one or more INCREMENT lines. Each INCREMENT line contains a license key based on the data in that line, the hostids specified in the SERVER lines, and other vendor-specific data.

You can modify only these data items in the license file; all other items must remain unchanged:

- System host names on the SERVER line(s)
- Port numbers on the SERVER line(s)

> **Note:**
>
> If you change the FlexNet port number, then you must also change the FlexNet port number that is specified in the `ansyslmd.ini` file or in the **ANSYSLMD_LICENSE_FILE** environment variable on all client machines to match the port number specified in the SERVER line.

- Vendor daemon file paths on the VENDOR line(s)
- Options file paths on the VENDOR line(s)
- Optional port numbers on the VENDOR line(s) (for Ansys Common Licensing firewall support only)

Long lines normally use the "\" line-continuation character to break up long lines. A space character must precede the line-continuation character.

1.1.5.2.1. SERVER Lines

The SERVER line specifies the hostname and hostid of the license server machine and the `lmgrd` port number. Normally a license file has one SERVER line. Three SERVER lines mean that you are using redundant servers. License administrators do not have the option of deleting SERVER lines from a license file because the hostids from all of the SERVER lines are computed into the license keys on every INCREMENT line.

The following is an example of a server line:

```
SERVER enterprise 0800967f42 1055
```

where:

`enterprise` is the license server machine host name. The Linux hostname or **`uname -n`** command returns the hostname. On Windows systems, **`ipconfig /all`** returns the host name. This can also be an IP address (nnn.nnn.nnn.nnn format).

`0800967f42` is the hostid returned by the **Get System Hostid Information** option of the **Ansys License Management Center**.

1055 is the Ansys default port number for FlexNet TCP. If port 1055 is already in use on your system, you can change this value.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

1.1.5.2.2. VENDOR Lines

The VENDOR line specifies the vendor daemon's name and path. `lmgrd` uses this line to start the vendor daemon, and the vendor daemon reads it to find its options file. The format of the VENDOR line is shown below.

```
VENDOR ansyslmd [vendor_daemon_path]
     [[options=]options_file_path] [[port=]port]
```

where:

`ansyslmd` is the name of the Ansys vendor daemon.

`vendor_daemon_path` is the path to the executable for this daemon. This path is optional. Ansys, Inc. does not supply this field because `lmgrd` will look for the vendor daemon `ansyslmd` executable in the directory where `lmgrd` is located and all Ansys products install both of these daemons into the same directory.

Note:

If you do supply this path and the path includes spaces, enclose the entire directory path in double quotes.

`options_file_path` is the full path to the end-user options file for this daemon. FlexNet does not require an options file. The options file need not be specified on this line. As long as the options file `ansyslmd.opt` is located in the same directory as the license file (the license_files directory), the vendor daemon will automatically find and use it.

port is the vendor daemon port number. Note: This is for firewall support only and is otherwise not recommended. In the following example, *####* would be replaced with the port number you choose:

```
VENDOR ansyslmd options="C:\Program Files\ANSYS Inc\Shared Files\
     Licensing\ansyslmd.opt" port=####
```

1.1.5.2.3. INCREMENT Lines

An INCREMENT line describes the license to use a product. The syntax of the INCREMENT line is:

```
INCREMENT feature ansyslmd feat_versionexp_date #lic key
      [VENDOR_STRING="vendor_str"] [ISSUED="..."] [START="..."] [SIGN2="..."]
```

A sample license file is shown here. This file is for 15 Ansys Mechanical Enterprise tasks.

```
SERVER gagh 690daec6 1055
VENDOR ansyslmd
INCREMENT ansys ansyslmd 9999.9999 30-sep-2018 15 8C59A481BA50 \
     VENDOR_STRING=customer:00012345 ISSUED=10-sep-2017 \
     START=10-sep-2017 SIGN2="007B AC4B D3A2 \
  E623 DC66 BC38 7B31 CE00 0055 DE8D 0E27 C6FD 6C07 EE27 BBCC"
```

where:

- *gagh* is the hostname of the license server

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- *690daec6* is the hostid
- *1055* is the FlexNet port number
- *ansyslmd* is the vendor daemon
- *ansys* is the license feature representing Ansys Mechanical Enterprise
- *9999.9999* indicates that the maintenance agreement is not applicable. Otherwise, this is highest supported build date for the application.
- *30-sep-2018* is the expiration date
- *15* is the number of tasks for Ansys Mechanical Enterprise
- *8C59A481BA50* is the encryption key for Ansys Mechanical Enterprise
- *customer:00012345* is the customer number
- *ISSUED=10-sep-2017* is the date the license was created
- *START=10-sep-2017* is the start date
- SIGN2=<" fifteen 4 character segments" > is the TRL encryption

Note:

Some INCREMENTS have additional SIGN and SIGN2 encryption to support Ansys Electronics products.

1.1.6. The License Server Machines

License administration is controlled from specific computers on the network called license server machines. License server machines run the license manager, which controls access to all licenses.

The server machines are designated by you--the end user. You have the option of designating one server or three servers. In a one-server network, if the server machine goes down, the licenses are no longer available for use until the server machine is back in service. In a three-server (redundant triad) network, as long as two of the three machines are still running, the licenses are still available for use.

The *master* server actually controls the license administration. If a network has only one server machine, then that server machine is automatically the master server. In a three server environment, the order of the SERVER lines in the license file determines which server is the master. *The order of the servers must match on all machines in a three server environment*. The first is the master, the second is the first backup, etc. If the order of the SERVER lines does not match on the three servers, then the servers will attempt to determine the master server; however, this attempt may not be successful. In a three-server network, if the master server is unavailable, then the first backup acts as the master.

To get the full set of files necessary to set up a license *server*, you will need to run the license manager installation. For detailed installation instructions, see Installing the License Manager (p. 12).

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

1.1.6.1. Selecting License Server Machines

Before running any Ansys, Inc. software, you must select which machine(s) will be license servers, and provide the hostid and hostname of those machines to Ansys, Inc. Use the **Get System Hostid Information** option of the **Ansys License Management Center** to capture the necessary system information and create the text file, which then needs to be forwarded to your Ansys sales representative.

Consider the following points when deciding which computer(s) will be used as server(s):

- All files used in conjunction with the license manager software must be located on a disk that is physically local to the server computer(s).
- Computers must have a high-speed, reliable Ethernet connection.
- Computers that experience extremely high levels of network traffic or processing lags due to high CPU and/or I/O usage are poor candidates for servers.
- Do not use computers that are frequently rebooted as servers.
- Do not enable "sleep mode" for the computer you are using as a license server. Client computers are not able to connect with a license server that is in sleep mode.
- The license server machine must have a static IP address.
- We do not allow the use of wide area networks (WANs) for license servers (with the standard Ansys contract).
- If using a three-server network, we recommend that you choose three machines that are of the same platform type (that is, three Linux or three Windows machines).
- If using a three-server network, we highly recommend that all three server machines be on the same subnet in the same physical location.

If these guidelines are not followed, the ability of the Ansys License Manager to perform consistently will be compromised.

Caution:

Do not change the date on the license server machine. Doing so will prohibit the Ansys product from running. Restoring the system to its original state prior to the date change may require significant effort.

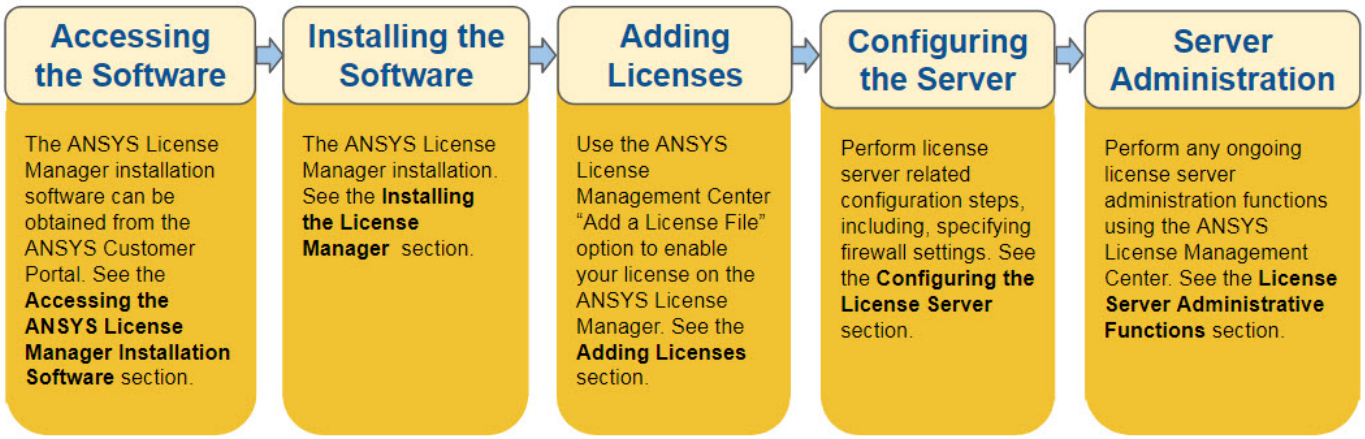
Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 2: Licensing Installation and Setup

The following sections describe the basic steps required to set up your license server. These instructions follow the Ansys Licensing Life-Cycle below.

Ansys Licensing Life-Cycle



The following sections provide basic installation and adminstration instructions for the Ansys License Manager. These instructions follow the Ansys Licensing Life-Cycle.

2.1. Accessing the Ansys License Manager Installation Software

2.2. Installing the License Manager

2.3. Uninstalling the Ansys License Manager

2.4. Adding Licenses

2.5. Configuring the License Server

2.6. License Server Administrative Functions

2.7. Installing the Enterprise Licensing Package

2.1. Accessing the Ansys License Manager Installation Software

The Ansys License Manager installation software can be downloaded from the Ansys customer site Download Center or obtained on USB media. To download the software, you need an account on the Ansys customer site. If you do not have an account, you may register at www.ansys.com/customercommunity to receive your own account.

2.1.1. Downloading the Installation Files

To download the Ansys License Manager installation files, you need to have a current technical support agreement.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

1. From the Ansys customer site, www.ansys.com/customercommunity, click **Downloads** > **Current Release**.
2. Select your installation operating system (**Windows x64** or **Linux x64**).
3. Expand the **Tools** option by clicking the + to the right of the title.
4. Click the **Full Package** option for the **Ansys License Manager**.
5. Select your desired download directory and click **Save**.
6. After the download is complete, uncompress the package using standard uncompression utilities for your specific platform. We strongly recommend that you extract the files into new, temporary directories.
7. Begin the license manager installation as described in Installing the License Manager (p. 12).

2.2. Installing the License Manager

As of release 2024 R2, the license manager installation has been removed from the Ansys Product Installation package. To get the license manager installation, log on to the **Ansys Customer Portal** and download the Ansys License Manager Installation package from **Downloads>Current Release>Tools>Ansys License Manager**.

You must install the license manager software on your server machine(s) at this release in order to be able to run Ansys, Inc. products. If you do not install the license manager at this release, your Ansys, Inc. products may not run. You will find detailed instructions for installing the license manager on your server machines later in this chapter.

Note:

If you want to run multiple releases of Ansys, Inc. software, you **MUST** install them chronologically (that is, Release 2025 R1 followed by Release 2025 R2). If you install an earlier release after installing Release 2025 R2, you will encounter licensing issues that may prevent you from running any products/releases. If you need to install an earlier release after you have already installed Release 2025 R2, you **must** uninstall Release 2025 R2, then re-install the releases in order.

When you run the license manager installation on the license servers, the licensing installation process will install all necessary files, as well as set the **ANSYSLIC_DIR** environment variable in the product-run scripts. If there is an existing license manager, the installation process will shut it down, so you should verify that no users will be affected while you run the installation.

Note that the FLEXlm for Ansoft (ansoftd) license manager will also be shut down and uninstalled if it's running; all associated license files will be migrated over to the Ansys License Manager. Once migrated, you will no longer be able to run the Ansys License Manager and the FLEXlm for Ansoft License Manager on the same system.

To support the Ansys License Management Center, a Tomcat web server and Java will be installed within the license manager directory during the Ansys License Manager installation. To view the latest

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Tomcat and Java versions installed, access the **View Licensing Configuration Details** option described in Accessing the Help Options (p. 62).

Run the license manager installation on all machines that will act as license servers.

Linux Server Installation Notes:

If you are installing the License Manager on the same machine where the product will be run, use the same top level directory path for both the product installation and the License Manager installation. We strongly recommend that you install the licensing files relative to the product installation directory to avoid manually editing the product run scripts.

A typical product installation on a Linux machine allows you to install the product anywhere on the system and then creates a symbolic link from the installation directory to `/ansys_inc`. If you did not set the symbolic link during the product installation, or if you installed the licensing files somewhere other than relative to the installation directory, replace all references to `/ansys_inc` in this guide with the name of the installation directory you used. Any reference throughout this manual to the licensing directory on Linux platforms means `/ansys_inc/shared_files/licensing`.

On Linux systems, you can install without administrative privileges but you may encounter permission problems during the installation.

Windows License Server Installation Notes:

The licensing installation on a Windows machine installs all necessary licensing files into the `\Program Files\ANSYS Inc\Shared Files` directory by default, located on the same drive as the operating system or the directory where you installed a previous license manager release, regardless of where your product installation resides. You must have administrative privileges on your machine to install the license manager.

Any reference throughout this manual to the licensing directory on Windows platforms means `\Program Files\ANSYS Inc\Shared Files\Licensing`, located on the same drive as the operating system. If you choose to install the Ansys License Manager to a different location, you must replace any references to `\Program Files\ANSYS Inc\Shared Files\Licensing` with the directory where you installed the license manager.

2.2.1. License Manager Installation Prerequisites

We recommend that you have the following information available before you begin this installation:

- Your license file from Ansys, Inc., saved to a temporary directory. Existing customers may not be supplied with new licenses for the current release. They will be supplied when the current licenses expire or when TECS expires. For more information, see Adding Licenses (p. 20).

- Open port numbers for FlexNet and Ansys Common Licensing.

  The default port for FlexNet is 1055. Ansyslmd daemon uses any free available port for communication with the Ansys common Licensing layer. If you want the daemon to use specific port then you may need to add, for example, PORT=1056 (or which ever available port you choose) in the license file and restart ansyslmd/lmgrd. For more information on the licensing file vendor lines, see VENDOR Lines (p. 7).

  To verify that a port is available, open a command line and enter the following command:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
netstat -a -p tcp
```

A list of active ports is displayed. Make sure the lmgrd and ansyslmd ports are open for communications.

- Verify that you are running on a supported platform.
- Verify that you have sufficient disk space to download, uncompress, and install the license manager.
- When installing Ansys License Manager on Linux platforms, verify that you have installed all required libraries. For a complete list of required libraries, see "Common libraries that may be required for all products" and "Ansys License Manager" in the Required Linux Libraries by Product section of the Ansys Linux Installation Guide.

2.2.2. License Manager Installation Instructions - Windows

Follow the instructions below to install the Ansys License Manager on Windows systems that will act as license servers.

1. Right-click the `setup.exe` file and select **Run as administrator**. If you downloaded the license manager installation package, this file will reside in the directory where you unzipped the files. If you are running from media, this file will reside in the top level of the media.
2. The installation launcher appears. Choose a language from the dropdown.
3. Select **Install Ansys License Manager**.
4. You will be notified that the license manager (Ansys or FLEXlm for Ansoft (ansoftd)), if running, will be shut down. Click **OK**.
5. The License Agreement screen appears. Read the license agreement, and if you agree, click **I Agree** to accept the terms and click **Next**, located on the right side of the screen. You must select **I Agree** to continue with the installation.
6. Specify the installation directory. You can accept the default or specify an alternate path and the directory name where the license manager is to be installed. The installation directory is set to `<OS_Drive>\Program Files\ANSYS Inc` by default. You must have administrative privileges for the directory you specify. In addition, the directory:
   - Must be a local directory
   - Must be a local, fixed-media drive
   - Cannot be a UNC or relative path
   - Cannot be a short (8.3) file name format path
   - Cannot be a symbolic link or junction

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- Cannot use wide character names/paths

Note:

You are not permitted to change the installation directory for a computer that currently contains an instance of the Ansys License Manager. To change the installation directory location, you must first uninstall any previous versions of the product.

7. The Ansys License Manager is the only component available and is selected to be installed. The amount of disk space required and the disk space available appear at the bottom of the window. If the disk space required exceeds the disk space available, be sure that you have sufficient space before continuing. The disk space required as calculated by the installation program may be greater than the actual amount needed. However, if you choose to continue the installation, you should carefully review any log and error files at the end of the installation to ensure that the installation completed successfully.

   Click **Next** to continue.

8. A summary of the selected installation data appears. Information shown includes platform, installation directory, and product. Review the information carefully, and if correct, click **Next** to continue the installation.

9. Once the license manager is installed, the installation program performs a "silent" licensing configuration which includes merging your custom changes to the product order. Click **Next** to continue the installation.

   The **Launch License Management Center upon exiting** option is included on the screen. The **Ansys License Management Center** is a browser-based application that centralizes many of the Ansys licensing administrative functions. For more information, see License Server Administration Using Ansys License Management Center (p. 47).

   Launch the **Ansys License Management Center** at this time to add a new license file.

   If you do not want to launch the Ansys License Management Center, clear the **Launch License Management Center upon exiting** option.

   Note:

   If the installation did not complete or completed with errors, review the progress log by clicking the **View Detailed Progress Log** button.

10. When the license manager installation is complete, click **Exit**. A new Start Menu item named **Ansys, Inc. License Manager** will be created automatically. It will include selections for the **License Management Center**, the Ansys *Licensing Guide* and the *FlexNet License Administration Guide* .

On Windows, if you encounter a problem during the licensing installation process that results in a failure or abort, or if you are concerned that the licensing installation did not complete correctly, we recommend that you re-run the License Manager installation.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

2.2.3. License Manager Installation Instructions - Linux

Follow the instructions below to install the Ansys License Manager on Linux systems that will act as license servers. This installation expects you to be logged in as root.

1. Run `INSTALL -LM` to launch the license manager installation. If you downloaded the license manager installation package, this file will reside in the directory where you untarred the files. If you are running from media, this file will reside in the top level of the media.

2. Select a language.

3. You will be notified that the license manager (ansyslmd and/or ansoftd), if running, will be shut down. Click **OK**.

4. The License Agreement screen appears. Read the license agreement, and if you agree, click **I Agree** to accept the terms and click **Next**. You must select **I Agree** to continue with the installation.

5. The mount directory (location where the installation is located) is specified. You should accept the default. You can also accept the default installation directory or specify an alternate path and directory name where the license manager is to be installed. You cannot use wide character names/paths in the installation directory.

   Note:

   You are not permitted to change the installation directory for a computer that currently contains an instance of the Ansys License Manager. To change the installation directory location, you must first uninstall any previous versions.

   We recommend that you also set the symbolic link `/ansys_inc` to the directory where the Ansys, Inc. product is installed. The `/ansys_inc` symbolic link is set by default. The symbolic link option is available only if you are installing as root. If you chose to set the symbolic link during the product installation, you should set it here as well.

   Click **Next** to continue.

6. The **Ansys License Manager** is the only component available and is selected to be installed by default. The amount of disk space required and the disk space available appear at the bottom of the window. If the disk space required exceeds the disk space available, be sure that you have sufficient space before continuing. The disk space required as calculated by the installation program may be greater than the actual amount needed. However, if you choose to continue the installation, you should carefully review any log and error files at the end of the installation to ensure that the installation completed successfully.

   Click **Next** to continue.

7. A summary of the selected installation data appears. Information shown includes platform, installation directory, and product. Review the information carefully, and if correct, click **Next** to continue the installation.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

8. Once the license manager is installed, the installation program performs a "silent" licensing configuration which includes merging your custom changes to the product order. Click **Next** to continue the installation.

   The **Launch License Management Center upon exiting** option is included on the screen. The **Ansys License Management Center** is a browser-based application that centralizes many of the Ansys licensing administrative functions. For more information, see License Server Administration Using Ansys License Management Center (p. 47).

   Launch the **Ansys License Management Center** at this time to add a new license file.

   If you do not want to launch the Ansys License Management Center, clear the **Launch License Management Center upon exiting** option.

   Note:

   If the installation did not complete or completed with errors, review the progress log by clicking the **View Detailed Progress Log** button.

9. When the license manager installation is complete, click **Exit**.

On Linux, if you encounter a problem during the licensing installation process that results in a failure or abort, or if you are concerned that the licensing installation did not complete correctly, we recommend that you re-run the License Manager installation.

2.2.4. Silent License Manager Installation Instructions

You can deploy an Ansys License Manager installation in silent mode on both Windows and Linux systems.

To silently install the Ansys License Manager on Windows systems that will act as license servers, you must run the `setup.exe` with the `-silent` and `-LM` options:

```
setup.exe -silent -LM
```

To install the Ansys License Manager on Linux systems that will act as license servers, you must run the `INSTALL` with the `-silent` and `-LM` options:

```
INSTALL -silent -LM -install_dir path
```

The silent license manager installation is valid only for the default Licensing Configuration option **Run the Ansys Licensing Interconnect with FlexNet**.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

If you are installing the license manager to a non-default installation directory, you can use the silent installation method, but only for the initial installation.

Note:

You are unable to change the installation directory for a computer that currently contains an instance of the Ansys License Manager. To change the installation directory location, you must first uninstall any previous versions of the Ansys License Manager.

You can use the following arguments when running a silent license manager installation:

`-silent`	Initiates a silent installation.
`-install_dir` *`path`*	Specifies the directory to which the license manager is to be installed. If you want to install to the default location, you can omit the `-install_dir` argument. The default location on Linux is `/ansys_inc` if the symbolic link is set; otherwise, it will default to `/usr/ansys_inc`.
`-lic-file-path` *`path`*	Specifies the location of the license file to install. If the path is not specified or if the path is the same as the existing license file, the license file will not be installed. For the license file path on Windows, you must enclose the path in quotes if you have spaces in the pathname.

During a silent installation, any licensing configuration messages will be written to the licensing installation configuration log file, `install_licconfig.log`, located in the installation directory.

Caution:

A silent license manager installation could shut down the Ansys License Manager, affecting other users who are using that license server machine.

If you are running a silent client installation, you can specify license server information as well.

`-licserver-info`	Specifies information to be used by the client for the license server. Valid only in conjunction with a silent product installation (`setup.exe` or `INSTALL`). See the Ansys *Installation Guide* for your platform for details on running a silent product installation, including client licensing.

2.3. Uninstalling the Ansys License Manager

These instructions shut down and remove the entire Ansys License Manager installation from your system. You should not uninstall the license manager if you still have products installed that use the license manager.

The procedures described in this section assume that you have installed the Ansys License Manager in the default locations. The default locations are:

Windows:

C:\Program Files\ANSYS Inc\

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Linux:

/ansys_inc/

If you have installed the Ansys License Manager to a non-default location, modify the steps accordingly.

Uninstalling on Linux License Servers

Follow these steps on the license server machine. You must be logged in as root or superuser.

1. Stop the Ansys License Manager from the **Ansys License Management Center** by following the steps contained in Stopping the Ansys License Manager (p. 50).

2. Stop any Ansys Tomcat server processes running from this installation directory by running the `stop_lmcenter` script located in:

   ```
   /ansys_inc/shared_files/licensing/
   ```

3. Delete the shared_files subdirectory (`/ansys_inc/shared_files/` by default).

   Note:

   Do not delete this directory if Ansys products are also installed in the installation directory.

4. Remove the Ansys License Manager automatic startup information by issuing the commands in Boot Time Startup Instructions using systemd (p. 35).

5. Remove the Tomcat automatic startup information by issuing the commands in Table 3.2: Removing Tomcat Automatic Startup Instructions (p. 38).

Uninstalling on Windows License Servers

Follow these steps on the license server machine. All commands must be run in an administrator command prompt window.

1. Stop the Ansys License Manager from the **Ansys License Management Center** by following the steps contained in Stopping the Ansys License Manager (p. 50).

2. Verify that the following processes are no longer running. If they are running, stop them before continuing the uninstall process.

   - ansysli_server.exe
   - ansysli_monitor.exe
   - ansyslmd.exe
   - lmgrd.exe

3. Go to the directory path below and verify whether the ansysli_server.exe file is in this directory.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
<Install Directory>\Program Files\ANSYS Inc\Shared Files\Licens-
ing\winx64\
```

4. To uninstall the Ansys License Manager service, you must use one of the following commands:

   If the ansysli_server.exe file is in your winx64 directory:

```
     "C:\Program Files\ANSYS Inc\Shared Files\Licensing\winx64\ansysli_server"
-k uninstall
```

   If the ansysli_server.exe file is NOT in your winx64 directory:

```
     sc delete "ANSYS, Inc. License Manager CVD"
```

5. Uninstall the Ansys Licensing Tomcat service. You must use the following commands to do so:

```
     sc stop "ANSYSLicensingTomcat"
     sc delete "ANSYSLicensingTomcat"
```

6. Delete the Shared Files subdirectory (`C:\Program Files\ANSYS Inc\Shared Files` by default).

   Note:

   Do not delete this directory if Ansys products are also installed in the installation directory.

7. Remove the Ansys License Manager folder from the Start menu.

8. Remove the **ANSYSLIC_DIR** and the **ANSYSLIC_SYSDIR** environment variables, if set.

2.4. Adding Licenses

If you did not add a license when you installed the license manager or do not have a license, you should complete the steps below:

1. If you do not have a license file, follow these steps:

   a. Open the **Ansys License Management Center**. For Windows, click **Start>All Programs>Ansys, Inc. License Manager>Ansys License Management Center** and for Linux run the /shared_files/licensing/start_lmcenter script.

   b. Click the **Get System Hostid Information** option to display your system ID code(s).

   c. Select the system ID you wish to use and click **SAVE TO FILE**. For more information, see .Displaying the License Server Machine Hostid Information (p. 52).

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

A text file containing your system ID information is created.

d. Forward this text file to your Ansys sales representative so that a license file can be created for you.

2. Add your license file(s)

   Add your license files though the **Ansys License Management Center**. For these steps, see Adding a License (p. 48).

   If you are running in a three-server environment, the license file must reside on all three servers and must match on all three servers. Therefore, install the same license file on each machine.

2.5. Configuring the License Server

This section provides information on how to configure your license server machine (post-installation) and modify your firewall settings to allow server communications.

2.5.1. Specifying Firewall Settings

If you use a firewall at your site and if you run Ansys products outside the firewall but access the license server within the firewall, you will need to add the Licensing Interconnect and FlexNet port numbers to the exceptions list, as well as the PORT designated on the VENDOR line of the license file. By default, these port numbers are:

Licensing Interconnect: 2325

FlexNet: 1055

PORT designated by PORT=#### on the VENDOR LINE in the `ansyslmd.lic` file (see VENDOR Lines (p. 7) for information on this PORT number)

2.6. License Server Administrative Functions

This section highlights the most commonly used license administrative functions using the **Ansys License Management Center**. These functions include, starting and stopping the Ansys License Manager, re-reading the Ansys License Manager settings and viewing the FlexNet license and license status.

2.6.1. Starting the Ansys License Manager

To run licensed Ansys products, the **Ansys License Manager** must be running on the license server with a valid license file.

To start the **Ansys License Manager**, open the **Ansys License Management Center** and click the **Start** button located on the right side of the page. For more information, see Starting the Ansys License Manager (p. 50).

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

2.6.2. Stopping the Ansys License Manager

To stop the **Ansys License Manager**, open the **Ansys License Management Center** and click the **Stop** button located on the right side of the page. For more information, see Stopping the Ansys License Manager (p. 50).

2.6.3. Viewing FlexNet Licenses

To view your FlexNet licenses, open the **Ansys License Management Center** and click the **View FlexNet Licenses** option. You can view license files that are in use (or will be in use) in the Ansys License Manager.

For more information, see Viewing FlexNet Licenses (p. 52).

2.6.4. Displaying the FlexNet License Status

To display the FlexNet license status, open the **Ansys License Management Center** and the click **Display FlexNet License Status** option. The license server information, vendor daemon status and license usage information are displayed in the status window, along with the users of those features.

For more information, see Displaying the FlexNet License Status (p. 58).

2.7. Installing the Enterprise Licensing Package

Before installing the Enterprise Licensing Package, you should understand the files included with the package, the files created by the Licensing Interconnect, and the files you create for use with the Licensing Interconnect, as well as the overall directory structure.

Details about the directory structure and all of the files are provided in the following sections.

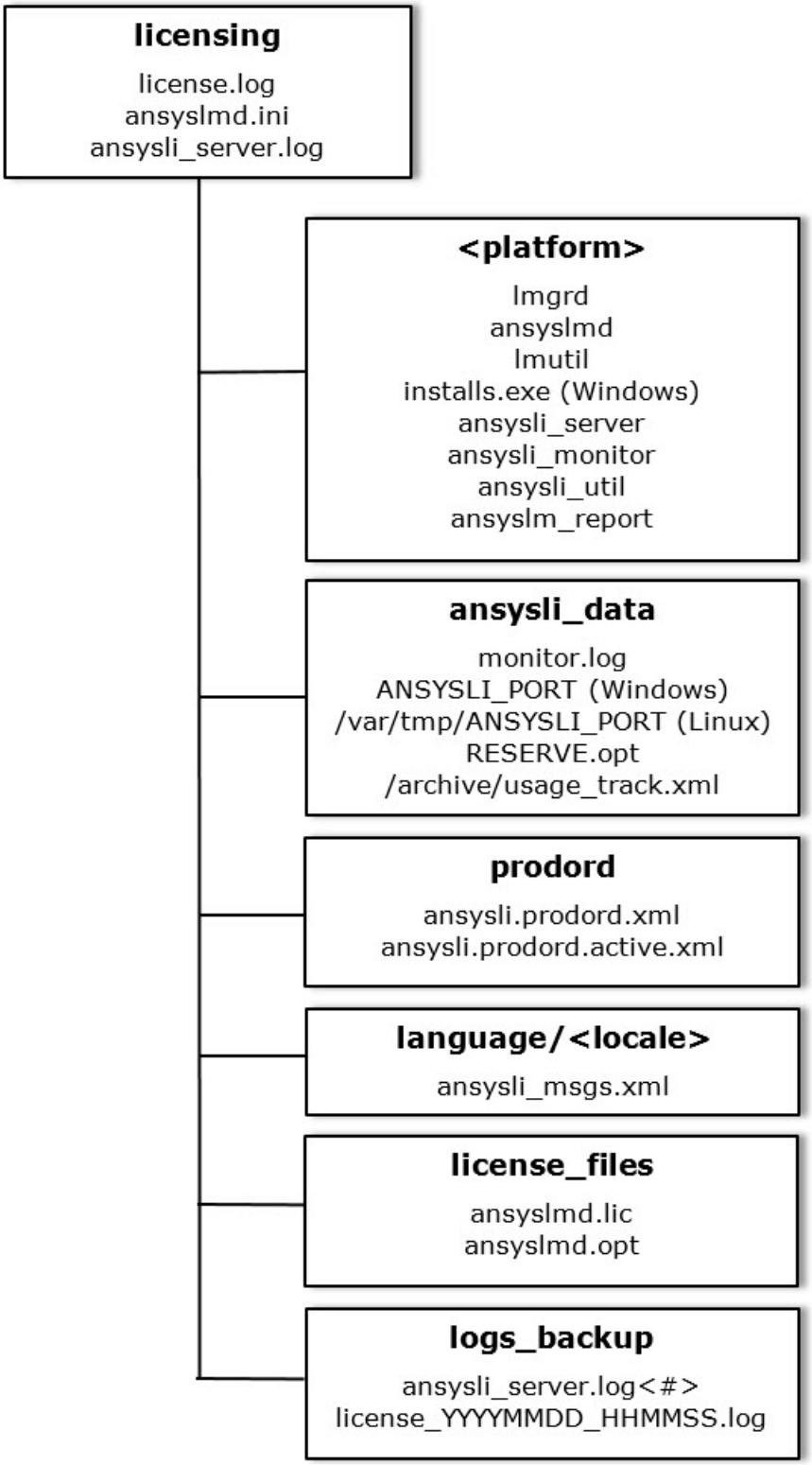
2.7.1. Default Directory Structure

The default directory structure for the Ansys License Manager installation is `/ansys_inc/shared_files/licensing` on Linux/UNIX and `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\` for Windows. Many of the files contained in this package require a specific relative relationship. Keeping the Ansys-specific files in `shared_files/licensing` on Linux/UNIX and in `Shared Files\Licensing` on Windows will ensure that needed relationship. You may select a different parent directory, such as `/licensing/flexnet/shared_files/licensing`.

However, we recommend keeping `shared_files` and below intact. The FlexNet component does not need to reside in the same directory; it may be installed elsewhere. Review ansyslmd.ini Keywords (p. 104) and Licensing Interconnect Command Options (p. 90) for information on specifying the location of specific files, such as the FlexNet license file.

The following diagram illustrates where the files contained in the Enterprise Licensing Package and their associated files reside within the default directory structure.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.



Note:

The Windows licensing directory structure has been changed as of Ansys Release 2024 R1. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, the **ansysli_data**, **prodord** and **language**

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

directorys will not be present. Additionally, the license.log can be found in "C:\Program-Data\AnsysLmd\".

2.7.2. Files Provided with the Enterprise Licensing Package

The Ansys Enterprise Licensing Package contains the minimum files required to successfully run the Ansys, Inc. License Manager. The files listed in this section are included in the Enterprise Licensing Package.

Any directory requirements are noted. The FlexNet files can generally reside anywhere. However, the Licensing Interconnect-related files (non-FlexNet) must remain in the same directory structure from `Shared Files` down as provided in the Enterprise Licensing Package.

lmgrd

Description: FlexNet License Manager Daemon

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/<platform>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: `lmgrd` can reside in any directory.

ansyslmd

Description: FlexNet Ansys Vendor Daemon

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/<platform>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: `ansyslmd` can reside in any directory.

lmutil

Description: FlexNet License Administration Tool

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/<platform>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: `lmutil` can reside in any directory.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

installs.exe (Windows)

Description: The FlexNet-supplied program to install FlexNet as a service on Windows.

Default Directory:

- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: `installs.exe` can reside in any directory.

ansysli_server

Description: Ansys Licensing Interconnect. Manages license requests between Ansys, Inc. applications and FlexNet; contains Ansys product definitions and must be running on the license server to be able to run Ansys products.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/<platform>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: `ansysli_server` needs to reside in the same directory as `ansysli_monitor` and `ansysli_util`. Files that are created or read by `ansysli_server` may have specific relative directory requirements.

Note:

Back-up log files for the **ansysli_server** file are stored in the **logs_backup** directory using the following format: *ansysli_server.log<#>*.

---

ansysli_monitor

Description: Ansys Licensing Interconnect Monitor. This program is started by the Licensing Interconnect. Its sole purpose is to make sure the Licensing Interconnect is running. If the Licensing Interconnect goes down, the monitor will restart it.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/<platform>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: `ansysli_monitor` needs to reside in the same directory as `ansysli_server` and `ansysli_util`. Files that are created by `ansysli_monitor` may have specific relative directory requirements.

ansysli_util

Description: Ansys Licensing Interconnect Informational Utility

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/<platform>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: `ansysli_util` needs to reside in the same directory as `ansysli_server` and `ansysli_monitor`.

ansysli_msgs.xml

Description: This file contains licensing-related information and error messages that are displayed by Ansys licensing, localized into specific languages: English, French, German and Japanese.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/language/<language locale>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\language\<language locale>`

Directory Requirements: Each language locale directory will contain a message file translated specifically for that language. The Licensing Interconnect determines the directory location for `ansysli_msgs.xml` relative to the `ansysli_server` executable. It finds `shared_files/licensing` within the current directory tree and looks one level down for the appropriate language directory. If the directory cannot be found in this manner, the Licensing Interconnect looks for the **ANSYSLIC_DIR** environment variable (which typically points to `/ansys_inc/shared_files/licensing` on Linux/UNIX and `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing` on Windows) and then one level down to the language directory.

Note that although a Japanese localized message file is provided, Licensing Interconnect messages are displayed in English when Japanese is selected.

ansyslm_report

Description: The ansyslm_report program extracts the raw data from the FlexNet debug log file to produce the license usage, license history and license denial reports.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/<platform>`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\<platform>`

Directory Requirements: ansyslm_report must reside in the platform directory.

2.7.3. Files created by the Licensing Interconnect

The files listed in this section are created by the Licensing Interconnect or its components.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

ansysli_server.log

Description: This log file contains a history of Licensing Interconnect activity (for example, license checkouts, license checkins), including any errors that may have occurred.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing`

Directory Requirements: If not using the default directory structure, use the `-log` Licensing Interconnect command option or the DEBUG_LOG_FILE keyword to indicate the location where the `ansysli_server.log` file should reside.

monitor.log

Description: This log file contains a history of Licensing Interconnect monitor activity.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/ansysli_data`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\ansysli_data`

Directory Requirements: The Licensing Interconnect monitor determines the directory location for `monitor.log` relative to the monitor executable. It finds `shared_files/licensing` within the current directory tree and looks one level down for `ansysli_data`. If the directory cannot be found in this manner, the monitor looks for the **ANSYSLIC_DIR** environment variable (which typically points to `/ansys_inc/shared_files/licensing` on Linux/UNIX and `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing` on Windows) and then one level down to `ansysli_data`.

RESERVE.opt

Description: File used to store reserve cache information for design point studies.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/ansysli_data`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\ansysli_data`

Directory Requirements: The Licensing Interconnect determines the directory location for `RESERVE.opt` relative to the `ansysli_server` executable. It finds `shared_files/licensing` within the current directory tree and looks one level down for `ansysli_data`. If the directory cannot be found in this manner, the Licensing Interconnect looks for the **ANSYSLIC_DIR** environment variable (which typically points to `/ansys_inc/shared_files/licensing` on Linux/UNIX and `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing` on Windows) and then one level down to `ansysli_data`. We programmatically set the permissions on this file to 775 on Linux/UNIX to be certain that the Licensing Interconnect can write to this file, regardless of what user starts the Licensing Interconnect. If the permissions on this file

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

are changed such that the user who started the Licensing Interconnect is no longer able to read from or write to the file, then users will not be able to reserve or rereserve licenses.

ANSYSLI_PORT

Description: File used to store (or that contains) the port number being used by the Licensing Interconnect.

Default Directory:

- UNIX/Linux: `/var/tmp`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\ansysli_data`

Directory Requirements: On Windows, the Licensing Interconnect determines the directory location for ANSYSLI_PORT relative to the `ansysli_server` executable. It finds `Shared Files\Licensing` within the current directory tree and looks one level down for `ansysli_data`. If the directory cannot be found in this manner, the Licensing Interconnect looks for the **ANSYSLIC_DIR** environment variable (which typically points to `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing`) and then one level down to `ansysli_data`.

On Linux/UNIX, it will always be placed in `/var/tmp`.

usage_track.xml

Description: This file contains archived usage data *for Ansys Workbench license usage reporting only*. Once the usage data is archived to this file, the data will be cleared from memory. By default, this file is purged every 14 days; use the `ansyslmd.ini` ANSYSLI_PURGE_WB_USAGE keyword or the `-purge_wb_usage` command option when starting the Licensing Interconnect to change the purge frequency. To disable usage reporting altogether, use the `ansyslmd.ini` keyword ANSYSLI_WB_USAGE or the `-wb_usage` command option when starting the Licensing Interconnect.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/ansysli_data/archive`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\ansysli_data\archive`

Directory Requirements: The Licensing Interconnect determines the directory location for `usage_track.xml` relative to the `ansysli_server` executable. It finds `shared_files/licensing` within the current directory tree and looks one level down for `ansysli_data` and then down one level for `archive`. If the directory cannot be found in this manner, the Licensing Interconnect looks for the **ANSYSLIC_DIR** environment variable (which typically points to `/ansys_inc/shared_files/licensing` on Linux/UNIX and `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing` on Windows) and then one level down to `ansysli_data` and then down one level for `archive`.

2.7.4. Files You Create for the Licensing Interconnect

The files in this section are created by you, the IT license administrator, for the Licensing Interconnect.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

ansyslmd.ini

Description: File used to control various operating parameters of the Licensing Interconnect. Many of the keywords also have a corresponding command line argument. This file is also used on client systems to locate FlexNet and the Licensing Interconnect. For more information on `ansyslmd.ini` keywords, see ansyslmd.ini Keywords (p. 104).

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing`

Directory Requirements: If not using the default directory structure, specify the location for the `ansyslmd.ini` file with the `-ini` Licensing Interconnect command option.

2.7.5. Files Created for and by FlexNet

The files in this section are created for or by FlexNet.

ansyslmd.lic

Description: The default name of Ansys' FlexNet license file. Placing all of your Ansys license files in the subdirectory license_files and naming them with a .lic file extension allows the Ansys License Manager to recognize multiple license files. This is especially useful since the Ansys License Manager supports multiple vendor daemons, via FlexNet's CVD technology.

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing/license_files`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\license_files`

Directory Requirements: When not using the default directory structure, use either the `-c` command argument when starting the Licensing Interconnect or the `ansyslmd.ini` file keyword LICKEYFIL to specify the license file or path to the license file.

Source: Provided by Ansys, Inc. and installed by you, the IT license administrator

license.log

Description: The FlexNet debug log file

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing`

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing`

> **Note:**
>
> The Windows location of this file has been changed as of Ansys Release 2024 R1. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, the license.log can be found in "C:\ProgramData\AnsysLmd\".

Directory Requirements: The Licensing Interconnect does not need to access this file; thus, there are no directory requirements.

> **Note:**
>
> Back-up log files for the **license.log** file are stored in the **logs_backup** directory using the following format: *license_YYYYMMDD_HHMMSS.log*.

Source: Created by FlexNet

ansyslmd.opt

Description: The FlexNet options file

Default Directory:

- UNIX/Linux: `/ansys_inc/shared_files/licensing`
- Windows: `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing`

Directory Requirements: The Licensing Interconnect gets the directory location of this file from the FlexNet license file. If the location of the FlexNet options file is not contained in the license file, the Licensing Interconnect looks for it in the same directory as the license file.

Source: Created by you, the IT license administrator

2.7.6. Installing the Enterprise Licensing Package for the First Time

If this is your first time installing the Enterprise Licensing Package, you may want to take a few additional steps to make sure that your configuration meets the needs of your organization. Refer to Advanced Procedures (p. 79) for more detailed instructions on the various procedures outlined below.

1. Untar/unzip the package contents into a clean empty directory structure.
2. Ideally, the package contents should stay in the directory structure provided. If you need to change the directory structure, review the information in Files Provided with the Enterprise Licensing Package (p. 24) on how the files need to relate to one another within the directory structure.
3. Put the files in their target directories.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

4. The directory location containing the license and FlexNet options files has changed at release 16.0. If you have not moved your license and options files to this new location yet, you should do so now. Name the license file with a .lic file extension in the following directory.

   `Linux: /ansys_inc/shared_files/licensing/license_files`

   `Windows: <OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\license_files`

   If you have scripts that start the license manager, verify that the –c command option is pointing to the correct location. If your ansyslmd.ini file uses the LICKEYFIL keyword, make sure it points to the correct location.

5. If the FLEXlm for Ansoft (ansoftd) License Manager is running:

   - Shut down the ansoftd License Manager.
   - If applicable, uninstall the ansoftd service.
   - Remove any procedures that start the ansoftd at boot time.
   - Copy any ansoftd license and FlexNet options files to:

     `Linux: /ansys_inc/shared_files/licensing/license_files`

     `Windows: <OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing\license_files`

   - Update your license files to have consistent port numbers and change the daemon name in the VENDOR line to ansyslmd.

6. If you modified the product order file at a prior release and would like to continue using these modifications, be sure to update your existing product order file to include any new site preference updates by using the **-updatesiteprefs** command.

7. Decide which command options should be used to start the `ansysli_server` component of the Licensing Interconnect:

   - If administering FlexNet and the Licensing Interconnect separately, use the command options `-c`, `-cacheflexlic`, and `-noflex` or add the LICKEYFIL, CACHE_FLEXLIC, and ANSYSLI_NOFLEX keywords to your `ansyslmd.ini` file.
   - If you are using an `ansyslmd.ini` file and it is not located in the default directory path, use the `-ini` command option.
   - For command options controlling the Licensing Interconnect log file, use command option `-log` or add the DEBUG_LOG_FILE keyword to your `ansyslmd.ini` file.
   - For command options to restrict users or groups who will be able to shut down the Licensing Interconnect, use command options `-group` and `-user` (Linux/UNIX only).
   - To disable the ability of your users running Ansys Workbench to track their license usage or reserve licenses for design point studies, use the command options `-wb_usage` and

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

`-dp_reserve`, respectively, or add the ANSYSLI_WB_USAGE and ANSYSLI_DP_RESERVE keywords to the `ansyslmd.ini` file.

8. If this is a Windows system, install the Licensing Interconnect as a service (see Installing the Licensing Interconnect as a Windows Service (p. 79)) and start it.

   If this is a UNIX/Linux system, start the Licensing Interconnect (`ansysli_server`). Set up the Licensing Interconnect to start automatically upon reboot with the command options selected.

9. Start FlexNet.

2.7.7. Installing the Enterprise Licensing Package Subsequent Times

If you have already installed the Enterprise Licensing Package once and are satisfied that your configuration meets your needs, follow these steps for subsequent upgrades. Refer to Advanced Procedures (p. 79) for more detailed instructions on the various procedures outlined below.

1. Untar/unzip the package contents into a clean, empty directory structure.

2. Check the version numbers for both FlexNet and the Licensing Interconnect, verifying that the files being installed are newer than the existing ones.

3. Stop the Licensing Interconnect and FlexNet.

4. Replace the existing files with the new files.

5. We changed the directory location containing the license and FlexNet options files at release 16.0. If you have not moved your license and options files to this new location yet, you should do so now. Name the license file with a .lic file extension in the following directory.

   ```
   Linux: /ansys_inc/shared_files/licensing/license_files
   ```

   ```
   Windows: <OS Drive>:\Program Files\Ansys Inc\Shared Files\Licens-
   ing\license_files
   ```

6. If the FLEXlm for Ansoft (ansoftd) License Manager is running:

   - Shut down the ansoftd License Manager.
   - If applicable, uninstall the ansoftd service.
   - Remove any procedures that start the ansoftd at boot time.
   - Copy any ansoftd license and FlexNet options files to:

     ```
     Linux: /ansys_inc/shared_files/licensing/license_files
     ```

     ```
     Windows: <OS Drive>:\Program Files\Ansys Inc\Shared Files\Licens-
     ing\license_files
     ```

   - Update your license files to have consistent port numbers and change the daemon name in the VENDOR line to ansyslmd.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

7. If you modified the product order file at a prior release and would like to continue using these modifications, be sure to update your existing product order file to include any new site preference updates by using the **-updatesiteprefs** command.

8. Start the Licensing Interconnect and FlexNet.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 3: Post-Installation Instructions

After you have installed the Ansys License Manager, you may want to complete some post-installation steps in order to optimize the performance of the Ansys License Manager at your site.

We recommend that you set your license manager to start at system startup. Other optional post-installation tasks are included here.

3.1. Start the Ansys License Manager at System Boot Time

On Windows systems, the license manager is set up as a service to start automatically at boot time.

On Linux machines, you can set the license manager to start automatically at system boot time. This task is optional but is recommended and should be done regardless of which type of license server configuration you use. You can use the following instructions for systemd to configure automatic license manager startup for all Ansys supported Linux versions. If you would prefer to use the deprecated init.d method, refer to section 5.1 in the Ansys 2020 R1 release documentation.

3.1.1. Boot Time Startup Instructions using systemd

This section details the steps that must be performed on each license server to start the license manager automatically during system boot on Ansys supported Red Hat Enterprise Linux, CentOS and SuSE SLES platforms.

The following systemd configuration steps are applicable to Red Hat, SuSE and CentOS platforms.

Note:

The procedure described below starts the license manager at boot time as root. It is not essential that the license manager be started by the root user; it may be run by a non-privileged user, depending on your preference. If you do not want the license manager to be started by root, the "User=" line in the service file is used to provide a username if you need to run the server as a specific non-root user.

Prior to performing these steps, makes sure that you have:

- Removed any instances of the Ansys License Manager in init.d or rc.local from your environment
- Stop Ansys License Manager

License Manager automatic startup instructions with systemd

1. Create a service file in in the following location:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
sudo vi /etc/systemd/system/ansyslmd.service
```

This file should include the following sample content:

```
[Unit]
Description=Ansys License Manager ansyslmd(CVD)
After=syslog.target network.target

[Service]
User=
Environment=ANSYSLMDSCRIPTS_DIR=/ansys_inc/shared_files/licensing
Type=forking
ExecStart=/bin/sh -c "${ANSYSLMDSCRIPTS_DIR}/start_ansyslmd"
ExecStop=/bin/sh -c "${ANSYSLMDSCRIPTS_DIR}/stop_ansyslmd"
Restart=on-failure
RestartSec=100

LimitNOFILE=500000
LimitNPROC=500000

[Install]
WantedBy=multi-user.target
```

2. After creating the service file steps above, issue the following command:

   ```
   sudo chmod 755 /etc/systemd/system/ansyslmd.service
   ```

3. Reload the systemd process by issuing the following command:

   ```
   sudo systemctl daemon-reload
   ```

4. Enable the service to start automatically after the reload by issuing the following command:

   ```
   sudo systemctl enable ansyslmd.service
   ```

5. Start the service by issuing the following command:

   ```
   sudo systemctl start ansyslmd.service
   ```

   Note:

   If the server shuts down while this process is enabled, the service restarts after 100 seconds.

Additional Service Commands:

Removing the automatic startup information when using systemd:

If you plan to remove the License Manager server installation from a machine and need to remove this capability, follow the instructions below.

1. Stop the License Manager service by issuing the following command:

   ```
   sudo systemctl stop ansyslmd.service
   ```

2. Disable the service by issuing the following command:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
sudo systemctl disable ansyslmd.service
```

3. Permanently remove the service file after stopping and disabling the service:

```
sudo rm /etc/systemd/system/ansyslmd.service
```

Checking the status of the service after start/restart/stop/reload/system reboot:

```
sudo systemctl status ansyslmd.service
```

Stopping the service:

```
sudo systemctl stop ansyslmd.service
```

Disabling the service:

```
sudo systemctl disable ansyslmd.service
```

Reloading the service:

This command should be used when you have made changes that will affect the license manager and want to incorporate these changes without stopping and restarting the license manager. This command performs the same function as the "Reread License Manager Settings" option in **Ansys License Management Center**.

```
sudo systemctl reload ansyslmd.service
```

Stopping and restarting the service:

```
sudo systemctl restart ansyslmd.service
```

3.2. Starting the Ansys Licensing Tomcat Server at System Boot Time

You can set Tomcat to start automatically at system boot time on Linux machines. This task is optional but is recommended and should be done regardless of which type of license server configuration you use. The License Management Center runs using the Tomcat web server. This task is required to be able to run the License Management Center.

Table 3.1: Tomcat Automatic Startup Instructions (p. 38) details the steps that must be performed on each Linux license server to start Tomcat automatically when the system is rebooted.

Note:

The procedure described in this section starts Tomcat at boot time as root. It is not essential that Tomcat be started by the root user; it may be run by a non-privileged user, depending on your preference. If you do not want Tomcat to be started by root, modify the LMUSER value in the `init_ansyslm_tomcat` boot script to include the user login name you want to use at boot time. This user must have read/write access to all files contained in the following directories:

```
<Install Directory>/shared_files/licensing/tools/tomcat/conf
```

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
<Install Directory>/shared_files/licensing/tools/tomcat/logs

<Install Directory>/shared_files/licensing/tools/tomcat/bin
```

Table 3.1: Tomcat Automatic Startup Instructions

Platform	Instructions

Linux: Red Hat, SuSE and CentOS	Issue the Tomcat startup instructions:
	`cp /ansys_inc/shared_files/licensing/init_ansyslm_tomcat /etc/init.d`
	`chmod 555 /etc/init.d/init_ansyslm_tomcat`
	`chkconfig --add init_ansyslm_tomcat`
	`chkconfig init_ansyslm_tomcat on`

Once the procedure is in place for starting Tomcat automatically at boot time, reboot the system to verify that the automatic boot procedure is working correctly.

When the system comes back up, check to see that Tomcat is running by typing the appropriate **ps** command and looking for `init_ansyslm_tomcat` in the resulting display under the column labeled COMMAND. For example:

```
ps -ef|grep tomcat
```

Removing the Tomcat Automatic Startup Information

If you remove the license manager server installation from a machine and need to remove Tomcat Automatic Startup capability, follow the instructions below.

Table 3.2: Removing Tomcat Automatic Startup Instructions

Platform	Instructions

Linux: Red Hat, SuSE and CentOS	Issue the following commands:
	`/etc/init.d/init_ansyslm_tomcat stop`
	`chkconfig --del init_ansyslm_tomcat`
	`rm /etc/init.d/init_ansyslm_tomcat`

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 4: Configuration Options

This section includes a range of Ansys License Manager configuration options that my be required for your specific network architecture.

4.1. Configuring TCP/IP
4.2. Advanced Licensing Configuration Options
4.3. Modify License Manager Startup Options
4.4. Create a Group (Linux Only)
4.5. Specify User Privileges
4.6. Setting Up Redundant (Triad) Servers

4.1. Configuring TCP/IP

TCP/IP must be be configured and started for any Ansys, Inc. product and the license manager to be able to run. You should consult your network administrator for assistance with this configuration. The TCP/IP protocol must be installed on any machine on which you want to run an Ansys product.

TCP/IP is supplied as part of the Linux operating system. Table 4.1: Configuring TCP/IP (p. 39) specifies the system utility used to configure TCP/IP on the various hardware platforms. You should consult your network administrator for assistance with this configuration.

Note:

Linux systems require an Ethernet card.

Table 4.1: Configuring TCP/IP

Hardware Platform	TCP/IP Configuration Utility
Linux (Red Hat Enterprise) (64-bit)	**system-config-network**
Linux (Red Hat Enterprise and CentOS) (64-bit)	**nmtui**
Linux (SuSE Enterprise) (64-bit)	**yast**

For Windows systems, the TCP/IP protocol is included as part of the operating system and is typically installed by default. If you do need to install TCP/IP, remember that it must be bound to a network adapter (such as an ethernet adapter).

On machines that connect to the Internet or corporate intranet through a modem, TCP/IP can be bound to a dial-up connection.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Determining Whether TCP/IP Is Installed on a Microsoft Windows System

To determine if TCP/IP is installed on your system, open the Control Panel, select **Network and Internet> Network and Sharing Center**. Click **Local Area Connection** and click **Properties**. Internet Protocol (TCP/IP) should be listed.

If TCP/IP is installed, you must determine whether it is bound to a network adapter card or a dial-up connection. A network card or a Dial-Up Adapter will be shown under **Connect Using:**.

Caution:

If your computer is connected to a network, it is *highly recommended* that you contact your Information Technology Department before installing or modifying TCP/IP on your machine.

4.1.1. Changing the Default Ansys Licensing Interconnect and FlexNet Port Numbers

A port number specifies the communications channel by which two or more processes can communicate. Ansys uses 2325 as the default port number for the Ansys Licensing Interconnect and 1055 as the default port number for the FlexNet component of the license manager. `ansyslmd` also uses a port designated by the operating system, unless one is manually specified in the license file on the VENDOR line. If you encounter a conflict in port numbers, you can change the default by modifying all of the following files:

Ansys Licensing Interconnect Port Number

The Ansys Licensing Interconnect port number is defined in the `ansyslmd.ini` file. You can change this file by selecting **Specify the License Server Machine** on the **ANSLIC_ADMIN** utility. Enter the new port number in the **Ansys Licensing Interconnect Port Number** field. The Licensing Interconnect port number may also be specified via the **ANSYSLI_SERVERS** environment variable, if set.

FlexNet Port Number

To change the default FlexNet port number, you need to change the following files:

- On the license server machine(s): the port number listed on the SERVER line in the license file (`ansyslmd.lic` and/or `ansoft.lic`).
- On the client machine(s): the port number listed in the `ansyslmd.ini` file. Use the **Specify the License Server Machine** option of the **ANSLIC_ADMIN** utility to change the `ansyslmd.ini` file. The FlexNet port number may also be specified via the **ANSYSLMD_LICENSE_FILE** environment variable, if set.

ansyslmd Port Number

The `ansyslmd` daemon uses a port designated by the operating system, unless one is manually specified in the license file on the VENDOR line. See VENDOR Lines (p. 7) for information on specifying this port number on the VENDOR line. You should need to specify this port number manually only if using a firewall.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

For information on firewall settings, see Specifying Firewall Settings (p. 21).

4.2. Advanced Licensing Configuration Options

In addition to the default configuration, Ansys, Inc. offers two run mode options that can be selected through the **Specify the License Manager Run Mode** option in the **Ansys License Management Center**:

- **Run the Ansys Licensing Interconnect without FlexNet** -- Use this option if you want to run a local copy of the Ansys Licensing Interconnect for better performance, such as if your server machine is in a remote location, or to manage the server load better if your license server machine serves many users. With this option, FlexNet licenses will be taken from another server machine. Use this option to run the Licensing Interconnect on additional systems other than your license server; your site must still have the Licensing Interconnect running on the license server machine.

- **Run the Ansys Licensing Interconnect and FlexNet independently** -- Use this option if you want to manage your FlexNet licenses independently of the Ansys, Inc. tools (for example, using Flexera Software's FLEXnet Manager to manage multiple companies' FlexNet product licenses). This option should be used only by experienced users with well-established licensing procedures.

These options are available through the **Specifying the License Manager Run Mode** option in the **Ansys License Management Center** after a license manager installation has been run on this machine. For more information, see Specifying the License Manager Run Mode (p. 61)

If you have already configured your licensing and are changing to a different configuration option, you must stop and restart the Ansys License Manager for these changes to take effect. Rereading the license manager settings will not be sufficient.

Run the Ansys Licensing Interconnect without FlexNet

Important:

When using this advanced option, the license server holding the FlexNet licenses must also have the Licensing Interconnect installed and running.

To use the **Ansys License Management Center** to set up a license server that will run the Licensing Interconnect without FlexNet, see Specifying the License Manager Run Mode (p. 61).

Run the Ansys Licensing Interconnect and FlexNet independently

Use this option if you want to manage your FlexNet licenses on a server machine independently of the Ansys, Inc. tools (for example, using Flexera Software's FLEXnet Manager to manage multiple companies' product licenses). This option should be used only by experienced users with well-established licensing procedures. Running these processes separately requires caching the license file, meaning that you specify the location of an existing license file that contains FlexNet licenses for Ansys, Inc. products. Because **Ansys License Management Center** will no longer be managing FlexNet, you will need to

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

use your license management tools (such as FLEXNet Manager) to start/restart FlexNet or to reread the license file if you make changes to the license file.

Important:

If you make changes to the license file, in addition to rereading the license file in FlexNet (using your license management tools), you must also recache the license file in the Licensing Interconnect by restarting the Licensing Interconnect or by using the Reread the License Manager Settings option in the **Ansys License Management Center**.

To use the **Ansys License Management Center** to set up a license server that will run the Licensing Interconnect and FlexNet independently, see Specifying the License Manager Run Mode (p. 61).

4.3. Modify License Manager Startup Options

This **ANSLIC_ADMIN** utility option (**Set Site Preferences>Modify Startup Options**) writes an ansyslmd.ini file in the licensing directory. This file contains any changes to the default values as well as your license server specifications and other settings (such as log file locations). Use this **ANSLIC_ADMIN** utility option to change the default values.

4.4. Create a Group (Linux Only)

You may want to create a group of users with specific usage capabilities, such as users with licensing administrative privileges, or users who are authorized to shut down the license manager. An lmadmin group is the most common type of group.

To specify a list of users with access to licensing administrative options, you need to create an lmadmin group on computers from which license administration will be performed. If you create an lmadmin group, you must include root in order for root to continue to have access to these functions. For more details on using an lmadmin group, see the *FlexNet License Administration Guide* (accessible from the **Ansys License Management Center**). This option is available for Linux platforms only.

Follow the instructions below for your hardware platform to create an lmadmin group.

Linux

Add a line to the file `/etc/group` as follows:

```
lmadmin:*:nn:root,user1,user2,user3...usern
```

where *nn* represents any unique group number and `user1`, `user2`, `user3`, ..., `usern` represent a list of *n* users in the group.

4.4.1. Defining Group Restrictions for the Licensing Interconnect

On Linux machines only, you can specify who can shut down the Ansys License Manager by using the **ANSLIC_ADMIN** utility's **Modify Startup Options**. By default, anyone can stop the license manager. You can restrict shutdown capabilities to only the user who started it, or to a group, such as lmadmin. If you choose group, you will need to specify the name of the group. Note that the user who started

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

the license manager will still be able to shut it down, even if he is not part of a group with shutdown capabilities.

If you specify a group restriction, any users in that group who want to perform that operation must have the specified group as their primary group. For example, adding the following restriction:

RESTRICT_SHUTDOWN=GROUP:lmadmin

restricts the ability to shut down the license manager to only members of the lmadmin group. Any user who is a member of the lmadmin group and wants to shut down the license manager must have lmadmin as his primary group:

machineabc{user1}: groups
other testing dev1 lmadmin

In the above example, user1 is a member of the groups *other*, *testing*, *dev1*, and *lmadmin*, where *other* is the primary group and *testing*, *dev1*, and *lmadmin* are secondary groups.

To change a group from a secondary to a primary group, issue the **`newgrp`** (or equivalent) command:

```
machineabc{user1}: newgrp lmadmin
```

In this example, user1 now has lmadmin as the primary group and will be able to shut down the license manager:

machineabc{user1}: groups
lmadmin other testing dev1

4.5. Specify User Privileges

Establish user privileges by editing the FlexNet Options file. The options file allows you, the license administrator, to control various operating parameters of FlexNet:

- Allow or deny the use of features based on user, hostname, display name, group, etc.
- Reserve licenses based on user, hostname, display name, group, etc.
- Control the amount of information logged about license usage.
- Set the Idle Timeout for participating Ansys products . For more information, see Setting Idle Timeout (p. 44).

By using the options file, you can be as secure or as open with licenses as you like.

The default location of the options file, `ansyslmd.opt`, is in the license_files directory. If you have a three-server system, the options file must match exactly on all three servers.

If you are using an options file, you must specify the pathname to the file on the VENDOR line in the license file, unless it uses the default name, `ansyslmd.opt`, and resides in the same directory as the license file. On Linux systems, the VENDOR line would look like this for an options file named `my.opt`:

```
VENDOR ansyslmd options=/ansys_inc/shared_files/licensing/license_files/my.opt
```

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

On Windows systems, if the path has spaces in it, you must enclose it in quotes:

```
VENDOR ansyslmd options="c:\Program Files\ANSYS Inc\Shared Files\Licensing\license_files\my.opt"
```

For more information, see the **FlexNet Publisher License Administration Guide** which available through the **Ansys License Management Center**. For instructions on accessing this guide, see Accessing the Help Options (p. 62).

4.5.1. Setting Idle Timeout

The **Idle Timeout** option defines the time-out value before a license can be returned for an Ansys application. To participate in idle timeout, you must:

1. Obtain an updated license file containing the Ansys Idle Timeout license increment. To get this license, contact your Ansys sales representative.
2. Add the appropriate Idle Timeout settings to the ansyslmd.opt file as described below.

Currently, the following Ansys applications are using idle timeout:

- Mechanical
- Fluent
- CFX
- EnSight
- Electronics Desktop

Idle timeout is set via the FLEXlm options file. You must edit the FLEXlm options file on the license server machine and restart or reread the license manager. The FLEXlm options file does not exist in a default installation. If you have not done so in the past, you may need to create FLEXlm options file before proceeding. The FLEXlm options file is a text file named ansyslmd.opt and placed in the **license_files** directory of your installation, for example:

Linux: /ansys_inc/shared_files/licensing/license_files/ansyslmd.opt

Windows: C:\Program Files\Ansys Inc\Shared Files\Licensing\license_files\ansyslmd.opt

After creating the FLEXlm options file, add either of the following settings to the file and then restart or reread the license manager through the **Ansys License Management Center**:

```
TIMEOUTALL seconds

Example: TIMEOUTALL 5400

TIMEOUT feature seconds

Example: TIMEOUT ansys 5400
```

Once this option is added, any application that participates in idle timeout will return its license after approximately 900 seconds (depending on server communication factors) plus the defined idle

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

timeout seconds of inactivity. In the case of our example, approximately 900 + 5400 = 6300 seconds of inactivity.

Note:

The minimum value for the idle timeout is 3600 seconds (1 hour).

After a client application license has timed out, others will be able to use that license. When the idle application becomes active again, it will attempt to check out the license increment immediately.

4.6. Setting Up Redundant (Triad) Servers

Throughout this document, we use the term "three-server network" when referring to redundant triad servers. Redundant server setup is a network configuration where multiple machines are designated as license servers. Redundancy can be achieved in two ways:

- Any number of license server machines can be running independently. The total number of licenses is split between each license server. For example, if you are licensed for 20 tasks of a certain product, and you have two license server machines, each license server machine will serve ten licenses. In this example, if one of these machines fails, only ten licenses will be available.
- Three different machines can be selected to work together in tandem (typically referred to as a redundant triad), where two of the three must be running at all times. These three license server machines work from a single set of licenses. This option is not recommended.

Caution:

If you are running redundant servers, you should have the license file (as well as the entire licensing directory) installed locally on each license server. If you do not, you lose all the advantages of having redundant servers, since the file server holding these files becomes a single point of failure.

We recommend using multiple independent license server machines to achieve redundancy; however, if your site requires the use of three license server machines working in tandem, follow the guidelines in this section to configure the servers.

1. Install the License Manager on each of the three servers as described in Installing the License Manager (p. 12). Be sure that each machine meets all of the prerequisites.
2. Start each of the license servers using the same license file on each machine. The license file for the three-server setup will begin with three SERVER lines:

   ```
   SERVER myserver1 00e2463 1055
   SERVER myserver2 00132460b724 1055
   SERVER myserver3 001a246d4e64 1055
   ```

   The first SERVER line is the license server you have designated as the primary server followed by the second and third servers, which act as the backup servers.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

3. Always start the primary server first. If not, the second or third server will take over as the master server.

   When you start each license server, you will see a message indicating that the server is starting. The primary server will not be fully started until you start the second or third server, creating a quorum. Until you have a quorum of servers started, the **Ansys License Management Center** will show the Licensing Interconnect and monitor running while FlexNet will show as not running. You could see a delay of up to five minutes in the startup of a server's FlexNet component while the communication between all three servers is being established. If a connection cannot be established within the five minutes, the Licensing Interconnect and Licensing Interconnect Monitor will stop. Check the **Ansys License Management Center** to verify that all components have stopped before you attempt to restart the Ansys License Manager on any server.

To stop redundant servers, use the **Stop the Ansys, Inc. License Manager** option of the **Ansys License Management Center** to manually stop the License Manager on each server. The **Stop the Ansys, Inc. License Manager** option stops only the "local" instance of the License Manager, therefore it is necessary for you to stop each instance individually.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 5: License Server Administration Using Ansys License Management Center

This chapter explains how to use the **Ansys License Management Center (LM Center)** to perform many of the procedures necessary to administer Ansys licenses. The **Ansys License Management Center** is a browser-based user interface that centralizes many of the Ansys licensing administrative functions.

Note:

For Windows systems, Ansys, Inc. requires that you have system administrator privileges to start the **Ansys License Management Center**. To use the **Ansys License Management Center**, you must access it from the local license server machine.

5.1. Ansys License Management Center Browser Requirements

Supported Windows Browsers

- Microsoft Edge Version 118 or greater
- Firefox Version 119.0 or greater (64-bit)
- Chrome Version 118.0 or greater

Note:

Ansys License Management Center uses your default browser when opening. If you have not defined a default browser, **Ansys License Management Center** attempts to open using Windows Internet Explorer from the default installation location. If Windows Internet Explorer is not installed in the default location, an error is reported.

Supported Linux Browsers

- Mozilla Firefox 68.3.0 or greater

5.2. Accessing the Ansys License Management Center

To open the Ansys License Management Center:

Windows 10:

Click **Start>Ansys, Inc. License Manager>ANSYS License Management Center**

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Linux

Run the **`start_lmcenter`** script located in the following directory:

```
ansys_inc/shared_files/licensing/
```

5.3. Using the Ansys License Management Center

The left side of the **Ansys License Management Center (LM Center)** includes links accessing a variety of licensing administration functions. Additionally, an icon informing you of the status of the **Ansys License Management Center** is also located in the title bar. (**Running** is displayed as a green check mark while **Stopped** is displayed as a red stop sign.)

The following sections provide instructions on how to perform the licensing administration functions available through the **Ansys License Management Center**:

5.3.1. Adding a License
5.3.2. Starting the Ansys License Manager
5.3.3. Stopping the Ansys License Manager
5.3.4. Rereading the License Manager Settings
5.3.5. Displaying the License Server Machine Hostid Information
5.3.6. Viewing FlexNet Licenses
5.3.7. Viewing the Licensing Interconnect Log
5.3.8. Viewing the FlexNet Debug Log
5.3.9. Viewing the Ansys License Management Center Log
5.3.10. Viewing the Current License Usage
5.3.11. Viewing the License Usage History
5.3.12. Viewing the Peak License Usage
5.3.13. Viewing License Denials
5.3.14. Displaying the FlexNet License Status
5.3.15. Gathering Diagnostic Information
5.3.16. Displaying Queued Licenses
5.3.17. Specifying the License Manager Run Mode
5.3.18. Accessing the Help Options

5.3.1. Adding a License

Important:

When adding a license file, the **Add a License File** option in the **Ansys License Management Center** validates the new license file for the system, attempts to correct issues that it recognizes, and ensures port number consistency. For this reason, you must use the **Ansys License Management Center** to add license files, rather that manually placing them in the license_files directory.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

This option validates a user-specified license file and, if the license file is found to be valid, installs it into the license_files directory. After installing the license file, this option communicates the new license file's information to the Ansys License Manager either by starting /restarting the license manager or by rereading the license manager's settings.

If a vendor license file is already installed for the vendor contained in the license file you are installing, the previously-installed license file will be renamed to have the form license_<vendor>_<timestamp>.lic and moved to the backup subdirectory in the license_files directory.

You must perform this process, using the same license file, on each license server machine.

To add a license file:

1. Save the license file that you received from your Ansys sales representative to a temporary file.

   Caution:

   Do not save license files in Microsoft Word format.

2. Open the **Ansys License Management Center**.
3. Click the **Add a License File** option.

   The **Add a License File** page is displayed.
4. Click the **Browse** button.
5. Browse to locate the saved license file from step #1.
6. Select the license file and click **Open**.
7. If the selected license file is not valid, the process ends with the **Status** pane displaying an error message containing details.
8. If the license file is valid, the **Add a License File** dialog box is displayed:
   - If the Ansys License Manager is not running, you are informed that it will be started when the license file is added.
   - If the Ansys License Manager is running, you are given the option of either restarting it or rereading the license manager settings. Click the appropriate options. For more information, see Rereading the License Manager Settings (p. 51).
9. The **Status** pane displays a message informing you of the steps taken successfully along with any errors that were encountered.

Special Considerations for Three Server (Redundant Triad) Environments

You must perform this process, using the same license file, on each license server machine.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

5.3.2. Starting the Ansys License Manager

In order for client machines to run licensed Ansys products, the Ansys License Manager must be running on the license server.

To use the **Ansys License Management Center** to start the license manager, **Ansys License Management Center** (including the Ansys Licensing Tomcat Server and the license manager) must be installed on the same computer. Additionally, a valid license file must be installed prior to starting the license manager.

To start the Ansys License Manager:

1. Open the **Ansys License Management Center**.
2. Click the **Start** button located on the right side of the page.

   The **Status** pane displays a message informing you whether the Ansys License Manager started successfully or if any errors have been encountered. Additionally, a "green check mark" status icon is displayed indicating that the license manager is running.

   Note:

   Every seven seconds, the **Ansys License Management Center** verifies that the license manager is running and updates the status icon.

The `ansyslmd.lic` and/or `ansoft.lic` file is provided by an Ansys sales representative and contains licensing for all the Ansys, Inc. products that you are entitled to use.

Special Considerations for Three Server (Redundant Triad) Environments

The Ansys License Manager *must* be running on at least two of the three servers before an Ansys product can be run.

In a three-server environment, you may see a delay in starting the Ansys License Manager until two of the three servers are running.

5.3.3. Stopping the Ansys License Manager

The following procedure should be used to shut down the Ansys License Manager on all machines listed in the license file.

To stop the Ansys License Manager:

Before shutting down the Ansys License Manager, check that no products that use it are currently running.

1. Open the **Ansys License Management Center**.
2. Click the **Stop** button located on the right side of the page.

   You are asked to confirm that the license manager should be shut down. Remember that the license manager must be running in order to run products that use it for their licensing.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

The **Status** pane displays a message informing you whether the license manager stopped successfully or if any errors have been encountered. Additionally, a "red stop sign" icon is displayed indicating that the license manager is no longer running.

Caution:

(Linux systems) Do not use kill -9 to shut down the Ansys License Manager. Use the **Ansys License Management Center**, the `ansysli_stop` script or `ansysli_server -k stop [port@host]` to perform the shutdown.

Special Considerations for Three Server (Redundant Triad) Environments

In a three-server environment, you may see a delay in stopping the license manager until two of the three servers are stopped.

5.3.4. Rereading the License Manager Settings

Use this option to reread the license manager settings. This option should be used when you have made changes that will affect the license manager and want to incorporate these changes without stopping and restarting the license manager.

This option:

- Rereads the `ansyslmd.ini` file to get any new settings, such as log file size or change of name
- Appends or opens a new Licensing Interconnect log file
- Rereads the site license preferences
- Recaches the installed license files
- Issues a FlexNet reread
- Recaches the servers
- Informs other servers about changes

Be aware that if you change the Licensing Interconnect port number, you will need to restart the license manager; a reread will not update the port number.

Note:

If you chose to configure your license manager to run the Licensing Interconnect without FlexNet or run the Licensing Interconnect and FlexNet independently, then selecting this option will affect only the Licensing Interconnect components including recaching the license file when running the Licensing Interconnect and FlexNet independently.

To reread the License Manager:

1. Open the **Ansys License Management Center**.
2. Click the **Reread License Manager Settings** option.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

3. Click the **Reread** button.

   The **Status** pane displays a message informing you whether the Ansys License Manager's settings were successfully reread.

5.3.5. Displaying the License Server Machine Hostid Information

Use this option to obtain and display the FlexNet hostid of the machine you wish to create licenses for and set up as a license server.

If you wish to use a FLEXID9 dongle as the hostid, make sure the device is inserted and the correct device driver is installed. For more information, see Using Dongles with the Ansys License Manager (p. 69). Dongles are only available for those sites that require the ability to run Ansys products on an isolated network.

Accessing the Hostid

1. Open the **Ansys License Management Center**.

2. Click the **Get System Hostid Information** option.

   The hostid information is displayed on the right-hand side of the page. The **HOSTNAME**, **Hostid**, **IDTYPE** and **PLATFORM** information is included. Windows systems use the physical machine disk serial number and Linux systems use the MAC address by default.

3. To save this information out to a file, click the **SAVE TO FILE** button. By default, the file is named `ansysid.`*`machinename`*`.txt`.

5.3.6. Viewing FlexNet Licenses

Use this option to view the FlexNet license files. You can view license files that are in use (or will be in use) in the Ansys License Manager.

1. Open the **Ansys License Management Center**.

2. Click the **View FlexNet Licenses** option.

   A field containing the name of one of your FlexNet license files is displayed.

3. Select the FlexNet license file you want to view by clicking the arrow located on the right side of the field and choosing the appropriate file from the drop-down menu. Note the drop-down menu is populated with any FlexNet license files (.lic) contained in the following directory:

   Windows:

   ```
   \Program Files\Ansys Inc\Shared Files\Licensing\license_files
   ```

   Linux:

   ```
   /ansys_inc/shared_files/licensing/license_files
   ```

4. The contents of the FlexNet license is displayed on the right side of the page.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

5.3.7. Viewing the Licensing Interconnect Log

Note:

This option has been removed as of Ansys Release 2024 R1. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, you will not see this option.

Use this option to view the Licensing Interconnect log file (named `ansysli_server.log` by default). The Licensing Interconnect log file contains all of the actions that the Ansys license server has taken since startup.

Accessing the Licensing Interconnect Log

1. Open the **Ansys License Management Center**.
2. Click the **View Licensing Interconnect Log** option.

   The Licensing Interconnect log file is displayed on the right side of the page.
3. To download a text version of the interconnect debug log file, click the **SAVE TO FILE** button.
4. To manually refresh the Licensing Interconnect log file, click the **REFRESH** button.

   Note:

   The Licensing Interconnect log file does not automatically refresh.

The Licensing Interconnect log file (ansysli_server.log) can be found in the "licensing" directory. To manually access this file, go to the following locations (by default):

Windows:

```
\Program Files\Ansys Inc\Shared Files\Licensing\ansysli_server.log
```

Linux:

```
/ansys_inc/shared_files/licensing/ansysli_server.log
```

5.3.8. Viewing the FlexNet Debug Log

Use this option to view the FlexNet license log file (named `license.log` by default). The FlexNet debug log includes the following message types:

- General informational messages describing the current status of FlexNet features
- Messages describing configuration issues
- License manager error messages associated with the FlexNet component of the license manager.

Accessing the FlexNet Debug Log

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

1. Open the **Ansys License Management Center**.
2. Click the **View FlexNet Debug Log** option.

   The FlexNet debug log is displayed on the right side of the page.
3. To download a text version of the FlexNet debug log, click the **SAVE TO FILE** button.
4. To manually refresh the FlexNet debug log, click the **REFRESH** button.

> **Note:**
>
> The FlexNet debug log does not automatically refresh.

The FlexNet debug log (license.log) can be found within the "licensing" directory structure by default. To manually access this file, go to the following location:

Windows:

```
\Program Files\ANSYS Inc\Shared Files\Licensing\license.log
```

> **Note:**
>
> The Windows location of this file has been changed as of Ansys Release 2024 R1. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, the license.log can be found in "C:\Program-Data\AnsysLmd\".

Linux:

```
/ansys_inc/shared_files/licensing/license.log
```

5.3.9. Viewing the Ansys License Management Center Log

Use this option to view the **Ansys License Management Center** log (named `ansyslmcenter.log` by default).

Accessing the Ansys License Management Center Log

1. Open the **Ansys License Management Center**.
2. Click the **View License Management Center Log** option.

   The **Ansys License Management Center** log is displayed on the right side of the page.
3. To download a text version of the **Ansys License Management Center** log, click the **SAVE TO FILE** button.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

4. To manually refresh the **Ansys License Management Center** log, click the **REFRESH** button.

> **Note:**
>
> The log does not automatically refresh.

The **Ansys License Management Center** log (ansyslmcenter.log) can be found within the "licensing" directory structure. To manually access this file, go to the following location:

Windows:

```
\Program Files\ANSYS Inc\Shared Files\Licensing\tools\lmcenter\logs\ansyslmcenter.log
```

Linux:

```
/ansys_inc/shared_files/licensing/tools/lmcenter/logs/ansyslmcenter.log
```

5.3.10. Viewing the Current License Usage

This option extracts data from your license manager to produce a live current license usage report. This report displays the number of feature licenses used by each user in a bar chart format. Additionally, a tabular chart displays maximum licenses available, user count, user names, host IDs and usage start date for each feature license.

Viewing the Current License Usage

1. Open the **Ansys License Management Center**.
2. Click the **View Current License Usage** option.

   The current license usage is displayed on the right side of the page.
3. To view the data in a tabular format, click the **Show tabular data** button.

5.3.11. Viewing the License Usage History

Use this option to extract data directly from your FlexNet debug log file and backup log files to produce a line chart displaying historical license usage for a specific product.

Viewing the License Usage History

1. Open the **Ansys License Management Center**.
2. Click the **View License Usage History** option.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

3. Select the appropriate date range (or a custom range) from the available drop-down menu and click **Generate**.

   Note:

   Based upon the date range selected, data may be extracted from your FlexNet debug log file (located in the licensing directory) and your backup log files (located in the logs_backup directory) to produce the chart.

   The history for the default settings is displayed.

4. Select the appropriate product from the drop-down menu to display usage history for that feature license.

5. Set any combination of the following options to customize the data displayed:

   - **Select username** - To view the usage history of a specific user, select the appropriate name from the drop-down menu.
   - **Select hostname** - To view the usage history for a specific host computer, select the appropriate computer from the drop-down menu.
   - **Select working hours/days** - The working hour/days options are:
     - **All (24/7)** - Displays all data available for the duration you select.
     - **Monday to Friday (24/5)** - Displays all data available for Monday through Friday for the duration you select.
     - **Monday to Friday from 8am to 5pm** - Displays data for Monday through Friday, from 9:00 AM to 5:00 PM for the duration you select.
   - **Select duration to display** - Click the **From** and **to** fields to specify the date range that you wish to display. Clicking the **Reset to all** button resets the **From** and **to** date duration values to the minimum and maximum dates found in the log files the for user, host and product you have selected.

   A graph is dynamically displayed showing license usage history for the options selected.

5.3.12. Viewing the Peak License Usage

This option extracts raw data from the FlexNet debug log file and backup log files to produce a graphical display of peak usage for a selected license feature for the duration you select.

Viewing the Peak License Usage

1. Open the **Ansys License Management Center**.

2. Click the **View Peak License Usage** option.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

3. Select the appropriate date range (or a custom range) from the available drop-down menu and click **Generate**.

   Note:

   Based upon the date range selected, data may be extracted from your FlexNet debug log file (located in the licensing directory) and your backup log files (located in the logs_backup directory) to produce the chart.

   The peak license usage for the default settings is displayed.

4. Select the appropriate product from the drop-down menu to display peak usage for that feature license.

5. Set any combination of the following options to customize the data displayed:

   - **Select username** - To view the usage history of a specific user, select the appropriate name from the drop-down menu.
   - **Select hostname** - To view the usage history for a specific host computer, select the appropriate computer from the drop-down menu.
   - **Select working hours/days** - The working hour/days options are:
     - **All (24/7)** - Displays all data available for the duration you select.
     - **Monday to Friday (24/5)** - Displays all data available for Monday through Friday for the duration you select.
     - **Monday to Friday from 8am to 5pm** - Displays data for Monday through Friday, from 9:00 AM to 5:00 PM for the duration you select.
   - **Select duration to display** - Click the **From** and **to** fields to specify the date range that you wish to display. Clicking the **Reset to all** button resets the **From** and **to** date duration values to the minimum and maximum dates found in the log files the for user, host and product you have selected.

   A graph is dynamically displayed showing peak license usage for the options selected.

6. You can export the data that is currently displayed to a CSV (comma separated value) file by clicking the Export to csv file button.

7. To view the data in a tabular format, click the **Show tabular data** button. The tabular view shows the peak license usage for each day as well as the average for each week and the selected period.

5.3.13. Viewing License Denials

This option extracts raw data from the FlexNet debug log file and backup log files to produce a license denial report. This report displays the number of license denials that occurred for a feature on a specified day in a graphical format.

Viewing License Denials

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

1. Open the **Ansys License Management Center**.
2. Click the **View License Denials** option.
3. Select the appropriate date range (or a custom range) from the available drop-down menu and click **Generate**.

   Note:

   Based upon the date range selected, data may be extracted from your FlexNet debug log file (located in the licensing directory) and your backup log files (located in the logs_backup directory) to produce the chart.

   The license denials for the default settings are displayed.
4. Select the appropriate product from the drop-down menu to display denials for that feature license.
5. Set any combination of the following options to customize the data displayed:
   - **Select username** - To view the usage history of a specific user, select the appropriate name from the drop-down menu.
   - **Select hostname** - To view the usage history for a specific host computer, select the appropriate computer from the drop-down menu.
   - **Select working hours/days** - The working hour/days options are:
     - **All (24/7)** - Displays all data available for the duration you select.
     - **Monday to Friday (24/5)** - Displays all data available for Monday through Friday for the duration you select.
     - **Monday to Friday from 8am to 5pm** - Displays data for Monday through Friday, from 9:00 AM to 5:00 PM for the duration you select.
   - **Select duration to display** - Click the **From** and **to** fields to specify the date range that you wish to display. Clicking the **Reset to all** button resets the **From** and **to** date duration values to the minimum and maximum dates found in the log files the for user, host and product you have selected.

   A graph is dynamically displayed showing the license denial history for the options selected.
6. To view the data in a tabular format, click the **Show tabular data** button. The tabular view shows the license denials for each day as well as the average for each week and the selected period.
7. You can export the data that is currently displayed to a CSV (comma separated value) file by clicking the Export to csv file button.

5.3.14. Displaying the FlexNet License Status

Use this option to display the FlexNet licensing activity (lmstat). The license server information, vendor daemon status and license usage information are displayed in the status window, along with the users of those features.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Viewing the FlexNet License Status

1. Open the **Ansys License Management Center**.
2. Click the **Display FlexNet License Status** option.

   The FlexNet license status is displayed on the right-hand side of the page.

5.3.15. Gathering Diagnostic Information

This option gathers various licensing-related files, logs and information about your license server system and places them in a single compressed file. This information is useful when requesting support for the **Ansys License Manager**.

Note:

On Windows, this process may take a few minutes when msinfo32.exe is running.

Using the Gather Diagnostic Information option:

1. Open the **Ansys License Management Center**.
2. Click the **Gather Diagnostic Information** option.
3. Click the **SAVE TO FILE** button.

   The **Ansys License Management Center** begins to collect the files and information. After the collection process is complete, all files that are found and included in the compressed file are listed.
4. Based upon how your default browser is configured, you will either be prompted for a location to save the compressed file or the compressed file will be automatically saved to your pre-defined location.

5.3.15.1. Gathering Diagnostic Information outside of Ansys License Management Center

If you are unable to access the **Ansys License Management Center** but still wish to gather diagnostic information about your server system, you can run the `gatherdiagnostics` script located in the following directory:

Windows:

```
\Program Files\Ansys Inc\Shared Files\Licensing\
```

Linux:

```
/ansys_inc/shared_files/licensing/
```

On Windows you must run this script from an administrator command line (do not double-click the batch file). Running this script from a command line produces a single compressed file. This file contains the same licensing related files, logs and information produced by running the **Gather Diagnostic Information** option within the **Ansys License Management Center**.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

5.3.16. Displaying Queued Licenses

Use this option to see a list of license features that are queued and awaiting availability, and the applicable licenses that are being used. The report will have the following format:

```
FEATURE       TIMESTAMP              TYPE           NAME           COUNT     HOST                STATUS
Feature1      YYYY/MM/DD HH:MM:SS    USER           User1          1         HostMachine1        IN USE
              YYYY/MM/DD HH:MM:SS    USER           User2          1         HostMachine2        QUEUED
              YYYY/MM/DD HH:MM:SS    USER           User2          1         HostMachine2        QUEUED
              N/A                    HOST_GROUP     HPC_CLUSTER    1                             RESERVED
```

Where the first line shows information for the requesting user, and subsequent lines under that license feature show information for the users who are currently using the licenses for each of the licensed products that satisfy the requested license feature.

Column Content Descriptions:

FEATURE: The license feature that is being used to satisfy the requested capability.

TIMESTAMP: The date and time that the current license was requested.

TYPE: The type of user. Typically USER but can also be the reserve type from the FlexNet Publisher options file RESERVE lines for the FEATURE.

NAME: The network username that requested the license. This column could also contain the name of the RESERVE option from the FlexNet Publisher options file.

COUNT: The number of license(s) requested by the user.

HOST: The host computer requesting the license(s).

STATUS: The current status of the license request. The status can be:

- **In Use:** The requested license(s) are in use and currently unavailable to other users.
- **Queued:** The requested license(s) are currently unavailable and the request has been placed in a queue until the license(s) become available.
- **Reserved:** One or more licenses have been reserved. For more information on reserved license types, see the **FlexNet Publisher License Administration Guide**.

Displaying Queued Licenses

1. Open the **Ansys License Management Center**.
2. Click the **Display Queued Licenses** option.

   The queued license status is displayed on the right-hand side of the page.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

5.3.17. Specifying the License Manager Run Mode

Note:

This option has been removed as of Ansys Release 2024 R1. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, you will not see this option.

This option specifies how the Ansys Licensing Interconnect is administered in conjunction with FlexNet. In addition to the default configuration (Run the Ansys Licensing Interconnect with FlexNet) which should satisfy most users, Ansys, Inc. offers two advanced licensing configuration "modes":

Run the Ansys Licensing Interconnect without FlexNet –Use this option if you want to run a local copy of the Ansys Licensing Interconnect on another machine in addition to the Licensing Interconnect being run on the license server machine. Your site must still have the Licensing Interconnect and FlexNet running on the license server machine. With this option, FlexNet licenses will be taken from another server machine. Note that this is not the default way to set up an Ansys license server machine and should be done only if it has been determined that you need this special type of setup. Examples of when this special type of setup might be used include increasing performance if your server machine is in a remote location or managing the server load better if your license server machine serves many users.

Run the Ansys Licensing Interconnect and FlexNet independently –Use this option if you want to manage FlexNet Licensing independently of the Ansys Licensing Interconnect. In this option, you would continue to manage the Ansys Licensing Interconnect via the Ansys License Management Center and FlexNet Licensing would be managed via another tool, such as Flexera Software's FlexNet Manager. Note that this is not the default way to set up an Ansys license server machine and should be done only by experienced users with well-established licensing procedures.

These options are available for license server machines via the **Ansys License Management Center's Specify License Manager Run Mode** option only after an Ansys License Manager installation has been run on this machine.

Specifying the Ansys License Manager run mode:

Caution:

Changing the run mode will cause the Ansys License Manager to be shut down and restarted.

1. Open the **Ansys License Management Center**.
2. Click the **Specify License Manager Run Mode** option.

   The **License Manager Run Mode Specification** page, containing each of the run modes, is displayed.

   Note:

   The default run mode is **Run the Ansys Licensing Interconnect with FlexNet**.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

3. Select the run mode you want to use.
4. Click the **SUBMIT** button to change the run mode.

Note:

Clicking any option that is not relevant to your current run mode will cause **Ansys License Management Center** to display a page informing you that this option is not supported by the current run mode.

5.3.18. Accessing the Help Options

The **Ansys License Management Center** "Help" options give you access to documentation and related product information.

The **Help** options are:

- **View Ansys Licensing Guide:** This option accesses the current PDF version of this guide.
- **View FlexNet Licensing Guide:** This option accesses the current PDF version of the FlexNet Publisher License Administration Guide.
- **View Licensing Configuration Details:** This option displays a table that lists the location, executable name and current version of programs/tools used for license management functions (FlexNet, Java, Tomcat, etc.).
- **About License Management Center:** The option includes the **Ansys License Management Center** product information (version number, copyright, etc.).

5.4. Enabling Secure Connections to the Web Server (Optional)

This section presents instructions for enabling secure connections to **Ansys License Management Center** (LM Center), using a Tomcat web server.

When communications between the client browser and the front-end web server need to travel over an untrusted network such as the Internet, it is highly advisable to use secure connections between the client browser and the front-end web server. SSL, or Secure Socket Layer, is a technology which allows web browsers and web servers to communicate over a secured connection. Data is encrypted by each communicator, transmitted and then decrypted by the other communicator. Additionally, the SSL protocol authenticates credentials during your initial attempt to communicate over the secure connection.

5.4.1. Understanding Certificates

When implementing SSL, a web server must have an associated Certificate for each external interface (IP address) that accepts secure connections. This provides a level of identity assurance during communication. The certificate is cryptographically signed by its owner, and is therefore extremely difficult for anyone else to forge.

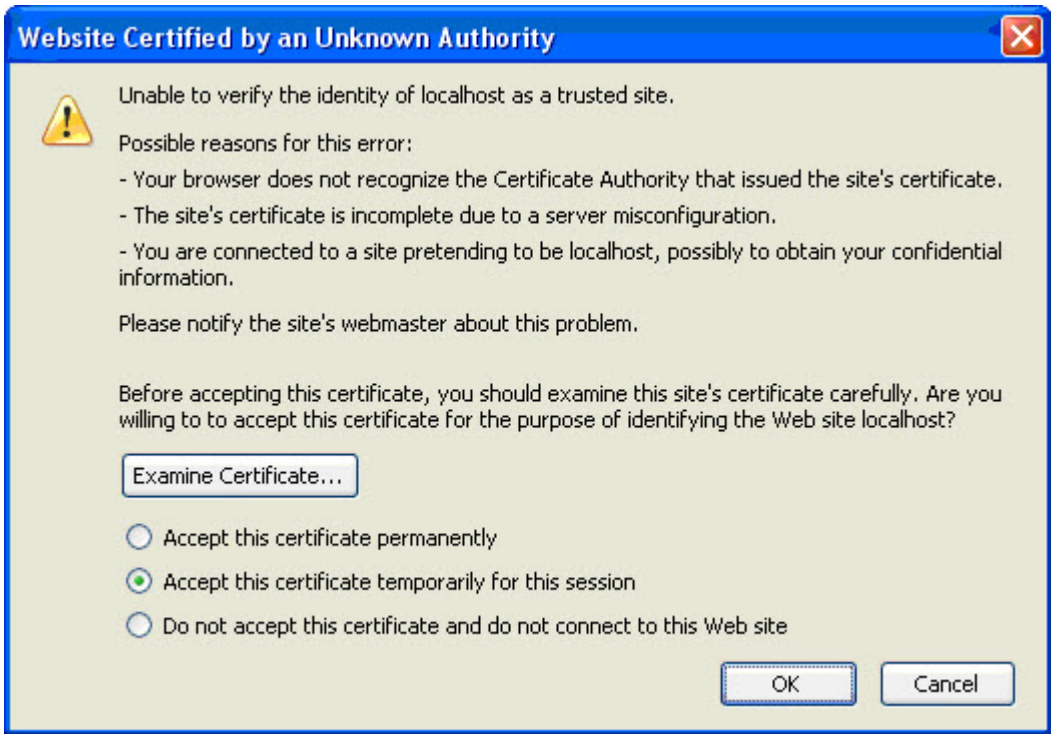
SSL/TLS certificates are typically purchased from well-known Certificate Authorities (CA) such as VeriSign and Thawte. Using a certificate from a well-established and widely recognized CA confers several

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

benefits to the web server operator. These include increased credibility and convenience because the root certificates for popular CAs are prepackaged into major browsers, eliminating the need to distribute anything to client browsers that will connect to the web site.

If a web server is to be used solely internally within an organization, then the benefits of using a certificate from a well-recognized Certificate Authority may not be important. Any valid SSL/TLS certificate can be used to encrypt traffic between client browser and web server as long as the client browser accepts the certificate. For internal production use, and certainly for test use, it is often sufficient to create and use an in-house Certificate Authority that can sign SSL/TLS certificates for these use cases.

A certificate that is signed by the same party that created it is known as a self-signed certificate. When an internally-generated certificate is signed using an in-house Certificate Authority, then a self-signed certificate is created. Self-signed certificates are perfectly usable for enabling HTTPS connections to a web server. However, when a browser encounters a certificate that has been signed by an unknown certificate authority, it will present the user with a warning, such as the following:



Once a user accepts the certificate, the HTTPS connection can proceed.

5.4.2. Configuring Tomcat Using Keytool

In cases where authenticity may be less of a concern but privacy is necessary, Java provides a relatively simple command line tool called "keytool". Keytool can create a simple, user-generated "self-signed" certificate. The following instructions describe how to configure keytool and Tomcat for SSL. We recommend that you read the Preparing the Certificate Keystore and Editing the Tomcat Configuration File before beginning the configuration.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

5.4.2.1. Preparing the Certificate Keystore

Tomcat currently operates only on JKS, PKCS11 or PKCS12 format keystores. The JKS format is Java's standard "Java KeyStore" format, and is the format created by the keytool command-line utility. This tool is included in the JDK and is what can be set-up using Ansys supplied tools. The PKCS12 format is an internet standard, and can be manipulated via (among other things) OpenSSL and Microsoft's Key-Manager.

Using the keytool command line, create the keystore file as follows:

Go to the tools directory in your installation and execute the following platform specific commands:

Windows

```
cd "C:\Program Files\ANSYS Inc\Shared Files\licensing\tools"
```

Run the following command to create the file tomcat\conf\keystore:

```
java\winx64\bin\keytool.exe -genkey -alias tomcat -keyalg RSA -keystore
tomcat\conf\keystore
```

Linux

```
cd /ansys_inc/shared_files/licensing/tools
```

Run the following command to create the file /licensing/tools/tomcat/conf/keystore:

```
java/linx64/bin/keytool -genkey -alias tomcat -keyalg RSA -keystore
tomcat/conf/keystore
```

5.4.2.2. Editing the Tomcat Configuration File

Tomcat can use two different implementations of SSL:

- JSSE implementation provided as part of the Java runtime (since 1.4)
- APR implementation, which uses the OpenSSL engine by default

The JSSE implementation can be set-up using Ansys supplied tools.

To configure the server.xml file using JSSE do the following:

Go to the licensing/tools/tomcat/conf directory in your installation and edit the server.xml file by adding:

```
<Connector protocol="org.apache.coyote.http11.Http11NioProtocol"
     port="8443" maxThreads="150"
     scheme="https" secure="true" SSLEnabled="true"
     keystoreFile="conf/keystore"
     keystorePass="changeit"
     keyPass="changeit"
     clientAuth="false" sslProtocol="TLS" />
```

where "changeit" is the password you specified when you created the keystore file above.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

You can now use **Ansys License Management Center** with HTTPS by restarting your Ansys Licensing Tomcat service and pointing to https://localhost:8443/ANSYSLMCenter.html.

To use the HTTPS secure connection exclusively:

1. Open the `server.xml` file in the licensing/tools/tomcat/conf directory
2. Remove or comment out the following 1084 connector entry:

```
<Connector port="1084" protocol="HTTP/1.1"
     connectionTimeout="20000"
            compression="on"
            address="127.0.0.1"
            compressionMinSize="2048"
            noCompressionUserAgents="gozilla, traviata"
            compressableMimeType="text/html,text/xml"
     redirectPort="8443" />
```

5.5. Modifying the Tomcat Port Number

Note:

The following procedure can only be used with a default Tomcat installation. This procedure cannot be used when Tomcat is installed as part of the secure connection option. For more information, see, Enabling Secure Connections to the Web Server (Optional) (p. 62).

By default, the Ansys License Manager installation sets the Tomcat port number to 1084. To manually change this value, you must modify the **server.xml** file located in the following directory:

Windows:

```
<install_dir>\Shared Files\Licensing\tools\tomcat\conf
```

Linux:

```
/ansys_inc/shared_files/licensing/tools/tomcat/conf
```

To change the Tomcat port number:

1. Open the **server.xml** file.
2. Locate the line that starts with

   ```
   <Connector port="1084" protocol="HTTP/1.1"
   ```

3. Change the port number from 1084 to your desired number.
4. If Tomcat is already running, the new port value will not be used until Tomcat is restarted. This can be done in the following manner:

   Windows:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Open the Windows Services applet and stop and restart the Ansys Licensing Tomcat service (ANSYSLicensingTomcat). The Windows Services applet can be started by issuing the command **services.msc** from an administrator command prompt window.

Linux:

a. Stop the Tomcat server process by executing the **stop_lmcenter** script.

b. Start the Tomcat server process with the new port number by executing the **start_lmcenter** script.

   These scripts can be found in the following directory:

```
/ansys_inc/shared_files/licensing
```

Note:

Starting the Tomcat server process will also open Ansys License Management Center.

5.6. Changing the Version of Java Used by Ansys License Management Center

In some scenarios, it may be desirable to use a version of Java other than the version that was shipped and installed with Ansys License Manager. This section contains instructions for changing the Java version used by **Ansys License Management Center**.

Note:

Changing the version of Java is only possible when the Java version is newer than the version supplied as part of the Ansys installation. To view the version of Java installed by Ansys, open the **Ansys License Management Center** and run the **View Licensing Configuration Details** option.

5.6.1. Changing the Java Version During a New Installation of Ansys License Manager

Windows or Linux:

1. Prior to performing the Ansys License Manager installation, set the following environment variable to point to the location of the Java version you want to use.

   `ANSYSLM_USER_JAVA_HOME`

2. Run the Ansys License Manager installation.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

5.6.2. Changing the Java Version on an Existing Installation of Ansys License Manager

Windows:

1. Set the following environment variable to point to the location of the Java version you want to use.

   `ANSYSLM_USER_JAVA_HOME`

2. As an administrator, re-run the Ansys License Manager installation or run `ansyslm_config.exe -usemyjava`.

   By default, `ansyslm_config.exe` is located in:

   ```
   C:\Program Files\ANSYS Inc\Shared Files\Licensing\tools\bin\winx64\
   ```

Linux:

1. Set the following environment variable to point to the location of the Java version you want to use.

   `ANSYSLM_USER_JAVA_HOME`

2. Stop any active version of Tomcat by running the `stop_lmcenter` script.

3. Run the `start_lmcenter` script to configure Tomcat to use your version of Java and start Tomcat.

   Both the `start_lmcenter` script and the `stop_lmcenter` script are located in:

   ```
   /ansys_inc/shared_files/licensing/
   ```

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information
of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 6: Using Dongles with the Ansys License Manager

Important:

- **CRITICAL SECURITY ISSUE:** For machines that already have the FLEXID9 (Sentinel/Aladdin USB) dongle driver installed, Flexera strongly recommends updating older versions of the dongle driver to version 7.90 to address vulnerabilities related to possible exploits of port 1947.
- When using dongles, after installing a new release of the Ansys License Manager, the dongles may not be recognized again by the license manager until the licensing configuration process has been completed by handling the manual steps detailed in this section. To avoid affecting currently running Ansys jobs, you will need to use caution when upgrading the license manager.
- Only the dongle driver that is included as part of our installation files is fully supported by Ansys, Inc. The driver version required for Release 2025 R2 is detailed in the *File Information and Supported Dongle Driver Versions (p. 71)* section below. We strongly recommend that you use this version of the driver. If you use any other version, including older versions that we provided, Ansys, Inc. can provide only limited support if you encounter problems. Flexera has stated that they will not provide any support for drivers other than the version that we include with our installation.

  Due to requirements of non-Ansys products that are installed on the machine or because of operating system levels that Ansys, Inc. supports but the driver included in the Ansys installation does not, you may need to use a version of the driver other than the one that we provide. You will need to choose which driver to use based on your individual business needs. Unfortunately, we cannot ensure that our license manager will work with that driver.

This section explains dongle and dongle driver support and usage with Ansys, Inc. products at Release 2025 R2. The information applies to the Ansys License Manager only and does not apply to any other license managers that you may be using. The following procedures assume that you have some familiarity with dongles, their usage, and their advantages and disadvantages.

6.1. Assumptions, Restrictions, and Notes

The Ansys License Manager supports limited dongle usage:

- Flexera does not recommend using dongles with license servers running on virtual machines.
- Ansys, Inc. supports only FLEXID9 (Sentinel/Aladdin USB) dongles and their Flexera-provided drivers.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- Ansys does not support license borrowing for any license features tied to a dongle.

When we refer to dongles, we are specifically referring to FLEXID9 (Sentinel/Aladdin USB) dongles.

Every machine from which you are serving licenses tied to a dongle requires the following:

- Ansys License Manager is installed on the machine.
- Dongle is inserted in an appropriate USB slot.
- Required version of the dongle driver is installed on the machine. This manual step is described in detail below.
- Flexera-provided FLEXID9 library is in the correct location on the machine. The Ansys License Manager installation's licensing configuration process handles this step for Windows machines. On Linux, copying this file to the correct location is a manual step included in the Linux Procedures (p. 75) section below.

The dongle driver version required for Release 2025 R2 is detailed in the *File Information and Supported Dongle Driver Versions (p. 71)* section below. If the specified version of the dongle driver is already installed on your machine, no additional action should be required to use dongles with this release of the Ansys License Manager. However, if you encounter problems, we recommend that you refer to *Dongle Troubleshooting (p. 77)* at the end of this section and that you go through the steps below for your machine's platform.

All Ansys paths shown in this document show the default installation directory. If your installation directory is not the default location, replace all Ansys paths with your installation directory. The default installation directories are as follows:

Windows: `C:\Program Files\Ansys Inc`

Linux: `/ansys_inc`

You must have administrator/root privileges to install or remove a dongle driver.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

6.2. File Information and Supported Dongle Driver Versions

The tables below provide platform-specific information about the supported dongle driver version and the files that will be used as part of the driver installation process.

Note:

The compressed files' names and their uncompressed directory names may not match the FlexNet version information shown in these tables.

Table 6.1: 64-bit Windows File Information and Supported Dongle Driver Version

Compressed File	Driver Version and Installation File	FlexNet FLEXID9 Shared Library	FlexNet Version
11_16_4_0.zip	haspdinst.exe, version 7.90	h haspsrm_win64.dll, version 7.9	11.16.4.0/11.16.4.0

Table 6.2: 64-bit Linux File Information and Supported Dongle Driver Version

Compressed File	Driver Version and Installation File	FlexNet FLEXID9 Shared Library	FlexNet Version
11.16.4.0 .tar	aksusbd-7.90-1.x86_64.rpm, version 7.9	ibhasp_linux_x86_64.so, version 7.9	11.16.4.0/11.16.4.0

6.3. Supported Platforms

The following operating system (OS) levels are supported by the dongle drivers supplied with Ansys 2025 R2. However, Ansys 2025 R2 may not support all of the listed OS levels. For detailed and current Ansys platform support information, see the Platform Support section of the Ansys, Inc. website (Support>Platform Support).

Table 6.3: 64-bit Windows Support

Driver OS Level Support
Windows Server 2012 R2 and 2016 and Windows 10, up through version 1703 (Insider Preview builds are not supported)

Table 6.4: 64-bit Linux Support

Linux Operating System	Driver OS Level Support
RHEL	6.x and 7.x
SLES	11 SP3, 11 SP4, and 12

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

6.4. Windows Procedures

Caution:

Do not allow Windows Update to install later versions of the dongle driver as this is not the Flexera-provided version. Automatic updates can cause unpredictable behavior with dongles, such as:

- Features that require the dongle cannot be checked out.
- The dongle FLEXID (hostid) is not returned correctly.
- The dongle driver cannot be removed using the methods described in this document.

6.4.1. Installing/Updating the Dongle Driver on Windows

Caution:

Removing a dongle or its driver may seriously disrupt your ability to run any product that uses it. Therefore, do not remove a dongle or its driver until you determine that all products that might be using it have been closed. Always stop all license managers that use the dongle and remove the dongle from the system before removing any existing driver. (These steps are detailed below for the Ansys License Manager.)

To install the Ansys-supplied driver on Windows systems, follow the steps below. You must have system administrator privileges to install this driver.

1. Install the Release 2025 R2 Ansys License Manager.
2. Confirm that the license manager is stopped by verifying that the 'Ansys License Manager' service is not running.
3. Remove all FLEXID9 dongles attached to your machine. Do not attach any dongles to the system again until told to do so in this document; if a dongle is plugged in before you have completed the driver installation, the Windows operating system could automatically install a non-Flexera driver.
4. In Windows Explorer, navigate to the following directory:

   `C:\Program Files\ANSYS Inc\Shared Files\bin\winx64\drivers\flexnet`

5. Extract the contents of the `11_16_4_0.zip` file into `C:\Program Files\ANSYS Inc\Shared Files\bin\winx64\drivers\flexnet`. You will need to remove 11_16_4_0 from the end of the default directory shown, if it is included.
6. Update the version of lmutil included with the Ansys License Manager installation from 11.13.1.2 to version 11.16.4.0.

   a. To do this, open the following directory:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
C:\Program Files\ANSYS Inc\Shared Files\Licensing\winx64\
```

b. Rename the **lmutil.exe** file to **lmutil-11_13_1_2.exe**.

c. Copy the version of 11.16.4.0 version of lmutil.exe file included in the dongle driver package found here:

```
C:\Program Files\ANSYS Inc\Shared
Files\bin\winx64\drivers\flexnet\11_16_4_0\
```

d. Paste this lmutil.exe file into the following directory:

```
C:\Program Files\ANSYS Inc\Shared Files\Licensing\winx64
```

Note:

The 11.16.4.0 version of lmutil will prevent you from borrowing licenses. If, in addition to using dongles, you also use licensing borrowing on this machine you will need the 11.13.1.2 version of lmutil.

7. Open an administrator command prompt window and perform the following steps:

   a. Remove any existing driver on your system. See the Removing an Existing Dongle Driver on Windows (p. 74) section below for more information.

   b. Navigate to the following directory:

   ```
   C:\Program Files\ANSYS Inc\Shared
   Files\bin\winx64\drivers\flexnet\11_16_4_0
   ```

   c. Issue the following command:

   ```
   haspdinst.exe -install
   ```

8. When the installation completes, restart the machine.

Note:

You may not see the new driver until the dongle has been inserted into the machine. However, do not insert the dongle until the next step.

9. After the machine has restarted, insert the dongle. Wait until the dongle's LED light is red and is not flashing. If you have multiple dongles, wait until the light is red (and not flashing) before inserting the next one.

10. To see if the dongle is being recognized, open the **Ansys License Management Center** and click the **Get System Hostid Information** link. If the dongle is recognized, you will see a **FLEXID9 Dongle ID (F)** entry under the **IDTYPE** column. (You can open the **Ansys License Management Center** by clicking the **Ansys, Inc. License Manager** > **Ansys License Management Center** item on the Windows Start menu/Apps page.)

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

6.4.2. Removing an Existing Dongle Driver on Windows

Caution:

Removing a dongle or dongle driver may seriously disrupt your ability to run any product that uses the dongle. Therefore, do not remove a dongle or dongle driver until you determine that it is safe to do so for all products using the dongle. Always stop all license managers that use the dongle and remove the dongle from the system before removing any existing driver.

Before installing the Ansys-supplied driver, you must remove any existing dongle driver from your system. You will need to use the installer or removal utilities provided with that driver to remove it. See the documentation provided with that driver for specific commands or procedures, or if you encounter problems.

Copies of the FLEXID_Dongle_Driver_installer.exe and FLEXIDCleanUtility.exe files discussed in this section are included in the following file's contents, which must be extracted to use either of these files:

```
C:\Program Files\ANSYS Inc\Shared
Files\bin\winx64\drivers\flexnet\11.9.1.0.zip
```

1. Uninstall the appropriate driver as described below.

   - To remove a dongle driver supplied at Ansys Release 16.0 or higher, run the following command while in the 11_16_4_0 subdirectory:

     ```
     haspdinst.exe -fremove -killprocess -purge
     ```

   - If the dongle driver has been updated through a Windows Update, it must be removed using the tools provided by SafeNet, Inc. Refer to SafeNet's documentation for details.

   - The FLEXID_Dongle_Driver_Installer.exe file was the driver installation file that Ansys, Inc. provided prior to Release 16.0. If you used it to install an earlier version of the Ansys-supplied dongle driver, perform the following steps to remove it.

     – Run the following command while in the 11.9.1.0 subdirectory:

       ```
       FLEXID_Dongle_Driver_Installer.exe /remove
       ```

     – Select the driver to uninstall and click **Next**.

   - If you used the FLEXIDInstaller.exe file to install an earlier version of the dongle driver, you can use either the cleanup utility provided for use with the FLEXIDInstaller utility or use the Programs and Features option from the Windows Control Panel. To use the cleanup utility, run the following command while in the 11.9.1.0 subdirectory:

     ```
     FLEXIDCleanUtility.exe
     ```

2. Restart the machine.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

6.5. Linux Procedures

6.5.1. Installing/Updating the Dongle Driver on Linux

Caution:

Removing a dongle or a dongle driver may seriously disrupt your ability to run any product that uses the dongle. Therefore, do not remove a dongle or dongle driver until you determine that it is safe to do so for all products using the dongle. Always stop all license managers that use the dongle and remove the dongle from the system before removing any existing driver. (These steps are detailed below for the Ansys License Manager.)

To install the Ansys-supplied driver on Linux systems, follow the steps below. You must have root permissions to install this driver.

1. Install the Release 2025 R2 Ansys License Manager.
2. Confirm that the license manager is not running.
3. Remove all FLEXID9 dongles attached to your machine. Do not attach any dongles to the system again until told to do so in this document.
4. Remove any existing driver on your system, if necessary. See the Removing an Existing Dongle Driver on Linux (p. 76) section below to determine if you must remove an existing driver.
5. Navigate to the directory:

   `/ansys_inc/shared_files/bin/linx64/drivers/flexnet`

6. Extract the `11_16_4_0.tar` file.
7. Update the version of lmutil included with the Ansys License Manager installation from 11.13.1.2 to version 11.16.4.0.

   a. To do this, open the following directory:

      `/ansys_inc/shared_files/license/linx64/`

   b. Rename the **lmutil** file to **lmutil-11_13_1_2**.

   c. Copy the version of 11.16.4.0 version of lmutil file included in the dongle driver package found here:

      `/ansys_inc/shared_files/bin/linx64/drivers/flexnet/`

   d. Paste this lmutil file into the following directory:

      `/ansys_inc/shared_files/license/linx64/`

8. Go to the subdirectory containing the `11_16_4_0.tar` file's contents, and do the following:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

a. Copy the `libhasp_linux_x86_64.so` file to the `/usr/lib64` directory.

> **Note:**
>
> If this file already exists in the `/usr/lib64` directory, rename it before copying the file. If the files are identical, no action is required.

b. **SUSE 12 SP2 only:** Installation of version 7.9 of the dongle driver requires the following additional commands to be issued at this point:

```
systemctl enable aksusbd
```

```
systemctl start aksusbd
```

c. Run the following command to install the driver:

```
rpm -i ./aksusbd-7.90-1.x86_64.rpm
```

9. Reboot the machine.

> **Note:**
>
> You may not see the new driver until the dongle has been inserted into the machine. However, do not insert the dongle until the next step.

10. After the machine has restarted, insert the dongle. Wait until the dongle's LED light is red and is not flashing. If you have multiple dongles, wait until the light is red (and not flashing) before inserting the next one.

11. To see if the dongle is recognized, open the **Ansys License Management Center** and click the **Get System Hostid Information** link. If the dongle is recognized, you will see a **FLEXID9 Dongle ID (F)** entry under the **IDTYPE** column. You can bring up the **Ansys License Management Center** by running the following script:

```
/ansys_inc/shared_files/licensing/start_lmcenter
```

6.5.2. Removing an Existing Dongle Driver on Linux

> **Caution:**
>
> Removing a dongle or dongle driver may seriously disrupt your ability to run any product that uses the dongle. Therefore, do not remove a dongle or dongle driver until you determine that it is safe to do so for all products using the dongle. Always stop all license managers that use the dongle and remove the dongle from the system before removing any existing driver.

1. Before installing the new driver, you must determine whether an existing driver must first be uninstalled.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- If the existing driver was installed via the script method (that is, using the dinst script provided with the older version of the driver) rather than by using the rpm method, you may not need to remove the currently installed driver before installing the new driver. The rpm installation method that will be used to install the new driver should replace the existing driver with the new driver. If you decide to uninstall this driver, you must use the dinst script that you used to install it.

- If the existing driver was installed via the rpm method, you must uninstall this driver before installing the Ansys-supplied driver. (As of Ansys Release 16.0, the only FlexNet-provided driver installation method has been the rpm method.)

2. If you uninstalled a driver, reboot the machine.

6.6. Dongle Troubleshooting

- On Linux systems, if you encounter "transaction lock" error messages, you may not have root privileges. Log in as root and retry the operation.

- If you have installed the new driver, rebooted the machine, and attached the dongle to the system, but the dongle is not recognized, confirm that the following file exists in the location below:

  Windows: `<OS drive>\Windows\System32\haspsrm_win64.dll`

  Linux: `/usr/lib64/libhasp_linux_x86_64.so`

  If the file is missing, copy the installation's file with that name from the Ansys FlexNet driver directory to the required location for your machine's platform. Additional details are available in the appropriate platform section above.

- **SUSE 12 SP2 only:** Version 7.9 of the dongle driver fails if the following commands were not issued before installing the driver:

  ```
  systemctl enable aksusbd
  ```

  ```
  systemctl start aksusbd
  ```

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 7: Advanced Procedures

This section describes various procedures for both setting up Ansys, Inc. licensing and its day-to-day management.

7.1. Running FlexNet and the Licensing Interconnect Separately on Linux/UNIX

Use the instructions in this section to start the Licensing Interconnect and manage FlexNet and the Licensing Interconnect separately on Linux/UNIX systems.

On each license server, start the Licensing Interconnect with the following command:

```
ansysli_server  -cacheflexlic  -noflex  -c  /FlexNet/ansys/license/license_files/
```

Replace **`/FlexNet/ansys/license/license_files`** in the above example with the actual directory path to the license files and or the file name of the FlexNet license file; either directory path or file name is valid. This step applies to both single servers and triads.

You should start FlexNet in the same manner as you usually do. It does not matter whether FlexNet or the Licensing Interconnect is started first.

Note that each time you reread FlexNet, you also need to reread the Licensing Interconnect.

You can also specify startup options using the `ansyslmd.ini` file, as described in Specify Startup Options via the ansyslmd.ini File (p. 80).

7.2. Running FlexNet and the Licensing Interconnect Separately on Windows

Use the instructions in this section to start the Licensing Interconnect and manage FlexNet and the Licensing Interconnect separately on Windows systems. On Windows, you will need to install the Licensing Interconnect as a Windows Service; see Installing the Licensing Interconnect as a Windows Service (p. 79) for detailed procedures.

After you have installed the service, on each license server, start the Licensing Interconnect with the following command:

```
ansysli_server  -k start
```

7.2.1. Installing the Licensing Interconnect as a Windows Service

You can install the Licensing Interconnect as a Windows Service (named Ansys, Inc. License Manager) via command arguments. You can specify startup options via command arguments or via the `an-`

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

`syslmd.ini` file. Procedures for both methods are described below, but we recommend using the `ansyslmd.ini` method to specify startup options.

Note:

The Windows service name has been changed as of Ansys Release 2024 R1. If you have installed the Ansys License Manager 2024 R1 or newer on a machine that has never had the Ansys License Manager installed, the Windows service name is "ANSYS, Inc. License Manager CVD". This service is installed using the Flexera installs.exe file. For more information on the installation usage and options, run <Installation Directory>:\Program Files\ANSYS Inc\Shared Files\Licensing\winx64>installs.exe.

When installing the Licensing Interconnect as a Windows Service, be sure that the Licensing Interconnect Service is set to automatically restart.

The basic form of the command to install the Licensing Interconnect as a Windows Service is:

```
ansysli_server -k install
```

Any other command arguments needed to start the Licensing Interconnect must precede the `-k install` argument.

The following example indicates installation of the Licensing Interconnect as a Windows Service, starting it with the options specified in your `ansyslmd.ini` file. Use the `-ini` option, replacing ***`path_to_file`*** with the actual path of the `ansyslmd.ini` file *only if the `ansyslmd.ini` file is not in the default location*. The `-ini` command and any other command arguments needed to start the Licensing Interconnect must precede the `-k install` argument.

```
ansysli_server -ini "path_to_file" -k install
```

See the sample `ansyslmd.ini` file in Specify Startup Options via the ansyslmd.ini File (p. 80) for an example of the entries needed to administer FlexNet and the Licensing Interconnect separately.

7.2.1.1. Specify Startup Options via the ansyslmd.ini File

You can use the `ansyslmd.ini` file to specify startup options. We recommend using this method to specify startup options, as this method allows you to change startup options without reinstalling the service.

You may use the sample `ansyslmd.ini` file below to indicate that the Licensing Interconnect will not start FlexNet (ANSYSLI_NOFLEX) and will read the license feature information (CACHE_FLEXLIC) from thedirectory path specified (LICKEYFIL), allowing you to administer FlexNet and the Licensing Interconnect separately.

```
ANSYSLI_NOFLEX=1
CACHE_FLEXLIC=1
LICKEYFIL=c:\FlexNet\ansys\license\license_files\
```

Replace **`c:\FlexNet\ansys\license\license_files\`** above with the actual directory path to the license files file name of the FlexNet license file, either directory path or file name is valid.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

7.2.1.2. Specify Startup Options via Command Line

The following example installs the Licensing Interconnect as a Windows Service, allowing you to administer FlexNet and the Licensing Interconnect separately:

```
ansysli_server -noflex -cacheflexlic -c "c:\FlexNet\ansys\license\license_files\" -k install
```

where:

- `-noflex` indicates that the Licensing Interconnect will not start FlexNet
- `-cacheflexlic` indicates that the Licensing Interconnect will read the license feature information
- `-c` indicates the FlexNet license file directory location

Replace **`c:\FlexNet\ansys\license\license_files\`** above with the actual directory path to the license files file name of the FlexNet license file, either directory path or file name is valid.

7.2.1.3. Uninstalling the Service

Use this command to uninstall the Licensing Interconnect Windows Service:

```
ansysli_server -k uninstall
```

7.3. Determining the Version Number of the Licensing Interconnect

To determine the Licensing Interconnect version number, enter the command:

```
ansysli_server -version
```

Use this command to ensure that you are always running the latest release. Each new release of Ansys products requires a new version of the Licensing Interconnect.

You can also find the version number in the STARTUP banner in the log file.

7.4. Shutting Down the Licensing Interconnect

Issue the following command from the system on which the Licensing Interconnect is running to shut down the Licensing Interconnect, including the service on Windows systems:

```
ansysli_server –k stop
```

If you are administering the Licensing Interconnect and FlexNet separately, this command will shut down only the Licensing Interconnect. If you are administering the Licensing Interconnect and FlexNet together, this command will shut down both the Licensing Interconnect and FlexNet.

If you need to manually kill the Licensing Interconnect, terminate the processes in this order:

1. `ansysli_monitor`

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

2. `ansysli_server`
3. `lmgrd`
4. `ansyslmd`

If you are managing the Licensing Interconnect and FlexNet separately, you may not want to kill `lmgrd` and `ansyslmd`.

7.5. Rereading the Licensing Interconnect

As with FlexNet, if you make changes to the license file or the FlexNet options file, you need to reread the Licensing Interconnect. The Licensing Interconnect must have current license feature information so that your users have access to all available licenses.

You also need to make the Licensing Interconnect aware of any changes you make to the `ansyslmd.ini` file. Depending on the option(s) you change, you will need to reread or shut down and restart the Licensing Interconnect. See the description of each option in ansyslmd.ini Keywords (p. 104) to determine if a reread or restart is needed.

To reread the Licensing Interconnect on the local host, enter the following command from the system on which the Licensing Interconnect is running:

```
ansysli_server -k reread
```

Note that if you are administering FlexNet and the Licensing Interconnect together, this command will reread both FlexNet and the Licensing Interconnect.

7.6. Installing a New License File

When you install a new license file, you need to ensure that the Licensing Interconnect recognizes the new file by rereading the Licensing Interconnect. See Rereading the Licensing Interconnect (p. 82).

You must also inform the Licensing Interconnect if you change the location of the license file. Use either of the following methods:

1. Use the `-c` command argument to specify the new license file(s) or new path to the license file. On Linux/UNIX, use the `-c` command argument in the command that you use to start the Licensing Interconnect. On Windows, use it in the command that you use to install the Windows service. If the service is already installed and the location of the license file was specified on the command line that created the service, you must uninstall the existing service before installing it again with the new path.
2. In the `ansyslmd.ini` file, use the LICKEYFIL=<*`path to license file directory or FlexNet license file`*> keyword to specify the new license file(s) or the new path to the license file. Do NOT include double quotes around any path specified in the `ansyslmd.ini` file.
3. When specifying a directory path (rather than a file), be sure that all license files within that directory have a .lic file extension to be recognized by the license manager.

Update any scripts that start the Licensing Interconnect with the new directory path.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

7.7. Caching License Information from Another License Server

If you have multiple independent license servers (non-triad) and your individual users often check out licenses from more than one of those servers, you can cache the license information from the other license servers when the Licensing Interconnect starts to speed up license checkouts. If the caching is not done upon startup of the Licensing Interconnect, it will be done on the fly, when a client connects with the other license server in its license path. Caching makes the local Licensing Interconnect aware of license features available on other license servers. You should not cache the local host.

Use one of the following methods to cache licensing information from another license server:

1. Start the Licensing Interconnect with the following command option:

   ```
   -cache_srv <port>@<host>
   ```

2. Add any of the following keywords to the `ansyslmd.ini` file:

   ```
   CACHE_SERVER=<port>@<host>
   ```

   or

   ```
   SERVER=<port>@<host>
   ```

   or

   ```
   ANSYSLI_SERVERS=<port>@<host>
   ```

See Licensing Interconnect Command Options (p. 90) and ansyslmd.ini Keywords (p. 104) for more information on these startup options.

7.8. Improving Licensing Performance

If you see sluggish performance with your licensing, you may need to ease the load on the Licensing Interconnect. Try the following suggestions to improve your company's licensing performance.

7.8.1. Running a Standalone Licensing Interconnect

In addition to the Licensing Interconnect that must be running on your license server, you can also set up standalone Licensing Interconnects on other systems. There is no limit to the number of standalone Licensing Interconnects that can be running.

You might find it beneficial to set up standalone Licensing Interconnects if, for example, you have the license server at one geographic location (City A) and a group of users at a separate, geographically distant location (City B), especially if the user's location in City B has a slower Ethernet connection. If you set up a standalone Licensing Interconnect in City B, all of the user's licensing requests are to the local standalone Licensing Interconnect; the Licensing Interconnect is the only entity that needs to communicate with City A. This example minimizes the communication between City A and City B. If no standalone Licensing Interconnect is setup in City B, all users would need to communicate individually to the Licensing Interconnect in City A.

To implement this example:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

1. On the license server in City A, no additional changes are needed.

2. On the system hosting the standalone Licensing Interconnect in City B, only the Licensing Interconnect will be running, not FlexNet. The Licensing Interconnect in City B will need to obtain the license file cache from the license server in City A. For this configuration, the Licensing Interconnect in City B should be started with the following command:

   ```
   ansysli_server -noflex -cache_srv 2325@cityA
   ```

   Alternatively, you can use an `ansyslmd.ini` file for the Licensing Interconnect in City B. It would look similar to this example:

   ```
   ANSYSLI_NOFLEX=1
   CACHE_SERVER=2325@cityA
   ```

   For the client systems in City B, we recommend including the path to both City B and City A's Licensing Interconnect, with the local Licensing Interconnect in City B being listed first. The `ansyslmd.ini` file on the client systems in City B would look like the following:

   ```
   SERVER=1055@cityA
   ANSYSLI_SERVERS=2325@cityB
   ANSYSLI_SERVERS=2325@cityA
   ```

   where **`cityA`** and **`cityB`** in the above example are hostnames.

   If you prefer to use environment variables on the client side rather than the `ansyslmd.ini` file, use the **ANSYSLMD_LICENSE_FILE** environment variable for the FlexNet path and the **ANSYSLI_SERVERS** environment variable for the Licensing Interconnect path. For the **ANSYSLI_SERVERS** environment variable, join the two by delimiting the two servers with colons on UNIX/Linux and semicolons on Windows, with City B being listed first.

3. Client systems in City A would only point to the Licensing Interconnect in City A.

When it is time for an upgrade, remember to upgrade any standalone Licensing Interconnects when the primary Licensing Interconnect is upgraded.

7.8.2. Balancing the Load on a Triad

Because the Licensing Interconnects running on a triad work independently and are all active and able to accept client connections at any time, you can divide the load across the triad. To do so, split your user base (the client systems) into three groups and have each group point to the Licensing Interconnects in a different order.

No special changes are needed for your triad setup. All three systems run FlexNet and all three run the Licensing Interconnect. No different license server `ansyslmd.ini` file settings or command options to start the Licensing Interconnect are needed.

For example, the hostnames of the systems in your triad are **`apricot`**, **`coconut`**, and **`fig`**. Split your users into three groups:

- Group 1 has **`apricot`** first in their path
- Group 2has **`coconut`** first in their path

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- Group 3 has **fig** first in their path

The `ansyslmd.ini` file for each of the groups would look like the following:

First Group (all running from UNIX/Linux systems; note the colon delimiter):

```
SERVER=1055@apricot:1055@coconut:1055@fig
ANSYSLI_SERVERS=2325@apricot:2325@coconut:2325@fig
```

Second Group (all running from UNIX/Linux systems; note the colon delimiter):

```
SERVER=1055@apricot:1055@coconut:1055@fig
ANSYSLI_SERVERS=2325@coconut:2325@fig:2325@apricot
```

Third Group (all running from UNIX/Linux systems; note the colon delimiter):

```
SERVER=1055@apricot:1055@coconut:1055@fig
ANSYSLI_SERVERS=2325@fig:2325@apricot:2325@coconut
```

First Group (all running from Windows systems; note the semicolon delimiter):

```
SERVER=1055@apricot;1055@coconut;1055@fig
ANSYSLI_SERVERS=2325@apricot;2325@coconut;2325@fig
```

Note that for all users the path to FlexNet stayed the same; only the path to the Licensing Interconnect changed. If you prefer to use environment variables on the client side rather than the `ansyslmd.ini` file, use the **ANSYSLMD_LICENSE_FILE** environment variable for the FlexNet path and the **ANSYSLI_SERVERS** environment variable for the Licensing Interconnect path.

See Managing Triads (p. 85)for more information.

7.9. Managing Triads

Each system that is a license server needs to run both FlexNet and the Licensing Interconnect; this requirement applies to both single servers and triads. We recommend that you always configure triads to manage FlexNet and the Licensing Interconnect independently. Keep the following points in mind when working with triads.

In a triad environment, the Licensing Interconnect functions in an independent manner. All systems are active and can all accept client requests at any time, unlike FlexNet, where only one of the three is serving licenses at a time. Although we strongly recommend that each of the systems in the triad is running a Licensing Interconnect, unlike FlexNet, a quorum of Licensing Interconnects is not required.

We recommend that you include the path to each of the triad systems in the license path of each of the clients via the `ansyslmd.ini` file on the client machines. The license server listed first in the client license path is tried first to check out a license. If no licenses are available, the second license server is tried.

If you need to change the order of the systems in your triad (for example, making the secondary server the primary), you will also need to change the license paths on the client machines to be consistent.

We do not recommend caching the license file of the other two servers in the triad. Since the same file is used on all three systems, it is unnecessary.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

When shutting down the Licensing Interconnect on triad systems, initiating shutdown on one system will not shut down the Licensing Interconnect on other systems in the triad; you must shut each of them down individually.

7.10. Understanding Port Numbers

In addition to the FlexNet port, the Licensing Interconnect also uses a port. Ansys, Inc. has registered two port numbers with the IANA: 1055 for FlexNet and 2325 for the Licensing Interconnect. When no port numbers are specified, the defaults are used.

Below are the locations where you may need to specify the Licensing Interconnect port number:

1. If you are not using the default Licensing Interconnect port number (2325), you must include the ANSYSLI_PORT=<port> keyword in the `ansyslmd.ini` file on the license server.

2. If you have multiple standalone license servers (non-triad) and you are caching the license file information from one license server to another, use either the `-cache_srv` command option when starting the Licensing Interconnect or the CACHE_SERVER=<*`ansysli_port`*>@<*`host`*> keyword in the `ansyslmd.ini` file.

3. When running Ansys applications from a client machine, specify the path to the Licensing Interconnect by either the ANSYSLI_SERVERS=<*`port`*>@<*`host`*> keyword in the `ansyslmd.ini` file on the client system or the **ANSYSLI_SERVERS** environment variable on the client system.

Firewall Issues

When any of your users are running Ansys, Inc. products over a firewall, be sure that all three necessary port numbers are open to ensure successful communications:

- 2325 for the Licensing Interconnect
- 1055 for `lmgrd`
- The port you specify (in the license file) for `ansyslmd` (required only if specified in the license file)

WAN Optimization Software: When using WAN Optimization Software on your network, it may be necessary to set the WAN Optimization Software to bypass the Licensing Interconnect port (2325) to ensure that the Licensing Interconnect communication is not blocked. Failure to bypass the Licensing Interconnect port could result in licenses remaining checked out even after the application has exited.

Freeing Ports

Some systems take much longer to free ports than other systems, especially if a process crashes or is stopped with `kill -9`. We provide two `ansyslmd.ini` keywords and corresponding command options to ensure that the Licensing Interconnect and the Licensing Interconnect Monitor wait a sufficient amount of time to allow the Licensing Interconnect port to free, thus allowing the Licensing Interconnect to start successfully. These keywords/command options are described in Enterprise Licensing Reference (p. 89):

- ANSYSLI_PORT_TIMEOUT (`-port_timeout`)
- ANSYSLI_RESTART_PORT_TIMEOUT (`-restart_port_timeout`)

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

7.11. Using Virus Scanners

Some virus scanning software view applications that perform a high volume of communications as a threat. To avoid any conflict, you may need to specify these executables as exceptions to the virus scanning software.

- `ansysli_server`
- `ansysli_monitor`
- `ansyslmd`
- `lmgrd`

7.12. License Reporting Tools

You may already be using reporting tools provided by Flexera Software or other software vendors. Ansys, Inc. Licensing in no way interferes with these tools. All license checkins/checkouts are done though FlexNet and therefore all entries are logged to the FlexNet debug log file. If FlexNet reporting is enabled, all checkin/checkout entries are logged there as well.

7.13. Enabling License Manager Privacy Controls

To comply with data privacy requirements (such as the General Data Protection Regulation), you can perform the following steps to ensure that personally identifiable information (username and hostname) is not returned during client calls for license or queue status queries. **Examples:** "lmutil lmstat -a".

1. **Enable Privacy Mode in the Ansys Licensing Interconnect**

   To enable privacy mode in the Licensing Interconnect, you can perform either step "a" or "b" below:

   a. Enable the **-private** Licensing Interconnect Command Option

      The **-private** command option dictates whether the Licensing Interconnect should run in private mode where requests for license usage from client systems do not return user or host information.

      For more information, see Licensing Interconnect Command Options (p. 90).

   b. Enable the **ANSYSLI_PRIVATE** ansyslmd.ini Keyword

      The **ANSYSLI_PRIVATE** feature dictates whether the license server should run in private mode where requests for license usage from client systems do not return user or host information.

      For more information, see ansyslmd.ini Keywords (p. 104).

2. **Enable Privacy Mode in FlexNet**

   Configuring port forwarding blocks lmutil commands to the Ansys license server that require lmgrd processing. For example, lmstat will not work when port forwarding is enabled.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

To do this you will need to set a static port for the ansyslmd daemon.

You can set a static port for the ansyslmd daemon by adding PORT=#### to the end of the vendor line in your license file and restarting the license manager.

Example:

```
VENDOR ansyslmd PORT=1056
```

You must configure port forwarding through IPtables (as root) or the firewall on your license server to forward all inbound traffic on the lmgrd port (default is 1055) to the vendor port (example 1056).

Note:

The license server will still be able to run queries of the license status, reserved status, or queued status; all usage data is displayed from the license server.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 8: Enterprise Licensing Reference

8.1. Environment Variables

This section describes licensing-related environment variables and their usage.

ANSYSLIC_DIR

You may find this environment variable helpful for the Licensing Interconnect to locate files within the licensing directory structure. If the Licensing Interconnect is unable to locate files in their default location, it tries the directory path in this environment variable. If this environment variable is set, it should point to the directory that we refer to as the licensing directory; reference the diagram in Default Directory Structure (p. 22). This default directory location is `/ansys_inc/shared_files/licensing` for Linux and `<OS Drive>:\Program Files\Ansys Inc\Shared Files\Licensing` for Windows.

The Licensing Interconnect and the Licensing Interconnect monitor use this environment variable as a fallback to locate most licensing-related files.

The Licensing Interconnect command options `-ini` and `-log` and the `ansyslmd.ini` keyword DEBUG_LOG_FILE use the **ANSYSLIC_DIR** environment variable (if it is set) and the default directory path is not used; these are so noted in the Licensing Interconnect command option description (Licensing Interconnect Command Options (p. 90)) or in the `ansyslmd.ini` keyword description (ansyslmd.ini Keywords (p. 104)). When possible, we recommend that you specify the full path name for command options and `ansyslmd.ini` keywords.

ANSYSLI_SERVERS

This environment variable is used to specify the Licensing Interconnect license path on client systems. Use the *port@host* designation to set this environment variable. The default port number is 2325 for the Licensing Interconnect. If it is more convenient, you may use this environment variable in lieu of the ANSYSLI_SERVERS=<*port@host*> setting in the `ansyslmd.ini` file on client systems. The environment variable setting will take precedence over the `ansyslmd.ini` file setting. You can list multiple Licensing Interconnect paths as a list, delimited by colons (:) on Linux and semicolons (;) on Windows.

ANSYSLMD_LICENSE_FILE

Use the *port@host* designation to set this vendor-specific FlexNet environment variable. The default port number is 1055 for the `ansyslmd` vendor daemon. The vendor-specific FlexNet license path environment variable is recognized by the Licensing Interconnect. If it is more convenient, you may use this environment variable in lieu of the SERVER=<*port@host*> setting in the `ansyslmd.ini` file on client systems. List multiple entries separated by colons (:) on Linux and semicolons (;) on Windows.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

LM_LICENSE_FILE

The Licensing Interconnect does not use the generic FlexNet environment variable **LM_LICENSE_FILE** (used for setting the license path for all FlexNet-enabled products) in order to maintain acceptable performance levels.

8.2. Licensing Interconnect Command Options

This section describes command options that you can use when starting the Licensing Interconnect. For each option, we provide the following information:

- a description
- the default value and range of values
- the corresponding `ansyslmd.ini` option
- other options that need to be combined with each one
- any platform restrictions
- an example

When combinations of command options are used, the order in which the options are specified does not matter unless otherwise noted.

-ali_tls_version [1.2]

Description: This command allows you to disable previous versions of TLS and enable TLS version 1.2 for communication.

Default value/range: 1.2

Corresponding ansyslmd.ini keyword: ANSYSLI_TLS_VERSION

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example enables TLS version 1.2.

```
-ali_tls_version 1.2
```

-AnsysclCiphersToUse [OpenSSL Cipher(s)]

Description: This command allows the user to specify the SSL Cipher Suite used on the licensing server to secure communications between client and server. OpenSSL Cipher names are used and can be combined in a comma separated list without spaces in order of preference. To see what ciphers are supported, use the ansysli_server.exe command "-DisplaySupportedCiphers (p. 93)". Setting the Ciphers to only use a preferred cipher, for example ECDHE-RSA-AES128-GCM-SHA256,

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

may prevent older clients that do not support that cipher from connecting. To ensure older clients can connect, AES128-SHA256 and/or AES256-SHA should be enabled.

Table 8.1: Cipher Compatibility with Ansys Releases

Cipher Suite Versions	Supported Ansys Releases
AES128-SHA256	All Ansys releases
AES256-SHA	All Ansys releases
ECDHE-RSA-AES128-GCM-SHA256	Ansys release 19.5 and newer

Default value/range: Output from `-DisplaySupportedCiphers` command

Corresponding ansyslmd.ini keyword: ANSYSCL_CIPHERS_TO_USE

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example sets the SSL Cipher Suite to use the ECDHE-RSA-AES128-GCM-SHA256 cipher, or the AES256-SHA Cipher if the client doesn't support the first.

```
-AnysysclCiphersToUse ECDHE-RSA-AES128-GCM-SHA256,AES256-SHA
```

-c <*license_file_path*>

Description: Use this command option to pass the file name or path of the FlexNet license file to the Licensing Interconnect, which is needed when administering FlexNet and the Licensing Interconnect separately. If you are administering FlexNet and the Licensing Interconnect together, allowing the Licensing Interconnect to start FlexNet, this command option is used to start FlexNet. The optional <*license_file_path*> is required only if you are not using the default location. When specifying a directory path (rather than a file), be sure that all license files within that directory have a .lic file extension to be recognized by the license manager.

Default value/range: Valid directory path or filename of the FlexNet license file. The default is the directory path - /ansys_inc/shared_files/licensing/license_files.

Corresponding ansyslmd.ini keyword: LICKEYFIL=<*license_file_path*>

Use in combination with these command options: `-cacheflexlic` and `-noflex`

Hardware platform restrictions: N/A

Example: This example starts the Licensing Interconnect and identifies the location of the license file as `/FlexNet/ansys/license/license_files/`.

```
ansysli_server -c "/FlexNet/ansys/license/license_files/"
```

-cacheflexlic

Description: Indicates to the Licensing Interconnect to cache the FlexNet license file when administering FlexNet and the Licensing Interconnect separately to make the Licensing Interconnect aware of available license features.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Default value/range: N/A

Corresponding ansyslmd.ini keyword: CACHE_FLEXLIC=1

Use in combination with these command options: `-c` and `-noflex`

Hardware platform restrictions: N/A

Example: This example starts the Licensing Interconnect; the Licensing Interconnect will not start FlexNet (`-noflex`). The Licensing Interconnect will read the license feature information (`-cacheflexlic`) from the license file path specified (`-c`).

```
ansysli_server  -cacheflexlic  -noflex  -c "/FlexNet/ansys/license/license_files/"
```

-cache_srv <*port@host*>

Description: When you have multiple single license servers (not a triad), use this option to specify license servers other than the localhost for which to cache their FlexNet licenses at startup. This option will make the Licensing Interconnect aware of what license features are available on the other license servers. Use this option to speed up license checkouts, so that the caching is done upon startup of the Licensing Interconnect, rather than on the fly, when a client connects with the other license server in its license path.

Default value/range: The port number is the Licensing Interconnect port; the default is 2325. The host is the hostname of another standalone license server. The *port@host* can also be a list, delimited by colons (:) on Linux and semicolons (;) on Windows.

Corresponding ansyslmd.ini keyword: CACHE_SERVER=<*port@host*>

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example starts the Licensing Interconnect on your current system. Upon startup, the Licensing Interconnect will cache the license information from a different license server named *apple* on port 2325 on that machine.

```
ansysli_server   -cache_srv 2325@apple
```

-checkoutretry [1/0]

Description: This command allows you to disable and enable the ANSYSLI_CHECKOUT_RETRY feature. The ANSYSLI_CHECKOUT_RETRY feature dictates the number of seconds the license check-out retry attempts will continue before failing. This command is set to 1 (allowed) by default.

Default value/range: 1/0; default is 1

Corresponding ansyslmd.ini keyword: ANSYSLI_CHECKOUT_RETRY

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example turns the ANSYSLI_CHECKOUT_RETRY feature off.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
-checkoutretry 0
```

-DisplaySupportedCiphers

Description: This command allows the user to display the default Cipher Suites currently supported in ansysli_server. Cipher Suites can be set via the `-AnsysclCiphersToUse` command line option. AnsysclCiphersToUse will only accept the ciphers if they are in the output list of `-DisplaySupportedCiphers`.

Default value/range:N/A

Corresponding ansyslmd.ini keyword: N/A

Use in combination with these command options: AnsysclCiphersToUse

Hardware platform restrictions: N/A

Example: This example prints the currently enabled cipher suites

```
ansysli_server   -DisplaySupportedCiphers
```

-dp_reserve [1/0]

Description: This command allows you to turn off the license reservation feature for design points in Ansys Workbench.

Default value/range: 1/0; default is 1.

Corresponding ansyslmd.ini keyword: ANSYSLI_DP_RESERVE

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example turns license reservation off for design points in Ansys Workbench.

```
ansysli_server   -dp_reserve 0
```

-fnp_ip_env [0/1]

Description: Enabling this command option sets the FlexNet environment variable - FNP_IP_ENV. This option allows you to bypass the client-side hostname resolution, thus improving license checkout performance. Use this option when you see such messages as "FLEXlm server is not responding. Resource temporarily not available."

Default value/range: 0/1; default is 0 (off)

Corresponding ansyslmd.ini keyword: ANSYSLI_FNP_IP_ENV

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example bypasses the client-side hostname resolution.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
-fnp_ip_env 1
```

-fnp_restart_attempts [1-10]

Description: This option allows you to specify the number of times that the Licensing Interconnect attempts to restart lmgrd/ansyslmd. After attempting to restart for the specified number of times, the Licensing Interconnect discontinues the restart process until the next CHECKPOINT. At the time of the next CHECKPOINT, the Licensing Interconnect again attempts to restart for the specified number of times. This process continues until the issue is resolved. This situation might occur if licenses in the license file have expired.

Note:

The time of each CHECKPOINT is determined by the last start time and the CHECKPOINT_INTERVAL value in ansyslmd.ini (default is 6 hours).

Default value/range: 1-10; default is 1

Corresponding ansyslmd.ini keyword: ANSYSLI_FNP_RESTART_ATTEMPTS

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example sets the number of restart attempts to 1.

```
-fnp_restart_attempts 1
```

-group <*group*>

Description: Only a member of the group specified can shutdown the Licensing Interconnect. If the group restriction is in place, when shutting down the Licensing Interconnect, the group specified must be your primary group.

Default value/range: Valid system group names.

Corresponding ansyslmd.ini keyword: RESTRICT_SHUTDOWN=GROUP:<*group*>

Use in combination with these command options: N/A

Hardware platform restrictions: This option is only available on Linux platforms.

Example: This example starts the Licensing Interconnect on your current system and limits the users who can shutdown the Licensing Interconnect to those who are members of the group *lmadmin*.

```
ansysli_server -group lmadmin
```

-include_flexsvr <*server name*>

Description: This command allows you to define which license servers to use from the licensing path. Any servers that you specify will be used, ignoring all other servers listed in the licensing path.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Default value/range: N/A

Corresponding ansyslmd.ini keyword: ANSYSLI_INCLUDE_FLEXSVR=<*Server1, server2, etc.*>

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example ignores all supplied servers in the licensing path except server1 and server2.

```
ansysli_server -include_flexsvr server1, server2
```

-ignore_flexsvr <*server name*>

Description: Any server that you specify will not be included in the FlexNet license path. The reason to remove these servers from your path is that FlexNet can take too long to return when a server in the path does not exist. This can cause the Licensing Interconnect to delay license checkout calls. Candidates are license servers that are off-line but still in the DNS.

Default value/range: N/A

Corresponding ansyslmd.ini keyword: ANSYSLI_IGNORE_FLEXSVR=<*Server1, server2, etc.*>

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example removes server1 from the license path.

```
ansysli_server  -ignore_flexsvr=server1
```

Note:

To ensure that all appropriate domain aliases are removed from the licensing path, Ansys, Inc., recommends that you use the base hostname rather than the fully qualified domain name whenever applicable.

-ini <*ini_file_path*>

Description: Most command arguments to the Licensing Interconnect also have a corresponding `ansyslmd.ini` keyword. This command option signals the Licensing Interconnect to read the startup options from the specified `ansyslmd.ini` file. Use this option if your `ansyslmd.ini` file is not in the default location.

Default value/range: The default location for the `ansyslmd.ini` file is determined as follows:

1. The default directory is one directory level up from the `ansysli_server` executable.
2. If not found in the default directory and the **ANSYSLIC_DIR** environment variable is set, that path is used.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Specify both the path and file name.

Corresponding ansyslmd.ini keyword: N/A

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example will start the Licensing Interconnect, identifying the location of the `ansyslmd.ini` file. The Licensing Interconnect will read and apply any settings contained in the `ansyslmd.ini` file.

```
ansysli_server  -ini  "/my_directory/shared_files/licensing/ansyslmd.ini"
```

-IpOverride

Description: This Licensing Interconnect command option allows the Licensing Interconnect to revert back to Release 14.5 and prior behavior with regard to client IP addresses. For most sites, the 15.0 and later behavior is appropriate. This option should only be used if you are using stand-alone Licensing Interconnects in addition to the one on your license server and you want the IP address used to be that of the system on which the stand-alone Licensing Interconnect is running, not the client machine. To change the default behavior, this command option would need to be set on the systems running the stand-alone Licensing Interconnect.

Default value/range: N/A

Corresponding ansyslmd.ini keyword: ANSYSLI_IP_OVERRIDE

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example turns off the IP address override.

```
ansysli_server -IpOverride
```

-k info [*port@host*]

Description: Returns information on the Licensing Interconnect running at *port@host*. Information returned includes whether the Licensing Interconnect is running and on which port.

Default value/range: Port refers to the Licensing Interconnect port number; the default port number is 2325. Host is the hostname. If *port@host* is not specified, localhost is tried (using the ANSYSLI_PORT value).

Corresponding ansyslmd.ini keyword: N/A

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: Use this example to determine if the Licensing Interconnect is running on a license server named *grape* on port 2325.

```
ansysli_server –k info 2325@grape
```


Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

-k reread [*port@host*]

Description: This command option will reread information for the Licensing Interconnect. If you are administering FlexNet and the Licensing Interconnect separately, each time you reread FlexNet, you must also reread the Licensing Interconnect. If you are administering FlexNet and the Licensing Interconnect together, this command option will reread both FlexNet and the Licensing Interconnect. Files that are read include:

- the FlexNet license file(s)
- the FlexNet options file
- the `ansyslmd.ini` file

Reread cannot be used in the following situations:

- The Licensing Interconnect port number is changed
- The licensing configuration option is changed
- The number of licenses in an existing RESERVE line in the FlexNet options file is changed

Default value/range: Port number refers to the Licensing Interconnect port number; the default is 2325. Host is the hostname. If *port@host* is not given, the localhost is tried (using the ANSYSLI_PORT value).

Corresponding ansyslmd.ini keyword: N/A

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: Use this command to have the Licensing Interconnect reread the FlexNet license file(s), the FlexNet options file, and the `ansyslmd.ini` file on the license server named *orange* on port 2325. Note that if FlexNet and the Licensing Interconnect are being administered together, this command will also send a reread command to FlexNet.

```
ansysli_server –k reread 2325@orange
```

-k stop [*port@host*]

Description: Stops the License Manager running at *port@host*. If `-noflex` was used to start the Licensing Interconnect, only the Licensing Interconnect will be stopped. If `-noflex` was not used to start the Licensing Interconnect, both FlexNet and the Licensing Interconnect will be shutdown.

Default value/range: Port refers to the Licensing Interconnect port number; the default is 2325. If you do not specify *port@host*, it will attempt to shut down the Licensing Interconnect running on localhost (using the ANSYSLI_PORT value). This command argument will only accept one Licensing Interconnect to shutdown. If you need to kill the Licensing Interconnect manually, kill the monitor first, `ansysli_server` second, then FlexNet.

Corresponding ansyslmd.ini keyword: N/A

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: Use this command to stop the Licensing Interconnect on the system named *peach*, using port 2325. Note that if FlexNet and the Licensing Interconnect are being administered together, both FlexNet and the Licensing Interconnect will be shutdown.

```
ansysli_server –k stop 2325@peach
```

-log <file>

Description: This command option specifies the directory path and name of the output log file for the Licensing Interconnect; debugging and usage information is included in the file.

Default value/range: If a log file name and path is not specified the file is put in the default location one directory level up from `ansysli_server<.exe>` and is named `ansysli_server.log`. If no directory is specified and the default directory is not found, the file is placed in the directory specified by **ANSLIC_DIR**.

Corresponding ansyslmd.ini keyword: DEBUG_LOG_FILE =<*`path_file_name`*>

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This command specifies the directory path and file name of the Licensing Interconnect log file as `/ansys_inc/shared_files/licensing/ansysli_server.log`.

```
ansysli_server –log "/ansys_inc/shared_files/licensing/my_ansysli_server.log"
```

-logtype

Description: When included on the command line to start the Licensing Interconnect, this command option indicates the level of verbosity of the Licensing Interconnect log file information (`ansysli_server.log`). If this command option is not specified, the verbosity level is set to STANDARD. The verbosity level should be changed only if you are actively working with the Ansys, Inc. Technical Support staff to solve a specific problem.

STANDARD level logs `ansysli_server` STARTUP options, license cache information (such as features/counts and FlexNet options file content), CHECKOUT, CHECKIN, RESERVE, and RETURN_RESERVE. It also logs CLIENT_SHUTDOWN for all but `ansysli_monitor`.

CONNECTIONS level logs everything that STANDARD logs, and CLIENT_ACCEPT and CLIENT_SHUTDOWN for the monitor.

VERBOSE level logs STANDARD plus CONNECTIONS, and ADD (product definitions and shared capabilities) and REMOVE (shared capabilities).

Default value/range: STANDARD (default), CONNECTIONS, VERBOSE

Corresponding ansyslmd.ini keyword: DEBUG_LOG_TYPE

Use in combination with these command options: N/A

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Hardware platform restrictions: N/A

Example: This command indicates that Licensing Interconnect log file (specified by `-log`) verbosity level should be set to VERBOSE.

```
ansysli_server –log "/ansys_inc/shared_files/licensing/my_ansysli_server.log" -logtype verbose
```

-max_queued_requests

Description: The Ansys License Manager supports FlexNet's licensing queuing in many Ansys, Inc. products. By default, queuing is off. This command option indicates the maximum number of license checkout requests that can be queued at any one time.

Default value/range:1 - 10000 (default)

Corresponding ansyslmd.ini keyword: MAX_QUEUED_REQUESTS

Use in combination with these command options: `-queuing_interval`

Hardware platform restrictions: N/A

Example: This example indicates that a maximum of 20 requests can be queued:

```
ansysli_server –max_queued_requests 20
```

-multitask_queuing_flex [0/1]

Description: This option only applies when queuing for multiple tasks of the same feature, like HPC. When this option is enabled (default/on=1), you are using FNP queuing and you are put in the queue in the order in which the request is made. When this option is disabled (off=0), you are not using FNP queuing and are using Ansys Licensing Interconnect queuing only.

Default value/range: 0/1; default is 1 (on)

Corresponding ansyslmd.ini keyword: ANSYSLI_MULTITASK_QUEUEING_FLEX

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example uses FlexNet Publisher to queue multi-task checkout requests when you choose to queue requests.

```
-multitask_queueing_flex 1
```

-nocache_srv <*port@host*>

Description: When you have multiple single license servers (not a triad), use this option to specify which license servers, other than the localhost, should not cache their FlexNet licenses at startup.

Default value/range: The port number is the Licensing Interconnect port; the default is 2325. The host is the hostname of another standalone license server. The *port@host* can also be a list, delimited by colons (:) on Linux and semicolons (;) on Windows.

Corresponding ansyslmd.ini keyword: ANSYSLI_ NOCACHE_SERVER=<*port@host*>

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example indicates that port1@host1 and port2@host2 should not cache their FlexNet licenses at startup (on a Windows system).

```
ansysli_server -nocache_server=port1@host1;port2@host2
```

-noflex

Description: This command option allows you to administer FlexNet and the Licensing Interconnect separately by telling the Licensing Interconnect to not start FlexNet. If this command option is omitted, the Licensing Interconnect will attempt to start FlexNet.

Default value/range: N/A

Corresponding ansyslmd.ini keyword: ANSYSLI_NOFLEX=1

Use in combination with these command options: `-c` and `-cacheflexlic`

Hardware platform restrictions: N/A

Example: This example starts the Licensing Interconnect; the Licensing Interconnect will not start FlexNet (`-noflex`). The Licensing Interconnect will read the license feature information (`-cacheflexlic`) from the license file path specified (`-c`).

```
ansysli_server  -cacheflexlic  -noflex  -c "/FlexNet/ansys/license/license_files/"
```

-port_timeout

Description: This option controls how long the `ansysli_server` process should wait before abandoning attempts to access the Licensing Interconnect port if the port was in use when the `ansysli_server` process began. This option may be useful if your system takes a long time to free its ports.

Default value/range: 15 minutes; minimum 10 minutes, maximum 60 minutes

Corresponding ansyslmd.ini keyword: ANSYSLI_PORT_TIMEOUT

Use in combination with these command options: `-restart_port_timeout`

Hardware platform restrictions: N/A

Example: Use this command to tell the `ansysli_server` to wait 25 minutes before it stops checking for the port availability and exits:

```
ansysli_server -port_timeout 25
```

-Private [0/1]

Description: This command dictates whether the Ansys Licensing Interconnect should run in private mode where requests for license usage from client systems do not return user or host information.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Setting this command to 1 (on) blocks user and hostname information while setting it to 0 (off) allows this information to be included. This command is set to 0 (off) by default.

Note: This command only modifies license or queue status queries from client systems, requests made from the server system are not affected.

Default value/range: 1/0; default is 0 (off)

Corresponding ansyslmd.ini keyword: ANSYSLI_PRIVATE

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: This example sets the Ansys Licensing Interconnect to run in private mode:

```
-private 1
```

-purge_wb_usage

Description: Use this command option to purge obsolete usage data from the license tracking usage file (`usage_track.xml`; see the file description in Files created by the Licensing Interconnect (p. 26)). If you do not purge this file periodically, it could become very large. By default, this file is purged every 14 days.

Default value/range: positive integers representing days; default is 14

Corresponding ansyslmd.ini keyword: ANSYSLI_PURGE_WB_USAGE

Use in combination with these command options: `-wb_usage`, `-usage_archive_interval`

Hardware platform restrictions: N/A

Example: This example purges the `usage_track.xml` file every 31 days.

```
ansysli_server -purge_wb_usage 31
```

-queuing_interval

Description: The Ansys License Manager supports FlexNet's licensing queuing in many Ansys, Inc. Products. By default, queuing is off. This command option specifies the frequency by which checkout attempts are performed on queued license checkout requests.

Default value/range: 15 - 600 seconds; default is 120 seconds

Corresponding ansyslmd.ini keyword: QUEUING_INTERVAL

Use in combination with these command options: `-max_queued_requests`

Hardware platform restrictions: N/A

Example: This example indicates that checkout attempts for queued requests are performed every 5 minutes (300 seconds):

```
ansysli_server –queuing_interval 300
```

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

-restart_port_timeout

Description: This command controls how long the `ansysli_monitor` should wait for the Licensing Interconnect port to free before restarting the `ansysli_server`. This option may be useful if your system takes a long time to free its ports.

Default value/range: 15 minutes; minimum 10 minutes, maximum 60 minutes

Corresponding ansyslmd.ini keyword: ANSYSLI_RESTART_PORT_TIMEOUT

Use in combination with these command options: `-port_timeout`

Hardware platform restrictions: N/A

Example: The following example tells the `ansysli_monitor` to wait 25 minutes for the port to free before restarting the `ansysli_server`:

```
ansysli_server -restart_port_timeout 25
```

-reservegroup <*group list*>

Description: Use this command option to stipulate that a member of the group specified can return reserved licenses for the design point reservation feature. This command option identifies the group or (comma separated) list of groups that are permitted to return reserved licenses for all users. If this option is used, the user who started the Licensing Interconnect will be unable to return reserved licenses, unless that user is a member of the group specified.

Default value/range: The system group name specified must be valid. When returning reserved licenses, the group must be your active group.

Corresponding ansyslmd.ini keyword: RETURN_RESERVE=GROUP

Use in combination with these command options: N/A

Hardware platform restrictions: This option is only available on Linux platforms.

Example: The following example allows only those users who are a member of the group lmadmin to return reserved licenses.

```
ansysli_server  -reservegroup   lmadmin
```

-reserveuser <*userlist*>

Description: Use this command option to stipulate that the users specified can return the reserved licenses of all users for the design point reservation feature. This command option identifies the user or (comma separated) list of users that are allowed to return reserved licenses for all users. If this option is used, the person who started the Licensing Interconnect will be unable to return reserved licenses, unless that person is included in the member list.

Default value/range: Valid usernames. Comma separate list of valid users

Corresponding ansyslmd.ini keyword: RETURN_RESERVE=USER

Use in combination with these command options: N/A

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Hardware platform restrictions: N/A

Example: The following example allows only users legolas and gimli to return reserved licenses.

```
ansysli_server  -reservegroup legolas,gimli
```

-usage_archive_interval

Description: This option is used to specify how frequently usage data is archived *for Ansys Workbench license usage reporting only*. Once the usage data is archived, the data will be cleared from memory. Data is archived to `<osdrive>\Program Files\ANSYS Inc\Shared Files\Licensing\ansysli_data\archive\usage_track.xml` (Windows) or `ansys_inc/shared_files/licensing/ansysli_data/archive/usage_track.xml` (Linux).

Default value/range: 60 minutes; minimum 5 minutes, maximum 720 minutes

Corresponding ansyslmd.ini keyword: ANSYSLI_USAGE_ARCHIVE_INTERVAL

Use in combination with these command options: `-purge_wb_usage`, `-wb_usage`

Hardware platform restrictions: N/A

Example: The following example sets the archive interval to every two hours (120 minutes):

```
ansysli_server -usage_archive_interval 120
```

-user

Description: This command option will restrict shut down of the Licensing Interconnect to only the user who started it.

Default value/range: N/A

Corresponding ansyslmd.ini keyword: RESTRICT_SHUTDOWN=USER

Use in combination with these command options: N/A

Hardware platform restrictions: This option is only available on Linux platforms.

Example: This example starts the Licensing Interconnect and limits the user who can shutdown the Licensing Interconnect to only the user who started the Licensing Interconnect.

```
ansysli_server -user
```

-version [<*type*>]

Description: This command option displays the Licensing Interconnect version information.

Default value/range: When no value is given, all version information is given. This option is the equivalent of `-version long`. Other values for <*type*> are: short, build, ali, or revn, each of which will display a subset of the long output.

Corresponding ansyslmd.ini keyword: N/A

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Use in combination with these command options: N/A

Hardware platform restrictions: N/A

Example: Use this command to obtain version information on the Licensing Interconnect.

```
ansysli_server -version
```

-wb_usage [0/1]

Description: This command option turns license tracking on or off for the license reservation feature for Ansys Workbench. License tracking is on by default. License data usage is archived to `<os-drive>\Program Files\ANSYS Inc\Shared Files\Licensing\ansysli_data\archive\usage_track.xml` (Windows) or `ansys_inc/shared_files/licensing/ansysli_data/archive/usage_track.xml` (Linux).

Default value/range: 0/1; default is 1 (on)

Corresponding ansyslmd.ini keyword: ANSYSLI_WB_USAGE

Use in combination with these command options: `-purge_wb_usage`, `-usage_archive_interval`

Hardware platform restrictions: N/A

Example: This example turns license tracking off for design points in Ansys Workbench.

```
ansysli_server -wb_usage 0
```

8.3. ansyslmd.ini Keywords

Below is a list of keywords that may be used in the `ansyslmd.ini` file. For each keyword, we provide the following information:

- a description
- the default value and range of values
- corresponding command option
- other keywords that need to be combined with each one
- any platform restrictions
- whether the Licensing Interconnect needs to be restarted or reread when changed
- an example

The `ansyslmd.ini` file must be a text file. Entries should begin in column one. Be sure that no spaces are used in any of the entries. Do not use quotes around paths in the `ansyslmd.ini`, even if the path contains spaces. Keywords can appear in any order.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

ANSYSCL_CIPHERS_TO_USE = [OpenSSL Cipher(s)]

Description: This option allows the user to specify the SSL Cipher Suite used on the licensing server to secure communications between client and server. OpenSSL Cipher names are used and can be combined in a comma separated list without spaces in order of preference. To see what ciphers are supported, use the ansysli_server.exe command "-DisplaySupportedCiphers (p. 93)". Setting the Ciphers to only use a preferred cipher, for example ECDHE-RSA-AES128-GCM-SHA256, may prevent older clients that do not support that cipher from connecting. To ensure older clients can connect, AES128-SHA256 and/or AES256-SHA should be enabled.

Default value/range: Output from `-DisplaySupportedCiphers` command

Corresponding command argument: `-AnsysclCiphersToUse`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example sets the SSL Cipher Suite to use the ECDHE-RSA-AES128-GCM-SHA256 cipher, or the AES256-SHA Cipher if the client doesn't support the first.

```
ANSYSCL_CIPHERS_TO_USE=ECDHE-RSA-AES128-GCM-SHA256,AES256-SHA
```

ANSYSLI_CHECKOUT_RETRY[=1]

Description: This keyword allows you to disable and enable the ANSYSLI_CHECKOUT_RETRY feature. The ANSYSLI_CHECKOUT_RETRY feature dictates the number of seconds the license check-out retry attempts will continue before failing. This keyword is set to 1 (allowed) by default.

Default value/range: 1/0; default is 1 (on)

Corresponding command argument: `-checkoutretry`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example turns the ANSYSLI_CHECKOUT_RETRY feature off.

```
ANSYSLI_CHECKOUT_RETRY=0
```

ANSYSLI_DP_RESERVE[=1]

Description: This keyword allows you to turn off the license reservation feature for design points in Ansys Workbench. This keyword is set to 1 (license reservation allowed) by default.

Default value/range: Default=1, Range=0-1

Corresponding command argument: `-dp_reserve`

Use in combination with these ansyslmd.ini keywords: N/A

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example turns off license reservation for design points in Ansys Workbench.

```
ANSYSLI_DP_RESERVE=0
```

ANSYSLI_EXTERNAL_IP[=External IP]

Description: In a scenario where a client connects to a server using an external IP which redirects traffic to the license server machine, and the license server does not know its own external IP address, the license server will read the IP address in the licensing path and try to connect to it to get the cache information. This causes a license server machine to try a connect to itself over the internet to get the licensing cache information. This keyword will prevent this issue from occuring. To use this option, set the following ansyslmd.ini keyword to the external IP address of the license server.

Default value/range: N/A

Corresponding command argument: N/A

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example defines the license server external IP as 100.00.00.101.

```
ANSYSLI_EXTERNAL_IP=100.00.00.101
```

Note:

ANSYSLI_EXTERNAL_IP can be used to define multiple external IP addresses by separating each with a comma.

ANSYSLI_FNP_IP_ENV[=0]

Description: Enabling this keyword internally sets the FlexNet environment variable - FNP_IP_ENV. This keyword allows you to bypass the client-side hostname resolution, thus improving license checkout performance. Use this keyword when you see such messages as "FLEXlm server is not responding. Resource is temporarily unavailable."

Default value/range: Default=0, Range=0-1

Corresponding command argument: `-fnp_ip_env`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example bypasses the client-side hostname resolution.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
ANSYSLI_FNP_IP_ENV=1
```

ANSYSLI_FNP_RESTART_ATTEMPTS[=#]

Description: This option allows you to specify the number of times that the Licensing Interconnect attempts to restart lmgrd/ansyslmd. After attempting to restart for the specified number of times, the Licensing Interconnect discontinues the restart process until the next CHECKPOINT. At the time of the next CHECKPOINT, the Licensing Interconnect again attempts to restart for the specified number of times. This process continues until the issue is resolved. This situation might occur if licenses in the license file have expired.

Note:

The time of each CHECKPOINT is determined by the last start time and the CHECKPOINT_INTERVAL value in ansyslmd.ini (default is 6 hours).

Default value/range: Default=1, Range=1-10

Corresponding command argument: `-fnp_restart_attempts`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example sets the number of restart attempts to 1.

```
ANSYSLI_FNP_RESTART_ATTEMPTS=1
```

ANSYSLI_INCLUDE_FLEXSVR [=server name]

Description: This keyword allows you to define which license servers to use from the licensing path. Any servers that you specify will be used, ignoring all other servers listed in the licensing path.

Default value/range: N/A

Corresponding command argument: `-include_flexsvr`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: This example ignores all supplied servers in the licensing path except server1 and server2.

```
ANSYSLI_INCLUDE_FLEXSVR=server1, server2
```

ANSYSLI_IGNORE_FLEXSVR[=server name]

Description: This keyword allows you to specify which servers will not be included in the FlexNet license path. The reason to remove these servers from your path is that FlexNet can take too long

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

to return when a server in the path does not exist. This can cause the Licensing Interconnect to delay license checkout calls. Candidates are license servers that are off-line but still in the DNS.

Default value/range: N/A

Corresponding command argument: `-ignore_flexsvr`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: This example removes server1 from the license path.

```
ANSYSLI_IGNORE_FLEXSVR=server1
```

Note:

To ensure that all appropriate domain aliases are removed from the licensing path, Ansys, Inc., recommends that you use the base hostname rather than the fully qualified domain name whenever applicable.

ANSYSLI_IP_OVERRIDE

Description: This Licensing Interconnect keyword allows the Licensing Interconnect to revert back to Release 14.5 and prior behavior with regard to client IP addresses. For most sites, the 15.0 and later behavior is appropriate. This option should only be used if you are using stand-alone Licensing Interconnects in addition to the one on your license server and you want the IP address used to be that of the system on which the stand-alone Licensing Interconnect is running, not the client machine. To change the default behavior, this keyword would need to be set on the systems running the stand-alone Licensing Interconnect.

Default value/range: N/A

Corresponding command argument: `-IpOverride`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread

Example: This example turns off the IP address override.

```
ANSYSLI_IP_OVERRIDE
```

ANSYSLI_LICSTARTOPTS[=lmgrd command line option]

Description: This Licensing Interconnect keyword allows you to include any optional lmgrd command line arguments. For more information on the lmgrd command line options, see the **FlexNet Publisher License Administration Guide**.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Default value/range: N/A

Corresponding command argument: N/A

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: This example enables the -local lmgrd command line option.

```
ANSYSLI_ LICSTARTOPTS=-local
```

ANSYSLI_MULTITASK_QUEUING_FLEX[=0]

Description: This keyword only applies when queuing for multiple tasks of the same feature, like HPC. When this keyword is enabled (default/on=1), you are using FNP queuing and you are put in the queue in the order in which the request is made. When this keyword is disabled (off=0), you are not using FNP queuing and are using Ansys Licensing Interconnect queuing only.

Default value/range: Default=1 (on), Range=0-1

Corresponding command argument: `-multitask_queueing_flex`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example uses FlexNet Publisher to queue multi-task checkout requests when you choose to queue requests.

```
ANSYSLI_MULTITASK_QUEUEING_FLEX=1
```

ANSYSLI_NOFLEX[=0]

Description: This keyword allows you to administer FlexNet and the Licensing Interconnect separately by telling the Licensing Interconnect to not start FlexNet. Set this keyword to 1 so the Licensing Interconnect will not start FlexNet. You must stop and start the Licensing Interconnect if changing; a reread is not sufficient.

Default value/range: Default=0, Range=0-1

Corresponding command argument: `-noflex`

Use in combination with these ansyslmd.ini keywords: LICKEYFIL and CACHE_FLEXLIC

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: When using this example to start the Licensing Interconnect, the Licensing Interconnect will not start FlexNet (ANSYSLI_NOFLEX). The Licensing Interconnect will read the license feature

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

information (CACHE_FLEXLIC) from the license files in `/FlexNet/ansys/license/license_files/` (LICKEYFIL).

```
ANSYSLI_NOFLEX=1
CACHE_FLEXLIC=1
LICKEYFIL=/FlexNet/ansys/license/license_files/
```

ANSYSLI_PORT=<*port*>

Description: This `ansyslmd.ini` keyword is needed if you are using a port number for the Licensing Interconnect that is other than the default (2325). Make sure ANSYSLI_SERVERS (on both clients and the license server) and CACHE_SERVER (on license servers) use the same port number. If port numbers change for a Licensing Interconnect, all clients and license servers pointing to that Licensing Interconnect must change their port numbers locally using the **ANSLIC_ADMIN** utility.

Default value/range: Default is 2325. Range is any valid port number.

Corresponding command argument: N/A

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: Use this keyword to use a Licensing Interconnect port number other than the default; this example uses 5678:

```
ANSYSLI_PORT=5678
```

ANSYSLI_PORT_TIMEOUT=[*minutes*]

Description: This keyword controls how long the `ansysli_server` process should wait before abandoning attempts to access the Licensing Interconnect port if the port was in use when the `ansysli_server` process began. This option may be useful if your system takes a long time to free its ports.

Default value/range: 15 minutes. Range is 10–60 minutes.

Corresponding command argument: `-port_timeout`

Use in combination with these ansyslmd.ini keywords: ANSYSLI_RESTART_PORT_TIMEOUT

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: Use this keyword to tell the `ansysli_server` to wait 25 minutes before it stops checking for the port availability and exits:

```
ANSYSLI_PORT_TIMEOUT=25
```


Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

ANSYSLI_PRIVATE=[1/0]

Description: This keyword allows you to disable and enable the ANSYSLI_PRIVATE feature. The ANSYSLI_PRIVATE feature dictates whether the license server should run in private mode where requests for license usage from client systems do not return user or host information. Setting this keyword to 1 (on) blocks user and hostname information while setting it to 0 (off) allows this information to be included. This keyword is set to 0 (off) by default.

Note: This keyword only modifies license or queue status queries from client systems, requests made from the server system are not affected.

Default value/range: 1/0; default is 0 (off)

Corresponding command argument: `-private`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: This example sets the license server to run in private mode:

```
ANSYSLI_PRIVATE=1
```

ANSYSLI_PURGE_WB_USAGE=[<*number of days*>]

Description: Use this keyword to purge obsolete usage data from the license tracking archive usage file (`usage_track.xml`; see the file description in Files created by the Licensing Interconnect (p. 26)). If you do not purge this file periodically, it could become very large. By default, this file is purged every 14 days.

Default value/range: Range is positive integers representing days; default is 14 (days).

Corresponding command argument: `-purge_wb_usage`

Use in combination with these ansyslmd.ini keywords: ANSYSLI_WB_USAGE, ANSYSLI_USAGE_ARCHIVE_INTERVAL

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example purges the `usage_track.xml` file every 31 days.

```
ANSYSLI_PURGE_WB_USAGE=31
```

ANSYSLI_RESERVE=[*group*]

Description: Use this keyword to stipulate that a member of the group specified can return reserved licenses for the design point reservation feature. This keyword identifies the group or (comma separated) list of groups that are permitted to return reserved licenses for all users. If this keyword is used, the user who started the Licensing Interconnect will be unable to return reserved licenses, unless that user is a member of the group specified.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Corresponding command argument: `-reservegroup <group list>`

Use in combination with these ansyslmd.ini keywords:N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: The following example allows only those users who are a member of the group lmadmin to return reserved licenses.

```
ANSYSLI_RESERVE=lmadmin
```

ANSYSLI_RESERVE=[*user*]

Description: Use this keyword to stipulate that the users specified can return the reserved licenses of all users for the design point reservation feature. This keyword identifies the user or (comma separated) list of users that are allowed to return reserved licenses for all users. If this keyword is used, the user who started the Licensing Interconnect will be unable to return reserved licenses, unless that user is included in the member list.

Default value/range: Valid usernames. Comma separate list of valid users

Corresponding command argument: `-reserveuser <userlist>`

Use in combination with these ansyslmd.ini keywords: NA

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: The following example allows only users legolas and gimli to return reserved licenses.

```
ANSYSLI_RESERVE=legolas,gimli
```

ANSYSLI_RESTART_PORT_TIMEOUT=[*minutes*]

Description: This `ansyslmd.ini` keyword controls how long the `ansysli_monitor` should wait for the Licensing Interconnect port to free before restarting the `ansysli_server`. This option may be useful if your system takes a long time to free its ports.

Default value/range: 15 minutes. Range is 10–60 minutes.

Corresponding command argument: `-restart_port_timeout`

Use in combination with these ansyslmd.ini keywords: ANSYSLI_PORT_TIMEOUT

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: Use this keyword to tell the `ansysli_monitor` to wait 25 minutes for the port to free before restarting the `ansysli_server`:

```
ANSYSLI_RESTART_PORT_TIMEOUT=25
```


Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

ANSYSLI_SERVERS=<*port@host*>

Description: This keyword is needed on client systems; it is used by the client to locate the Licensing Interconnect. It is not required to be in the server `ansyslmd.ini` file, but there is no harm in it being in there. Single, independent servers should be listed one per line; triads should be listed one per line. When there are multiple servers, they should be listed in order of preference.

Default value/range: The default port number is 2325. When joining multiple servers on one line, delimit them with colons (:) on Linux and semicolons (;) on Windows.

Corresponding command argument: N/A

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: N/A

Example: This example identifies the Licensing Interconnect port number and hostname of the license server as 2325 and *mango* respectively.

```
ANSYSLI_SERVERS=2325@mango
```

ANSYSLI_TLS_VERSION[=1.2]

Description: This keyword allows you to disable previous versions of TLS and enable TLS version 1.2 for communication.

Default value/range: 1.2

Corresponding command argument: `-ali_tls_version`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example enables TLS version 1.2.

```
ANSYSLI_TLS_VERSION=1.2
```

ANSYSLI_USAGE_ARCHIVE_INTERVAL=<*number*>

Description: This keyword is used to specify how frequently usage data is archived for *Ansys Workbench license usage reporting only*. Once the usage data is archived, the data will be cleared from memory. Data is archived to `<osdrive>\Program Files\ANSYS Inc\Shared Files\Licensing\ansysli_data\archive\usage_track.xml` (Windows) or `ansys_inc/shared_files/licensing/ansysli_data/archive/usage_track.xml` (Linux).

Default value/range: 60 minutes; minimum 5 minutes, maximum 720 minutes

Corresponding command argument: `-usage_archive_interval`

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Use in combination with these ansyslmd.ini keywords: ANSYSLI_WB_USAGE, ANSYSLI_PURGE_WB_USAGE

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: The following example sets the archive interval to every two hours (120 minutes):

```
ANSYSLI_USAGE_ARCHIVE_INTERVAL=120
```

ANSYSLI_WB_USAGE[=0]

Description: This keyword turns license tracking on or off for the license reservation feature for Ansys Workbench. License tracking is on by default. License data usage is archived to `\Licensing\ansysli_data\archive\usage_track.xml` (Windows) or `/licensing/ansysli_data/archive/usage_track.xml` (Linux).

Default value/range: 0/1; default is 1 (on)

Corresponding command argument: `-wb_usage`

Use in combination with these ansyslmd.ini keywords: ANSYSLI_USAGE_ARCHIVE_INTERVAL, ANSYSLI_PURGE_WB_USAGE

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: This example turns license tracking off for design points in Ansys Workbench.

```
ANSYSLI_WB_USAGE=0
```

CACHE_FLEXLIC[=0]

Description: Indicates to the Licensing Interconnect to cache the FlexNet license file. This option is used when administering FlexNet and the Licensing Interconnect separately so that the Licensing Interconnect is aware of the available license features. The default is to not cache the FlexNet license file.

Default value/range: Default=0, Range=0-1

Corresponding command argument: `-cacheflexlic`

Use in combination with these ansyslmd.ini keywords: LICKEYFIL and ANSYSLI_NOFLEX

Hardware platform restrictions: N/A

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example: When using this example to start the Licensing Interconnect, the Licensing Interconnect will not start FlexNet (ANSYSLI_NOFLEX). The Licensing Interconnect will read the license feature information (CACHE_FLEXLIC) from the license files in /FlexNet/ansys/license/license_files/(LICKEYFIL).

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

```
ANSYSLI_NOFLEX=1
CACHE_FLEXLIC=1
LICKEYFIL=/FlexNet/ansys/license/license_files/
```

CACHE_SERVER=<port>@<host>

Description: When you have multiple single license servers (not a triad), use this keyword to specify license servers other than the localhost for which to cache their FlexNet license file at startup. This will make the Licensing Interconnect aware of what license features are available on the other license servers. Use this option to speed up license checkouts, so that the caching is done upon startup of the Licensing Interconnect, rather than on the fly, when a client connects with the other license server in its license path.

Default value/range: The port number is the Licensing Interconnect port; the default is 2325. The host is the hostname of another license server. The *port@host* can also be a list, delimited by colons (:) on Linux and semicolons (;) on Windows, but we recommend separate lines for multiple single servers.

Corresponding command argument: `-cache_srv <port@host>`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: When this keyword is in place, upon startup, the Licensing Interconnect will cache the license file information from a different license server running on port 2325 on a machine with the hostname *kiwi*.

```
CACHE_SERVER=2325@kiwi
```

DEBUG_LOG_FILE=<*path_file_name*>

Description: This keyword specifies the directory path and name of the output log file for the Licensing Interconnect; debugging and usage information is included in the file.

Default value/range: The default name and location for the Licensing Interconnect log file is one directory level up from the `ansysli_server` executable and is named `ansysli_server.log`. If a log file name and path is not specified and if the **ANSYSLIC_DIR** environment variable is set, the log file will reside in that directory specified in the **ANSYSLIC_DIR** environment variable. Override these defaults with this option by specifying the path and file name.

Corresponding command argument: `-log <file>`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This keyword specifies the directory path and file name of the Licensing Interconnect log file as `/ansys_inc/shared_files/licensing/ansysli_server.log`.

```
DEBUG_LOG_FILE=/ansys_inc/shared_files/licensing/ansysli_server.log
```

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

DEBUG_LOG_MAX_NUMBER=<*number*>

Description: Use this option to specify the number of back copies of the Licensing Interconnect log file, `anysysli_server.log` by default, to keep.

Default value/range: The range is positive integers, with the default value being 10 and minimum value being 1.

Corresponding command argument: N/A

Use in combination with these ansyslmd.ini keywords: DEBUG_LOG_MAX_SIZE

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: These keywords indicate that the Licensing Interconnect log file named `/ansys_inc/shared_files/licensing/ansysli_server.log` should maintain three back copies.

```
DEBUG_LOG_MAX_NUMBER=3
DEBUG_LOG_FILE=/ansys_inc/shared_files/licensing/ansysli_server.log
```

DEBUG_LOG_MAX_SIZE=<size>

Description: Use this keyword to set the maximum size (in MB) to which your Licensing Interconnect log file, `ansysli_server.log` by default, can grow.

Default value/range: The range is positive integers, with 10 MB being the default and 1 MB being the minimum.

Corresponding command argument: N/A

Use in combination with these ansyslmd.ini keywords: DEBUG_LOG_MAX_NUMBER

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: These keywords indicate that the Licensing Interconnect log file named `/ansys_inc/shared_files/licensing/ansysli_server.log` should only be allowed to grow to 500 MB.

```
DEBUG_LOG_MAX_SIZE=500
DEBUG_LOG_FILE=/ansys_inc/shared_files/licensing/ansysli_server.log
```

DEBUG_LOG_TYPE=<value>

Description: This keyword indicates the level of verbosity of the Licensing Interconnect log file information (`ansysli_server.log`). If this keyword is not specified, the verbosity level is set to STANDARD. The verbosity level should be changed only if you are actively working with the Ansys, Inc. Technical Support staff to solve a specific problem.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

STANDARD level logs `ansysli_server` STARTUP options, license cache information (such as features/counts and FlexNet options file content), CHECKOUT, CHECKIN, RESERVE, and RETURN_RESERVE. It also logs CLIENT_SHUTDOWN for all but `ansysli_monitor`.

CONNECTIONS level logs everything that STANDARD logs, and CLIENT_ACCEPT and CLIENT_SHUTDOWN for the monitor.

VERBOSE level logs STANDARD plus CONNECTIONS, and ADD (product definitions and shared capabilities) and REMOVE (shared capabilities).

Default value/range: This keyword can be set to STANDARD, CONNECTIONS, or VERBOSE.

Corresponding command argument: `-logtype`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This keyword indicates that the verbosity level of the log file should be set to VERBOSE.

```
DEBUG_LOG_TYPE=verbose
```

LICKEYFIL=<*path to FlexNet license file*>

Description: Use this keyword to pass the file name or path of the FlexNet license file to the Licensing Interconnect, which is needed when administering FlexNet and the Licensing Interconnect separately. If you are administering FlexNet and the Licensing Interconnect together, allowing the Licensing Interconnect to start FlexNet, the value in this keyword is used to start FlexNet. When specifying a directory path (rather than a file), be sure that all license files within that directory have a .lic file extension to be recognized by the license manager.

Default value/range: Valid directory path or file name of the FlexNet license file. The default is the directory path - /ansys_inc/shared_files/licensing/license_files.

Corresponding command argument: `-c <license_file_path>`

Use in combination with these ansyslmd.ini keywords: CACHE_FLEXLIC and ANSYSLI_NOFLEX

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example identifies the path to the license files as `/FlexNet/ansys/license/license_files/`.

```
LICKEYFIL=/FlexNet/ansys/license/license_files/ansyslmd.lic
```

MAX_QUEUED_REQUESTS=<*number*>

Description: The Ansys License Manager supports FlexNet's licensing queuing in many Ansys, Inc. Products. By default, queuing is off. Use this keyword to specify the maximum number of license checkout requests that can be queued at any one time.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Default value/range: 1 - 10000 (default)

Corresponding command argument: `-max_queued_requests`

Use in combination with these ansyslmd.ini keywords: QUEUING_INTERVAL

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example specifies that a maximum of 20 requests can be queued:

```
MAX_QUEUED_REQUESTS=20
```

NOCACHE_SERVER=<port>@<host>

Description: When you have multiple single license servers (not a triad), use this option to specify which license servers, other than the localhost, should not cache their FlexNet licenses at startup.

Default value/range: The port number is the Licensing Interconnect port; the default is 2325. The host is the hostname of another license server. The *`port@host`* can also be a list, delimited by colons (:) on Linux and semicolons (;) on Windows.

Corresponding command argument: `-nocache_srv <port@host>`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example indicates that port1@host1 and port2@host2 should not cache their FlexNet licenses at startup (on a Windows system).

```
ANSYSLI_ NOCACHE_SERVER=port1@host1;port2@host2
```

QUEUING_INTERVAL=<*number in seconds*>

Description: The Ansys License Manager supports FlexNet's licensing queuing in many Ansys, Inc. Products. By default, queuing is off. Use this keyword to specify the frequency by which checkout attempts are performed on queued license checkout requests.

Default value/range: 15 - 600 seconds; default is 120 seconds

Corresponding command argument: `-queuing_interval`

Use in combination with these ansyslmd.ini keywords: MAX_QUEUED_REQUESTS

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: This example indicates that checkout attempts for queued requests are performed every 5 minutes (300 seconds):

```
QUEUING_INTERVAL=300
```


Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

RESTRICT_SHUTDOWN=GROUP:<*group name*> or RESTRICT_SHUTDOWN=USER

Description: Use this keyword to specify that either a member of the group specified can shutdown the Licensing Interconnect or that the only the user who started the Licensing Interconnect can shut it down. If the group restriction is in place, when shutting down the Licensing Interconnect, the group specified must be your primary group. If specifying group, only one group can be specified. GROUP and USER cannot be used together; you can only specify one or the other.

Default value/range: Valid values are: USER or GROUP. The group name specified must be a valid Linux group name.

Corresponding command argument: `-group <group>` and `-user`

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: This option is only available on Linux platforms.

Action required to make keyword active: Stop and restart the Licensing Interconnect

Example 1: When the Licensing Interconnect is started with the keyword in this example, only a user whose primary group is *lmadmin* can shut down the Licensing Interconnect.

```
RESTRICT_SHUTDOWN=GROUP:lmadmin
```

Example 2: When the Licensing Interconnect is started with the keyword in this example, only the user who started the Licensing Interconnect can shut it down.

```
RESTRICT_SHUTDOWN=USER
```

RETURN_RESERVE=GROUP: <group names separated by ",">

Description: Use this keyword to stipulate that a member of the group specified can return reserved licenses for the design point reservation feature. This keyword identifies the group or (comma separated) list of groups that are permitted to return reserved licenses for all users. If this option is used, the user who started the Licensing Interconnect will be unable to return reserved licenses, unless that user is a member of the group specified.

Default value/range: The system group name specified must be valid. When returning reserved licenses, the group must be your active group.

Corresponding command argument: -reservegroup <*group list*>

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: This option is only available on Linux platforms.

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: The following example allows only those users who are a member of the group lmadmin to return reserved licenses.

```
RETURN_RESERVE=GROUP:lmadmin
```

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

RETURN_RESERVE=USER: <users in list separated by ",">

Description: Use this keyword to stipulate that the users specified can return the reserved licenses of all users for the design point reservation feature. This keyword identifies the user or (comma separated) list of users that are allowed to return reserved licenses for all users. If this option is used, the user who started the Licensing Interconnect will be unable to return reserved licenses, unless that user is included in the member list.

Default value/range: Valid usernames

Corresponding command argument: -reserveuser *<user list>*

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: Reread or stop and restart the Licensing Interconnect

Example: The following example allows only users legolas and gimli to return reserved licenses.

```
RETURN_RESERVE=USER:legolas, gimli
```

SERVER=<*port@host*>

Description: This keyword is needed on client systems; it is used by the client to locate FlexNet. It is not required to be in the server `ansyslmd.ini` file, but there is no harm in it being in there. Single servers should be listed only one per line; triads should be listed on the same line. When there are multiple servers, they should be listed in order of preference.

Default value/range: The default port number is 1055. When joining multiple servers on one line, delimit them with colons (:) on Linux and semicolons (;) on Windows.

Corresponding command argument: N/A

Use in combination with these ansyslmd.ini keywords: N/A

Hardware platform restrictions: N/A

Action required to make keyword active: N/A

Example: This example identifies the FlexNet port number and hostname of the license server as 1055 and *cherry* respectively.

```
SERVER=1055@cherry
```

8.4. Glossary

Capability

Ansys, Inc. has assigned identifiers to each of the specific areas of functionality in the product software. We refer to these identifiers as capabilities, which you may see in Ansys, Inc. licensing displays and logs. Each capability can be satisfied by at least one license feature; often, multiple license features can satisfy a particular capability. Based on the license features available, your individual

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

preferences, and the capability requested, the Licensing Interconnect determines the best match. The license feature that best matches is checked out.

Design Points

A design point is a set of input parameter values and corresponding output parameter values associated with an individual parameterized project definition. Design points can be created within the Parameters and Design Points workspace and allow users to perform what-if studies. Users can reserve licenses for design point studies so that the licenses needed to complete the study will be available when needed. As the license administrator, you can turn the license reserve feature on or off for your company.

Licensing Interconnect

The Licensing Interconnect is the intermediary process that communicates and manages license requests between Ansys applications and FlexNet. The actual Licensing Interconnect executable is `ansysli_server` on Linux and `ansysli_server.exe` on Windows. The Licensing Interconnect is one component of the Ansys License Manager; the other component is FlexNet.

Shared/Separate Mode

Ansys, Inc. offers two different modes of license consumption when running Ansys, Inc. Products from within the Workbench environment. The preferred mode is set per user, per machine via the preferences dialog in the **ANSLIC_ADMIN** utility or within the Workbench framework. The default mode is shared.

1. Shared mode: when possible, multiple applications within the same session will share a single license (default).

2. Separate mode: each application instance will consume a separate license.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information
of ANSYS, Inc. and its subsidiaries and affiliates.

Chapter 9: Troubleshooting

This chapter lists problems and error messages that you may encounter while setting up licensing. After each situation description or error message is the user action required to correct the problem.

For more troubleshooting information, see the *FlexNet License Administration Guide* (accessible from the **Ansys License Management Center**).

9.1. Gathering Diagnostic Information

There are situations which require licensing-related information to be gathered for diagnostic and troubleshooting purposes. At times it may be necessary to provide this information to technical support.

The client-related diagnostic information can be gathered by using the Ansys Licensing Settings Utility. For more information, see, Gathering Diagnostics in the **Ansys Licensing Settings Utility** section of the **Ansys Licensing Guide**.

The server-related diagnostic information can be gathered by using **Ansys License Management Center** or by using the standalone `gatherdiagnostics` script.

9.2. Problem Situations

This section describes problems you may encounter when setting up licensing or running an Ansys product, as well as actions you can take to correct the problems.

9.2.1. License Manager Will Not Start

If the license manager will not start, perform the tests below in the order they are listed:

1. Check the `license.log` file in the licensing directory on the license server for errors. See the remainder of this chapter for a list of possible errors and their resolutions.
2. Check the `ansysli_server.log` file in the licensing directory on the license server for errors.
3. Verify that TCP/IP is installed and configured correctly. Verify that the IP address is static. See Configuring TCP/IP (p. 39) for information about configuring TCP/IP.
4. Verify that the hostid has not changed. If the hostid has changed, you must obtain a new license.

Linux x64 Systems:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Linux x64 systems running the Ansys License Manager require the Linux Standard Base (LSB) package. If this package is missing, you will see one of the following errors when the license manager attempts to run:

```
/lmgrd -h
./lmgrd: No such file or directory
```

In this case, try installing the LSB package from the Linux installation media.

Three-Server Environment

In a three-server environment, you could see the following message when you start the first server:

*****Attempting to start the license manager...**

Start the License Manager status:

The license manager failed to start.

This message results when a quorum of servers (2 of the 3) are not yet started. Start the other servers, or verify that they are already started. When at least two of the three servers are started, you will see the **Ansys License Management Center** of this server change to reflect that it is now running. Do NOT attempt to stop the license manager by clicking the **Stop** button in the **Ansys License Management Center**.

If you verify that at least two servers are started and the **Ansys License Management Center** does not update to running in a reasonable time, follow the three steps noted in License Manager Will Not Start (p. 123).

Caution:

When you see this message, do NOT click the **Start** button again.

9.2.1.1. License Manager Will Not Start After Adding a License File

In cases where **License Management Center** is used to add a UTF-8 formatted license file on a Linux or SuSE system, license manager will not start if the LANG settings are not configured for UTF-8. In this case, you will need modify the LANG settings to accept UTF-8, delete and re-add the license file by following the steps below.

1. Verify that the license file is UTF-8 formatted by opening the file in a text editor. If the file starts with three question marks (???) then the file is UTF-8 formatted.

2. If the license file is UTF-8 formatted, modify the LANG settings to accept UTF-8.

   Red Hat

   /etc/sysconfig/i18n

   LANG="en_US.UTF-8"

   LC_COLLATE="C"

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

SuSE

/etc/sysconfig/language

RC_LANG="en_US.UTF-8"

RC_LC_COLLATE="C"

3. Exit out of your current terminal.
4. Restart Tomcat by performing the following steps:
   a. Stop the Tomcat server process by executing the **stop_lmcenter** script.
   b. Start the Tomcat server process with the new port number by executing the **start_lmcenter** script.

      These scripts can be found in the following directory:

      ```
      /ansys_inc/shared_files/licensing
      ```

      Note:

      Starting the Tomcat server process with the **start_lmcenter** script will also open Ansys License Management Center.

5. From the license_files directory, delete the UTF-8 formatted license file that was just added.
6. Open **License Management Center** and re-add the UTF-8 formatted license file.

9.2.2. License Manager Will Not Stop

When you attempt to stop the license manager, it may not stop immediately. You should use the **Stop the Ansys, Inc. License Manager** option of the Ansys License Management Center to stop the license manager. For more information, see Stopping the Ansys License Manager (p. 50). We do not recommend stopping the license manager manually; however, if you choose to do so, you must stop the components in the following order:

1. `ansysli_monitor`
2. Licensing Interconnect (`ansysli_server`)
3. FlexNet components (`lmgrd` first, followed by `ansyslmd`)

9.2.3. Unable to stop the license server with the default lmutil.exe

In cases where you have started the lmgrd portion of the ANSYS license manager with the “-local” command, there can be an issue when stopping the server using the following command:

lmutil lmdown -c "C:\Program Files\ANSYS Inc\Shared Files\Licensing\license_files\ansyslmd.lic" -q

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Resulting in the following error message:

"Shutdown failed: lmdown/lmreread must be run on the license server machine. (-119,214)"

As a fix for this we have provided an updated version of the lmutil executable which can be found in:

<Installation Drive>:\Program Files\ANSYS Inc\Shared Files\bin\winx64\drivers\flexnet\11_17_2_0.zip

Extract this zip file and replace the current version of lmutil with this updated version and then run the “lmutil lmdown” command.

9.2.4. License Manager Will Not Stop in a Three-Server Environment

When you attempt to stop the license manager in a three-server environment, the license manager does not stop immediately. You will see a message stating that the currently-installed license file is a three-server license file. With three-server license files, the license manager could take 60 seconds or longer to successfully stop. Wait at least 60 seconds. When the license manager has successfully stopped, the Ansys License Management Center will show that it is stopped. For more information, see Setting Up Redundant (Triad) Servers (p. 45).

9.2.5. License Manager Installation's Licensing Configuration Step to Update Site Preferences (Product Order) Fails

Note:

This step is only required if the license server's site preferences have been customized via the ANSLIC_ADMIN Utility's *Set Site Preferences* > *Specify Product Order* option. However, it is safe to follow the procedure below even if the site preferences have not been customized. Therefore, if you don't know if the server has customized site preferences, you should follow this procedure.

If the Ansys License Manager's licensing configuration log file (install_licconfig.log) indicates that the step to automatically update any existing site preferences (product order) failed, the following procedure can be used to manually update your modified product order file to include any product changes that have occurred in the most recently installed release of the Ansys License Manager.

1. Examine the section of the licensing configuration log that contains the error message to see if any details were provided describing why the automatic processing failed. If so, this issue will need to be resolved before continuing.

2. Follow the section below for your operating system. **<install_dir>** is the directory in which the Ansys License Manager is installed.

   Windows:

   Open an administrator command prompt window and issue the following command:

   ```
   "<install_dir>\Shared Files\Licensing\winx64\ansysli_util.exe" -updatesiteprefs
   ```

   Linux:

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Open a command line window and issue the following command:

```
"<install_dir>/shared_files/licensing/linx64/ansysli_util" -updatesiteprefs
```

3. A message should be displayed after the ansysli_util command is run. (If not, there is a problem.) Examine the message to determine if the command completed successfully. If not, resolve any issues and run the command again. If you are unable to resolve the issues, contact Ansys Technical Support.

4. Once the command completes successfully, examine the message to see if site preferences were updated or removed. If so, either reread the license manager settings or restart the license manager so the changes are recognized by the Ansys License Manager.

9.2.6. The Application Does Not Show the Correct License(s)

If you do not see the correct licenses in your application, in Client **ANSLIC_ADMIN**'s **Set License Preferences for *User*** option, or in the Mechanical APDL Product Launcher, check the following:

1. If you received a new license but your application does not recognize it, you may need to reset your preferences. If you had previously set your license preferences, select **Set License Preferences for User** from the **ANSLIC_ADMIN** utility and add the new license to your list in the desired order.

2. If you had previously defined your preferences and have since installed the license manager to a different location, you may need to reset your preferences.

3. If you do not see the correct licenses in the Client **ANSLIC_ADMIN**'s **Set License Preferences for *User*** option or in the Mechanical APDL Product Launcher, and you updated your product order at a previous release, you may need to update your product order again. Use the **Specify Product Order** option under **Server ANSLIC_ADMIN**'s **Set Site Preferences**.

On the license server machine:

1. Select the **Reset to Default** button to see the current release's default product order.

2. Reorder the products as you want, including any new products.

9.2.7. FlexNet Log File Shows Unexpected Messages When the License Manager Is Stopped

On Windows systems, you may see unexpected error messages in the FlexNet licensing log file when you shut down the license manager. Messages similar to the following could appear:

13:47:49 (lmgrd) Shutting down ansyslmd pid=1860 because of signal 15

13:47:49 (lmgrd) Can't connect to the license server system. Shutdown ansyslmd failed.

13:47:49 ((lmgrd)) 13:47:49 Loop info:(lmgrd) Cannot read data from license server system. (-16,10009:10054 "WinSock: Connection reset by peer")

MT:0 VD_HB:5913:47:49 (lmgrd) reset:0Can't shutdown the license server system. Shutdown ansyslmd failed. clients:013:47:49 (lmgrd) fd's:0EXITING DUE TO SIGNAL 15

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

13:47:49 (lmgrd) ansyslmd exited with status 58 ()

13:47:49 (lmgrd) Since this is an unknown status, license server

13:47:49 (lmgrd) manager (lmgrd) will attempt to re-start the vendor daemon.

13:47:49 (lmgrd) EXITING DUE TO SIGNAL 1

13:47:49 (lmgrd) Can't remove statfile C:\Documents and Settings\All Users\Application Data\Macrovision\FlexNet\lmgrd.620: errno No such file or directory

These or similar messages in the FlexNet log file can be safely ignored in most cases. You can verify that the service is shown as stopped, and that the `ansysli_server`, `ansysli_monitor`, `lmgrd`, and `ansyslmd` processes are stopped via Task Manager.

9.2.8. Unable to Check Out Licenses

If the license manager appears to start but you cannot check out any licenses, perform the tests below in the order they are listed:

1. Review the Licensing Interconnect debug log file for more information. Use the **View Licensing Interconnect Log** option of **Ansys License Management Center** to view the file.
2. On the license server machine(s), review the FlexNet `license.log` file for error messages. Use the **View FlexNet Debug Log** option of **Ansys License Management Center** to view the file.
3. If neither log file exists or has a zero length, verify that you have write permissions on the files and on the directory containing the files (the licensing directory by default).
4. If you have borrowed licenses, verify that you are not attempting to check out a non-borrowed license. Once you have borrowed one or more licenses, you will not be able to use non-borrowed licenses until you have returned all borrowed licenses.

You could also encounter problems with obtaining a license if the Licensing Interconnect is still attempting to restart the FlexNet server. Check the FlexNet `license.log` file. If you see the following lines multiple times, try rebooting your license server machine:

```
(lmgrd) ansyslmd exited with status 28 (Communications error)
(lmgrd) Since this is an unknown status, license server
(lmgrd) manager (lmgrd) will attempt to re-start the vendor daemon.
(lmgrd) REStarted ansyslmd (pid 103864)
```

9.2.9. Jobs Abort When a License Manager Goes Down in Three-Server Environment

If you are running in a three-server environment and Ansys program jobs abort when one of the license managers goes down, perform the tests below in the order they are listed:

Note:

1. If this problem persists after you perform the steps below, you may want to consider switching to a single-server environment.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

2. When using a three-server environment, we strongly recommend that all three servers be on the same subnet. If this is not the case, you should consider using three machines which are in the same physical location and are on the same subnet.

---

1. Verify that two of the three license managers are still running. Use the **Ansys License Management Center Displaying the FlexNet License Status** option. If the license manager is not already running on all servers, start it on all of them.
2. Check the `ansyslmd.ini` file in the licensing directory to make sure the server specification is correct.
3. Check to see whether the **ANSYSLI_SERVERS** or **ANSYSLMD_LICENSE_FILE** environment variable is set. If it is, verify that the settings are correct.
4. Verify that the same license file exists on all three license servers in the licensing directory. The hostnames of all three servers must appear in these files and in the same order. If the license files are not the same on all three servers, make corrections as necessary and restart the license manager.
5. Verify that the date and time on all license servers are consistent and correct. Make corrections as necessary and restart the license manager.
6. Verify that the hostid has not changed on any of the license servers. If any hostid has changed, you need to obtain and install new licenses on all license servers.
7. Verify that the license manager and utilities are installed locally on each license server. If not, run the installation and choose to install the license server only. See the installation manual for your product and platform for more information.
8. Verify that the `ansyslmd.opt` files match exactly on all three license servers.
9. Check the FlexNet `license.log` and the licensing interconnect `ansysli_server.log` files for error messages. See the remainder of this chapter for a list of possible errors and their resolutions.

9.2.10. Licensing Log File Not Created

On Windows, if the license manager starts and licenses can be taken from the license server, but the FlexNet licensing log file and the `ansysli_server.log` file are not written, check the Administrator account. Verify that the Administrator (as well as the individual user) has write privileges to the directory where the log files are to be written.

9.2.11. Queuing Does Not Work

If queuing does not work, refer to the following list of possible causes and corrections:

- The license manager is down. In this case, use **Ansys License Management Center** to start the license manager.
- The hostname is mistyped in the `ansyslmd.ini` file or the **ANSYSLMD_LICENSE_FILE** environment variable. If so, correct the name and retry.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- You are not licensed for the requested product. In this case, request a product for which you are licensed.
- All licenses for the requested feature are reserved in the license options file. If so, have the license administrator correct the license options file.
- The user is excluded via the license options file from using the licenses for the feature(s) that are installed on this machine.
- You are running an application that does not support queuing.

9.2.12. No Licensing Interconnect or FlexNet Path Available from Display the License Status Option

If you select the **Display the License Status** option from the **ANSLIC_ADMIN** utility and see a message stating that the Licensing Interconnect or FlexNet path is empty, try the following:

1. Use the **Specify the License Server Machine** option of the **ANSLIC_ADMIN** utility to specify the missing Licensing Interconnect or FlexNet port number. (On Windows, use the Client **ANSLIC_ADMIN** utility.) If the machine is already specified but the error message states that no FlexNet path has been specified, the FlexNet port number may be missing from the license server specification shown in the Specify the License Server window. Add the machine's FlexNet port number using the **Specify the License Server Machine** option to add this machine to your FlexNet license path.

   Note:

   This particular machine may have been configured to run the Ansys Licensing Interconnect without starting FlexNet. Verify that FlexNet is running on this machine before changing this setting.

2. Check the **ANS_FLEXLM_DISABLE_DEFLICPATH** environment variable setting. If this environment variable is set, the Ansys License Manager will not use the license server machine specifications in the `ansyslmd.ini` file. In this case, only the **ANSYSLMD_LICENSE_FILE** and **ANSYSLI_SERVERS** environment variable settings will be used.

9.2.13. Unable to Retrieve License Preferences in ANSLIC_ADMIN

In cases where you are unable to retrieve license preferences through the ANSLIC_ADMIN utility, you may be able to resolve the problem by trying the following:

1. Verify that you have correctly specified the license server machine. You can check this by opening the Client **ANSLIC_ADMIN** utility and choosing **Specify the License Server Machine**. Verify that:
   a. A license server machine is specified.
   b. You have access to the specified machine(s).
   c. The license server machine is running and the license server has been started correctly.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

2. Verify that license file has been cached if the FlexNet and Ansys Licensing Interconnect components were started separately. See Advanced Licensing Configuration Options (p. 41) for more information on running the licensing components independently.

9.2.14. Cannot Enter Data in Text Fields

On some Linux systems (for example Red Hat 7 systems), if you cannot enter data in text fields when using the **ANSLIC_ADMIN** utility, you may be encountering a Tcl incompatibility. To correct the problem, unset the following environment variables before running the **ANSLIC_ADMIN** utility:

QT_IM_MODULE

XMODIFIERS

GTK_IM_MODULE

You should reset these environment variables when you are finished using **ANSLIC_ADMIN**. Do not permanently unset these environment variables as doing so could affect other applications.

Note:

Other Ansys utilities that have interfaces written in the Tcl scripting language could encounter the same issue. (for example, the Mechanical APDL Product Launcher.)

9.2.15. See a "File Not Found" Message When Running a Licensing Utility

Linux x64 System:

Linux x64 systems running the Ansys License Manager require the Linux Standard Base (LSB) package. If this package is missing, you will see a message similar to one of the following errors when the license manager attempts to run, or when you attempt to run a licensing utility, such as **ANSLIC_ADMIN**, getFLEXid, or lmutil.

```
/lmgrd -h
./lmgrd: No such file or directory
```

If you have confirmed that the file listed does exist, try installing the LSB package from the Linux installation media.

9.2.16. Cannot See Attached Dongle

There are a number of reasons why you may not be able to see an attached dongle. Review the list below to troubleshoot the issue.

- Occasionally, dongles may work loose. Verify that the dongle is fully inserted in the appropriate USB port.
- The required dongle driver must be manually installed on the machine. To determine which version of the driver is required for this release of the Ansys License Manager and for information on installing the driver, see Using Dongles with the Ansys License Manager (p. 69).

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- Additional dongle-specific troubleshooting information can be found in *Dongle Troubleshooting* at the end of the Using Dongles with the Ansys License Manager (p. 69) section of this guide.

9.2.17. Unable to Run a Bookmarked Version Ansys License Management Center

To run the **Ansys License Management Center**, Tomcat must be running. Start Tomcat prior to starting the **Ansys License Management Center** from a bookmark.

9.2.18. Unable to View PDF Files in Ansys License Management Center

To view PDF files in the **Ansys License Management Center** the appropriate PDF plugin for your browser must be enabled.

For Internet Explorer and Firefox: Enable the Adobe PDF plugin.

For Chrome: Enable the Chrome PDF Viewer plugin.

9.2.19. Unable to Search PDF Files in Ansys License Management Center

To perform searches of PDF files displayed in the **Ansys License Management Center** the appropriate PDF plugin for your browser must be enabled.

For Internet Explorer and Firefox: Enable the Adobe PDF plugin.

For Chrome: Enable the Chrome PDF Viewer plugin.

9.2.20. Starting Ansys License Management Center Causes Error Messages (Linux Only)

Installing the Ansys License Manager as root and subsequently attempting to run **Ansys License Management Center** as a non-root user may display one of the following permission issues:

- **Ansys License Management Center hangs up, displaying the message, "Determining license manager status..."**
- **ERROR: In attempting to write to /ansys_inc/shared_files/licensing/tools/tomcat/logs/catalina.out, Tomcat will not be able to start successfully. Please check the file permissions.**

  /bin/sh: /var/tmp/cmd.out: Permission denied
- **ERROR: Attempt to delete file "/ansys_inc/shared_files/licensing/tools/tomcat/bin/setenv.sh.old" failed.**
- **ERROR: Attempt to rename file " /ansys_inc/shared_files/licensing/tools/tomcat/bin/setenv.sh" to " /ansys_inc/shared_files/licensing/tools/tomcat/bin/setenv.sh.old" failed.**
- **ERROR: The new value of export ANSYSLM_ROOT_DIR=/ansys_inc/shared_files/licensing/../.. was not updated in the Tomcat/ansys_inc/shared_files/licensing/tools/tomcat/bin/setenv.sh file.**

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Existing PID file found during start.

Removing/clearing stale PID file.

Unable to remove or clear stale PID file. Start aborted.

These permission issues may be resolved by running the following commands:

```
chmod 777 -R /ansys_inc/shared_files/licensing/tools/tomcat/bin
chmod 777 -R /ansys_inc/shared_files/licensing/tools/tomcat/logs
```

9.2.21. Manually Changing the Tomcat Port Number

During the default Ansys License Manager installation, the Tomcat port number is set to 1084. To change this port number, see, Modifying the Tomcat Port Number (p. 65)

9.2.22. Cannot Access a License After Disconnecting from VPN

There is a known issue with some VPN tools in which the tool does not clear the IPs correctly or does not clear them immediately after the VPN disconnection.

To address this issue, you need to force a DNS clear by performing the following steps:

1. From a comand prompt, issue the following command:

   ```
   ipconfig /release
   ```

2. Then issue the following command:

   ```
   ipconfig /renew
   ```

9.2.23. The Ansys Licensing Interconnect Shuts Down Unexpectedly

The Ansys Licensing Interconnect shuts down with the following message:

```
2017/09/27 05:43:30 ERROR Error determining if process <PROCESS NAME
BEING CHECKED FOR> is running:

Couldn't get hold of a new file descriptor. Too many open files
```

This is caused by exceeding the Linux "Open Files Limit". To correct this issue, increase the open files limit for the license server.

9.2.24. I See CHECKIN/CHECKOUT Actions for Names that do Not Correspond to License Features in the License File

For each license checkout request, you will see at least two log entries, one for the actual license feature that is checked out from FlexNet and one or more for the capability request to the Licensing Interconnect. (See the Capability definition in Glossary (p. 120)).

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

9.3. Licensing Error Messages

***** Licensed number of users already reached.**

You may have reached the number of Ansys product tasks that you have licensed. Wait until a task has been freed up and try again. If this error occurs on a regular basis, you may want to talk to your Ansys sales representative about obtaining additional licenses.

This error may also occur when licenses have been reserved for certain users, or when certain users have been excluded from licenses via the license options file.

***** All licenses are reserved for others.**

This error may occur if you have multiple INCREMENT lines for the same feature in the license file, and there are differing fields on each INCREMENT line (such as VENDOR_STRING and the version field), and licenses have been reserved for this feature. In this situation, the number of reserved licenses is reserved out of each INCREMENT, rather than the sum total of both.

***** Cannot connect to license server.**

or

*****Unable to connect to FlexNet license server**

The license manager is currently not running. Use **Ansys License Management Center** to start the license manager. Your license must exist on the license server prior to starting the license manager.

If you install the license manager and a license file, and it appears that the server is running, but you cannot connect to your license server, try rebooting.

If you think the license manager should already be running, check the FlexNet license log file and the `ansysli_server.log` file for errors.

Some other possible causes for this error include:

- If Windows Firewall is enabled on the license server, `ansyslmd.exe`, `lmgrd.exe`, and `ansysli_server.exe` need to be included in the exceptions.
- The wrong hostname is in the license file (machine ID is correct in the file and when the license keys were generated). The license manager could not be started.
- The wrong license file is on the system (both hostname and machine ID are incorrect and the license keys were created with the wrong ID). The license manager could not be started.
- The wrong license file is on the system AND the user changed the server line to have the machine's hostid but not the hostname. The license manager could not be started.
- An incorrect port number was used on the SERVER line(s) in the `ansyslmd.ini` file or in the setting of the licensing path environment variable **ANSYSLMD_LICENSE_FILE**
- All of the installed license files have expired.

If none of the above causes are applicable, the Licensing Interconnect may not have started because it was not able to start the FlexNet server or may have exited after failing to restart the FlexNet

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

server. Check the FlexNet license log file (`license.log`). If you see the following lines multiple times, try rebooting your license server machine:

```
(lmgrd) ansyslmd exited with status 28 (Communications error)
(lmgrd) Since this is an unknown status, license server
(lmgrd) manager (lmgrd) will attempt to re-start the vendor daemon.
(lmgrd) REStarted ansyslmd (pid 103864)
```

***** Feature removed during lmreread, or wrong SERVER line hostid**

Some possible causes of this message include:

- There is a typographical error in the license file's SERVER line. Typically, the machine ID was mistyped when manually entering the license file on a machine.
- You tried to install another machine's license file on a machine and changed the SERVER line in the file to have this machine's hostname but not the machine ID.
- A laptop with a docking station (with an Ethernet card in it) is removed from the docking station and the license file was made using this card's Ethernet address.
- The feature was removed during lmreread but the client is reading an old copy of the license file that still contains the removed feature.

***** Clock difference too large between client and server.**

This message will appear if the date on the client machine has changed. The date should never be set ahead or behind the actual date.

***** License server does not support this feature.**

This message can be generated if the feature has expired (on the server), or has not yet started, or the version is greater than the highest supported version, or the license file has been edited while the license server is running and the license file is not reread. Additional causes for this message include:

- If you are trying to install another machine's license file on a machine AND changes both the hostname and the machine ID information on the SERVER line to be this machine's information. The INCREMENT lines contained in the license file are still invalid for this machine.
- If new information for the requested feature was added to the license file but neither an lmreread was issued nor was the license manager restarted.
- If a laptop with a docking station (with an Ethernet card in it) is removed from the docking station, and the license was made using this card's Ethernet address, AND the user edited the SERVER line, replacing the Ethernet address with the disk signature of the machine (in an attempt to fix the problem). Such an attempt will not succeed because the INCREMENT lines were created using the docking station's Ethernet address, which in this situation can no longer be seen on this machine.
- If one or more INCREMENT lines that were made for machine A were installed in machine B's license file and those features were trying to be checked out from machine B.

***** Feature has expired.**

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Your license has expired; contact your Ansys sales representative for a renewal.

***** No such feature exists.**

- A license does not exist for the requested product. Verify that the **ANSYSLMD_LICENSE_FILE** environment variable and the `ansyslmd.ini` file are pointing to the correct license server.
- Verify that you are running the correct product. Use the **Set License Preferences for *`User`*** option of the **ANSLIC_ADMIN** utility to specify the products and the product order you want to use.
- If you are not licensed to run this product, contact your Ansys sales representative to obtain a license.
- If you are licensed to run this product, install the license from the license supplied by Ansys, Inc. or your Ansys sales representative using **Ansys License Management Center**. If you have already created the license, use **Ansys License Management Center** to reread the license file.
- You could also see this message if you are trying to use a license manager daemon from a previous release. For the current version of FlexNet, see Compatibility with Other FlexNet-Licensed Software (p. 2).

Failover feature <*`product name`*> specified in license preferences is not available.

You may see this message if no license for that product is currently available in the license path. Check the following:

- The license may have expired.
- All of your licenses may be in use.
- You do not have the specified license.
- The license is not included in your license preferences as set with the **Specify License Preferences for *`User`*** in the **ANSLIC_ADMIN** utility.
- Your Technology Enhancements and Customer Support (TECS) for this version may have expired.

***** License file does not support this version.**

The build date in the program is newer than the version in the license file. You may not be authorized to run a new release or you may not have installed your new license. If this is the case, install the license using the **Ansys License Management Center**. If you have installed the new license, use the **Ansys License Management Center** to reread the license file.

***** Invalid (inconsistent) license key**

For the current version of FlexNet, see Compatibility with Other FlexNet-Licensed Software (p. 2). Verify that you are not using the license manager daemons supplied with a previous release.

This error can also occur if the license key contains incorrect characters or format (sometimes caused by transferring the file).

Invalid license file: None of the hostnames in the license file match the system hostname.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

This message occurs when you install the license file if the hostname of the system you are running on does not match any of the hostnames in your license file. Some possible reasons why this can happen include:

- You are attempting to run on a system that has not been included in your license.
- The hostname of the system you are working on has been changed since it was used to generate the license information.
- A typographical error was introduced when the hostname was entered when creating the license key.
- On some newer Linux machines, the system hostname is not listed consistently in the `/etc/hosts` file. When you run the **Get System Hostid Information** option of the **Ansys License Management Center**, the utility uses the localhost information instead of the correct system hostname. An example of the problematic `/etc/hosts` file might look like this:

  ```
  # Do not remove the following line, or various programs
  # that require network functionality will fail.
  127.0.0.1       localhost.localdomain   localhost       abclinux5
  10.99.9.99      abclinux5       abclinux5
  [root@abclinux5 ~]$ hostname
  abclinux5
  [root@abclinux5 ~]$ hostname -s
  localhost
  [root@abclinux5 ~]$
  ```

  In this example, the **Get System Hostid Information** option would incorrectly use the localhost information.

  To correct the problem, you need to edit the `/etc/hosts` file and change the order of the hostname lines. The example shown above would then look like this:

  ```
  # Do not remove the following line, or various programs
  # that require network functionality will fail.
  10.99.9.99      abclinux5       abclinux5
  127.0.0.1       localhost.localdomain   localhost       abclinux5
  [root@abclinux5 ~]$ hostname
  abclinux5
  [root@abclinux5 ~]$ hostname -s
  abclinux5
  [root@abclinux5 ~]$
  ```

  In the corrected example, the **Get System Hostid Information** option would correctly use the abclinux5 hostname.

***** Local checkout filter rejected request.**

View the license debug log files (FlexNet `license.log` and the Licensing Interconnect `ansysli_server.log`) to find the specific cause of this message.

***** Cannot find server hostname in network database.**

This message will appear if one or more of the SERVER computer names do not appear in the client computer's `/etc/hosts` file (Linux) or the `services` file (Windows).

*****The Ansys license manager server is down. Unless a connection is reestablished, Ansys will exit in *nn* minutes.**

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

A message similar to this one occurs in a one-server license environment if your license manager has quit running. In a three-license server environment, the Ansys license manager must be running on at least two of the three license server machines at all times. If two of the license server machines go down, or two of the machines are not running the license manager, this error message will appear in the program output or in a message box. The program will continue to run for *nn* minutes to allow the license manager to be restarted or to be started on a second machine if using redundant servers. When this error message appears, start the license manager on the other machines designated as license servers.

If you get this message and determine that the license manager **is** still running, and you are running in a one-server environment, then the IP address of the license server machine was changed while the Ansys product was running (this is usually caused by connecting to or disconnecting from an Internet Service Provider (ISP) that dynamically allocates IP addresses). To correct this situation, you must return the IP address to the same address that the license server had when the Ansys product was started.

If the IP address changes after you start the Ansys product (either because you connected to or disconnected from your ISP), you can correct the error by restarting the Ansys product. You should not need to restart the license manager.

You can avoid this problem by remaining connected to or disconnected from the ISP the entire time you are running the application.

***** version of vendor daemon is too old.**

For the current version of FlexNet, see Compatibility with Other FlexNet-Licensed Software (p. 2). Verify that you are not using the license manager daemons supplied with a previous release.

Your version of the Ansys license client software is out of date. Refer to Licensing Error Messages in the Troubleshooting section of the Ansys Licensing Guide.

The version of the license client *`ansysli_client`* [*`version`*] must be greater or equal to the client *`Ansys application`* [*`version`*].

This message indicates that you are attempting to start an Ansys, Inc. application with an out-of-date version of the license client.

If you are using different installation directories for the current and prior versions, you need to ensure that each version is running from the appropriate installation directory.

If you are using the same installation directory for the current version as you used for the prior version, try the following solutions:

- The license client was running during the installation process and was not replaced. In this case, close all Ansys, Inc. applications, making sure that the license client closes, and then run the **Complete Unfinished Licensing Installation Configuration** option from the Client **ANSLIC_ADMIN**'s **Tools** menu.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- The license client was running during the installation process and was replaced, but the application is not reading the new client. In this case, close *all* Ansys, Inc. applications, making sure that the license client closes, and restart the Ansys, Inc. application.

Your version of the Ansys license manager software is out of date. Download and install the current Ansys license manager from the Ansys customer site.

The version of the license server *`ansysli_server`* [*`version`*] must be greater or equal to the client *`Ansys application`* [*`version`*].

This message indicates that you are attempting to start an Ansys, Inc. product with an out-of-date version of the license manager. You need to update to the latest version of the license manager.

*****Cannot read data from license server.**

The server and the client are having difficulties communicating. This error is usually caused by the network setup or by the network data being different from the data in the license file (for example, the server name, machine ID, port number, or vendor daemon).

- Confirm that the information on the SERVER line of the license file is the correct information for the server.
- Confirm that the syntax of the SERVER and VENDOR lines of the license file is correct.
- Verify that TCP/IP is enabled correctly.
- Check that the hosts file on the client machine contains the license server.
- Try using <*`port`*>@<*`ipaddress`*> when specifying the server.

*****The license server is taking too long to respond. The application has stopped waiting for a reply. The license server may be experiencing a high demand or a temporary outage. Try again later.**

In rare occasions, your site could be submitting too many requests too quickly (simultaneously or nearly simultaneously) to the Ansys License Manager. In this case, you will also see that the license server machine in question is averaging 85% CPU usage or higher. In this scenario, we recommend that you either point some of the clients to a different license server or install one or more standalone licensing interconnects for some of the clients to use. For instructions on installing a standalone licensing interconnect, see Run the Ansys Licensing Interconnect without FlexNet (p. 41).

*****Connection to the license server closed unexpectedly.**

If you see the above message and the server is not experiencing any demand, a virus scanner may be blocking connections to your license server. Rebooting your license server may also resolve the issue.

Could not bind socket on port 2325. Address already in use.

If you see the above message in your licensing log file, your operating system was not able to free a port before the timeout period expired. This situation could happen if the port is being used by some other application, or after you shut down a server if you did not wait long enough for the ports to free before restarting it.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Consult your system administrator before making changes to your default operating system settings or to determine which command is appropriate for your operating system level.

*****Failed to retrieve license preferences. Be sure that you are able to connect to the license server.**

If you attempt to set your license preferences and the client information is at a higher release than the server information, you may see this message. To verify, see the `getuserprefs.log` file (on Linux machines, in `.ansys` in your home directory; on Windows, in `%TEMP%\.ansys`). Note the last lines in the example below:

```
2012/08/24 17:18:00    INFO            Not connected to a local port.
2012/08/24 17:18:00    NEW_CONNECTION
                Connected to license server: 2325@linux10.ansys.com.
                       ANSYSLI_SERVERS: 2325@linux10.ansys.com
                        Servers: 1055@linux10.ansys.com
2012/08/24 17:18:01    SITE_PREFS                                2012.0806
                Your version of the Ansys license manager software is out
                 of date. Please download and install the current Ansys license
                 manager from the Ansys customer site.
                The version of the license server 2325@linux10.ansys.com [1.1.2]
                must be greater or equal to the client ALI_UTIL version [1.3.0].
```

*****License File *`filename`* has changed. Please do a reread to update the server.**

The license file or the FlexNet options file has been changed since the last restart of the license manager or reread of the license file. The changes will not be available until you restart the license manager or reread the license file. If you are running the Ansys Licensing Interconnect and FlexNet independently and have cached the license file, the cached license file may be out of date. Restart FlexNet or reread the license file to update the cached license file. If you make changes to the license file, in addition to rereading the license file in FlexNet, you must also recache the license file in the Licensing Interconnect by restarting the Licensing Interconnect or by using the Reread License Manager Settings option in the **Ansys License Management Center**.

9.4. License Manager Installation Directory Errors

The directory you specified is not valid for one of the following reasons:

- **Must not be a UNC path**
- **Must not contain a symbolic link or junction**
- **Must not be a filename**
- **Must be an absolute path**
- **Must be in long file name format (not 8.3 format)**
- **Must contain a valid, existing local, fixed-media drive**

Please check your path, correct the problem, and retry.

If you see this message or one that is similar, you may need to correct the path to the license manager. The message will display a particular error code (listed below). The -100 series numbers

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

indicate errors associated with the path you entered; the -200 series numbers indicate errors associated with the path specified in the service.

- -108 / -208: path is a UNC path; UNC paths are not permitted.
- -109 / -209: path contains a remote (network) drive; remote drives are not permitted.
- -110 / -210: path does not contain a valid drive letter from a to z.
- -111 / -211: path points to a file rather than to a directory.
- -113 / -213: path is a relative path, which is not permitted.
- -114 / -214: root path is invalid. (Example: The drive specified in the path doesn't exist.)
- -115 / -215: path's root path isn't a local fixed-media drive path.
- -116 / -216: path contains either a symbolic link or a junction, neither of which is permitted.
- -117 / -217: path is a short (8.3) file name format path, which is not permitted.
- 2147483647: The ALMConfig utility could not be run by the Ansys License Manager installation, as is required.

9.5. Ansys License Borrowing Errors

*****Unable to return <*`Product`*>, encountered "feature not found" attempting to return license feature <*`Product.`*>**

If you see the above message when attempting to return a borrowed license before the expiration date, the `-2 -p` license manager startup option might have been set. The `-2 -p` option is not supported. If you are running an earlier release, you must manually unset the option. In this case, you may also see the following in the log file:

UNAUTHORIZED lmremove request from <*`user`*> at node <*`host`*>.

You may also see the above message if the existing server specification does not contain the machine from which the license was borrowed. To correct the problem, add the machine to the server specification. If the Ansys Borrow Utility is open when the server specification is changed to contain this server, you must close and restart the utility after changing the license server specification and before returning the borrowed license.

9.6. FlexNet License Log File Errors

*****Not a valid server hostname, exiting. Valid server hosts are: *xxx***

The hostname in the SERVER line of the license file does not match the hostname of the system. In this case, change the hostname in the license file. Other possible causes include:

- The license file was put on a machine other than the one for which it was created; therefore, the hostname is not correct.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- The hostname of the license server changed. Change the hostname on the SERVER line of the license file to correct this problem. REMEMBER to send Ansys the new hostname so that future license files are made with the correct hostname.
- The license file was put on a machine other than the one for which it was created AND the user changed the machine's ID on the SERVER line but did not change the hostname. If the machine ID is also wrong, you will also see a message about the wrong hostid on SERVER line after correcting the hostname.
- The wrong hostname was used to create the license file. As long as the correct machine ID was used, you should be able to change the hostname on the SERVER line of the license file to fix this problem. REMEMBER to send Ansys the correct hostname so that future license files are made with the correct hostname.

*****Invalid license key (inconsistent authentication code)**

The INCREMENT lines in the license file are not valid for this system (Hostid mismatch). This error will also occur if the license file was typed incorrectly. Additional causes for this message include:

- If a license file created for machine A is being installed on machine B AND the user changed the hostname and the machine ID to machine B's in the SERVER line.
- If INCREMENT lines created for machine A are appended to an existing `ansyslmd.lic` file on machine B.
- If a laptop with a docking station (with an Ethernet card in it) is removed from the docking station, and the license was made using this card's Ethernet address, AND the user edited the SERVER line, replacing the Ethernet address with the disk signature of the machine (in an attempt to fix the problem). Such an attempt will not succeed because the INCREMENT lines were created using the docking station's Ethernet address, which in this situation can no longer be seen on this machine.
- In a three-server license environment, if the license file was created using an incorrect hostid for one of the license servers, this message will appear and will prohibit an Ansys product from running on any machine. Verify that the hostid in the license file matches the hostid on all three license servers. If it does not, the license file must be created using the correct hostid for all license server machines.

*****Wrong Hostid on SERVER line for license file: *<path to license file>***

License file is not valid for this machine. Possible causes include:

- There is a typographical error. If the license file was entered manually, the machine ID may have been incorrectly typed in the SERVER line.
- The user installed a license file created for machine A on machine B and changed the hostname in the SERVER line but did not change the machine ID.
- The hostid changed on a machine but the hostname stayed the same.
- A laptop with a docking station (with an Ethernet card in it) is removed from the docking station, and the license file was made using this card's Ethernet address.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

- A license file was made using the Windows disk signature but the keyword 'DISK_SERIAL_NUM=' was not put before the ID. Ethernet address would be expected.

***** "XXX" : Not a valid server hostname, exiting. Valid server hosts are: "YYY".**

The hostname listed in the `ansyslmd.lic` (YYY) file does not match the hostname of the system (XXX).

9.7. Contacting Technical Support

Technical Support can be accessed from www.ansys.com/support.

ANSYS Contacts & Locations can be found here.

9.8. Interpreting the ansysli_server.log File

The Licensing Interconnect log file, `ansysli_server.log` contains a history of licensing activity. Some common questions regarding the log file are addressed in the following sections.

9.8.1. Log File Keywords

Licensing Interconnect log file entries have the following basic format:

```
TIME  ACTION  FEATURE  REVISION  A/B/C/D  W/X/Y/Z  MPID:APP:USER@HOST:PLATFORM SOCKET:IP
```

where:

TIMESTAMP	The date and time of when the action occurred
ACTION	The action being taken by the Licensing Interconnect, for example, CHECKIN, CHECKOUT
FEATURE	The license feature or capability being requested
REVISION (BUILD DATE)	The revision and build date of the licensing version linked into the application
A	The number of licenses requested by this action
B	The number of licenses in use by this user
C	The number of licenses of this license feature currently in use
D	The number of licenses available in the local license pool, or in the case of a DesignPoint study, this value will reflect the total number of licenses available to the user based on the multiplicative effect of the Ansys HPC Parametric Pack license.
W	The number of client applications currently connected to this license server
X	The highest number of connected client applications
Y	The unique serial number of this client application
Z	The cumulative number of all client applications served by this license server
PID	The process ID number of the application requesting the action
MPID	The process's master process ID number

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

APP	The application that is requesting the action, e.g. MECH (for Mechanical), ANS_SOLVER (for Mechanical APDL), FLUENT_SOLVER (for FLUENT), CFX_SOLVER (for CFX)
USER	The username who is requesting the action
HOST	The hostname from where the action is being requested
PLATFORM	The hardware platform from where the action is being requested
SOCKET	The socket number of the machine making the request
IP	The IP address of the machine making the request

CHECKIN/CHECKOUT

The CHECKIN and CHECKOUT keywords indicate a license feature or capability checkin and checkout respectively. If you look closely at the details of these lines, you can gain some valuable statistics on overall license usage.

For each license checkout request, you will see at least two entries logged, one for the actual license feature that is checked out from FlexNet and one or more for the capability request to the Licensing Interconnect. (See the Capability definition in Glossary (p. 120)).

Example:

```
2012/09/20 12:42:36 CHECKOUT ane3fl 2025 R2 (2012.0814) 1/1/23/500 131/156/310068/310068
     7060:7884:MECH:john@plum:winx64  65028:194.154.5.32
```

In this example, one license for Ansys Multiphysics (ane3fl) is checked out by user *john*, by the Mechanical (MECH) application (with process ID 7060, Mast Process ID 7884 and Licensing Interconnect-assigned ID of 310068), from hostname *plum* (a Windows x64 system), on June 6, 2012 12:42:36. User *john* currently has only this license checked out. Of the 500 licenses of Ansys Multiphysics available, 23 are currently in use. There are currently 131 client applications connected to the license server. The highest number of concurrent connections to this license server is 156, with a total number of client applications served of 310068. The revision of the Ansys application being run is 2025 R2, built on June 3, 2012. The socket number and the IP address of the machine making the request are 65028 and 194.154.5.32, respectively.

```
2012/09/20 12:42:36 CHECKOUT MECH_STRUCT 2025 R2 (2012.0814) 1/1/17/-1 131/156/310068/310068
     7060:7884:MECH:john@plum:winx64 65028:194.154.5.32
```

This example is the capability checkout that corresponds to the above license feature checkout. A `-1` in Field D should only occur for the capability checkout, not for the feature checkout. The `-1` indicates that licenses are being used in shared mode.

The identifier (RESERVE) immediately following the license feature name indicates that the license checkin/checkout is for a license for a Design Point solve and is the time when the license is actually checked in or out.

CACHE_SERVER

This keyword is seen when the Licensing Interconnect is obtaining the license feature and FlexNet options file cache from another license server. You will typically see CACHE_SERVER lines appear in pairs. The first line indicates that the Licensing Interconnect is attempting to cache the license

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

feature and FlexNet options file information of another license server. The second line indicates the status of the cache.

CHECKPOINT

These messages provide a periodic status of the Licensing Interconnect. Information such as memory usage, uptime, etc. is given.

CLIENT_ACCEPT

Depending on the verbosity setting of the Licensing Interconnect log file, you may see one of these entries for each client that connects to the Licensing Interconnect. The entry is logged as soon as the client's socket is connected and prior to any processing.

CLIENT_EXIT

This keyword will appear when the application explicitly informs the Licensing Interconnect that it is exiting; this triggers the check-in of any capabilities currently checked out by the application. See also CLIENT_SHUTDOWN.

CLIENT_SHUTDOWN

This keyword will appear when the Licensing Interconnect has detected that the application has exited but has not explicitly passed the CLIENT_EXIT message. See also CLIENT_EXIT.

CONNECT_ERROR

This keyword is seen when connecting to another license server for the cache information and that license server is down or unreachable.

MEM_INFO

This system memory information will appear each time the Licensing Interconnect allocates additional memory.

QUEUE

This keyword indicates that queuing has been initiated for the capability in question (regardless if it is FlexNet queuing or ALI queuing).

QUEUE_GRANTED

This keyword is displayed when the FLEXlm server grants the license.

QUEUE_STARTED

This keyword indicates when a queue request is initiated to the FLEXlm server.

RECHECKOUT

If the connection between the Licensing Interconnect and the client application has been lost, once the RECONNECT has occurred, this keyword will indicate that the license feature or capability has been checked out again.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

RECONNECT

If the connection between the Licensing Interconnect and the client application has been lost, this keyword will indicate that the communication has been restored.

SHARE_LOCKER

This keyword indicates the locking mechanism is in play to prevent FLUENT and CFX from running in shared mode outside of the Workbench environment. It prevents you from running FLUENT and CFX Pre, Post and Solve concurrently outside of Workbench with a shared license. A SHARE_LOCKER checkout entry will appear any time one of these products is checked out. This only applies to the products that will run cross-application, such as Ansys CFD.

SPLIT_CHECKOUT

A SPLIT_CHECKOUT will occur when there are license checkout requests for two or more of the same license feature. The primary example where multiple licenses of the same feature are requested is for HPC products.

Example:

```
2012/09/20 15:05:23 SPLIT_CHECKOUT anshpc_pack 2025 R2(2012.0814) 2/6/10/500 152/165/314121/314121
     7508:6652:ANS_SOLVER:ted@papaya:winx64 65028:194.154.5.32

2012/09/20 15:05:23 CHECKOUT ANS_SOLVER_HPC 2025 R2 (2012.0814) 16/44/56/184 152/165/314121/314121
     7508:6652:ANS_SOLVER:ted@papaya:winx64 65028:194.154.5.32
```

Similar to the regular CHECKOUT, this example shows the license feature SPLIT_CHECKOUT for anshpc_pack and the corresponding capability checkout for ANS_SOLVER_HPC.

9.9. Log File Error Messages

HANDSHAKE_ERROR

This is usually a communication error, typically caused by network bandwidth saturation. Virus scanning software, too many client connections, or firewall software could be the cause. It could also be caused by applications unknown to the Licensing Interconnect trying to connect to the Licensing Interconnect port.

Feature *XXX* does not exist in the ANSYSLI pool

This error is given when there is a request for a capability for which no valid license exists on the license server. If you believe that a valid license does exist, be sure to reread both FlexNet and the Licensing Interconnect each time you install a new license.

The specified license path does not have any licenses for any product

This error typically indicates a cache problem. The license server from which you are trying to cache may be down or the path to the license server is incorrect.

Dependent feature *XXX* in AND keyword is not available

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

This error occurs when two or more different license features are requested for checkout and one or more are either not available or nonexistent.

A Workbench child application needs to wait for Workbench to recheckout its license

In the scenario where the Licensing Interconnect goes down and is restarted, for Workbench jobs that were running while the Licensing Interconnect was up, the main Workbench application must reconnect to the License Server before the job can proceed. This message will be seen for Workbench clients that are waiting until the main Workbench application has reconnected.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information
of ANSYS, Inc. and its subsidiaries and affiliates.

Glossary

ANSLIC_ADMIN	A utility that centralizes the various Ansys product licensing administrative functions.
Ansys License Manager	The Ansys License Manager consists of three components. The first two are FlexNet components; the last one is an Ansys component. See the definitions of each for more information. • `lmgrd` • `ansyslmd` • `ansysli_server`
ansysli	see Licensing Interconnect
Ansys License Management Center	The **Ansys License Management Center** is a browser-based user interface that centralizes many of the Ansys licensing administrative functions.
ansysli_client	A component of the Licensing Interconnect that is run by Ansys applications on client systems. No user configuration or administration is required or associated with this component.
ansysli_monitor	The ansysli_monitor runs on the same machine where the ansysli_server is running and ensures that the Licensing Interconnect is functioning correctly. If the Licensing Interconnect is not running, ansysli_monitor can restart it. If the Licensing Interconnect is running but is not responsive, ansysli_monitor can kill and restart it.
ansysli_server	A component of the Licensing Interconnect that is run on the license server systems. Use **ANSLIC_ADMIN** to manage (start, stop, etc.).
ansysli_server.log	The Licensing Interconnect log file, it provides a chronicle of Licensing Interconnect licensing activity, including problems. The Licensing Interconnect log file is located in the licensing directory by default.
ansysli port number	Communication channel by which the Ansys, Inc. applications communicate with the Licensing Interconnect. The default `ansysli` port number is 2325.
ANSYSLMD_LICENSE_FILE	An environment variable that may be used to specify the license server machine from which you want to check out a license.
ansyslmd	This is one of the FlexNet components of the Ansys license manager used to process Ansys product licensing requests, including issuing and returning licenses. `ansyslmd`, often referred to as the vendor daemon, is started by `lmgrd` and must be running to perform the aforementioned tasks.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

ansyslmd.ini	File that resides in the licensing directory. It is created by **ANSLIC_ADMIN** utility options **Specify the license server machine** and **Modify license manager startup options**.
backup server	In a three-server (redundant triad) network, the two servers not chosen to be the master are the backup servers. If the master server goes down, the backup server listed next in the license file automatically assumes the role of master.
borrowable license	A borrowable license is a license that you can use temporarily outside of the company facility (such as at home on a laptop). A special license key is required before any license can be borrowed.
build date	The build date is the year, month, and date the Ansys application was built. The version field in the license file specifies the latest build date that can be run using that license. It may also appear as 9999.9999 if a maintenance agreement is not applicable.
capability	Ansys, Inc. has assigned identifiers to each of the specific areas of functionality in the software. We refer to these identifiers as capabilities, which you may see in Ansys, Inc. licensing displays and logs. Each capability can be satisfied by at least one license feature; often, multiple license features can satisfy a particular capability.
client	A client is a machine that requests licenses but is not a license server machine (that is, does not have licenses installed on it).
feature	The word feature, when used in the descriptions of the licensing utilities, refers to the Ansys product. See the Ansys customer site for the list of Ansys products and their corresponding license features.
FlexNet	A component of the Ansys license manager used for all Ansys products. Also called FlexNet License Manager. The FlexNet component authenticates and processes all license requests.
FlexNet license log file	Typically referred to as the FlexNet Debug Log File, it contains information relevant to licensing activity. This file provides a way of tracking licensing problems that may occur. The licensing log file, `license.log`, is located in the licensing directory by default.
FlexNet port number	Communication channel by which the license manager communicates with the client (Licensing Interconnect). The default FlexNet port number is 1055.
floating license	Anyone on the network can run a licensed Ansys product, up to the limit specified in the license file. Floating licenses require the license manager daemon (`lmgrd`) and the vendor daemon (`ansyslmd`) to be running to count the concurrent usage of the licenses.
license	See license task.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

license borrowing	License borrowing allows a user to take a license for use outside of the company facility, such as for an engineer to take a license home on his laptop.
license file	A license file grants access to run specified products. Each licensed product will have an entry in the license file, `ansyslmd.lic` or `ansoft.lic`, which will reside in the license_files directory. Proper installation of a license file grants access to Ansys products. Install the license file using the **Ansys License Management Center** or during the installation process.
license key	The actual full license for the product.
license.log	Typically referred to as the FlexNet Debug Log File, it contains information relevant to licensing activity. This file provides a way of tracking licensing problems that may occur. The licensing log file is located in the licensing directory by default.
license manager	Software used for licensing Ansys, Inc. products. The Ansys License Manager has two components: the FlexNet software and the Licensing Interconnect.
license options file	A FlexNet file containing license manager-related resource information. By default, the file is named `ansyslmd.opt` and resides in the license_files directory. You may specify the following information in the options file: • Licenses that are reserved for individuals, groups, or machines • Those individuals, groups, or machines that are denied access to licenses
license server machine	A license server machine is a computer that you have designated to be the administrator of Ansys product licenses; the licenses are installed on the server machine(s). One or three systems (redundant triad) can be used to administer any particular set of Ansys product licenses.
license task	Each concurrent use of an Ansys product is a license task. Each use of an Ansys product will take a number of license tasks from the total number available.
licensing directory	The default location for the licensing files. On Linux systems, the licensing directory is `/ansys_inc/shared_files/licensing`. On Windows systems, the default licensing directory is `<OS_Drive>\Program Files\ANSYS Inc\Shared Files\Licensing`, located in the same drive as the operating system.
Licensing Interconnect	Communications between the Ansys applications, `lmgrd`, and `ansyslmd` are handled by an intermediary process called the Ansys Licensing Interconnect. The Ansys Licensing Interconnect communic-

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

	ates with the FlexNet license manager to authenticate and process all license requests.
Licensing Interconnect Log File	Provides a chronicle of Licensing Interconnect licensing activity, including problems. The Licensing Interconnect log file, `ansysli_server.log`, is located in the licensing directory by default.
lmadmin	A group of users that you designate to have the ability to perform license administrative tasks that are considered disruptive.
lmgrd	One of the FlexNet components of the Ansys License Manager, used to process Ansys product licensing requests, including issuing and returning licenses.
lmutil	`lmutil` is a FlexNet-supplied utility that will perform various license administrator functions including: rereading the license file, shutting down the license manager, starting the license manager, and listing the users of licensed products. `lmutil` is the underlying process in several of the **Ansys License Management Center** and **ANSLIC_ADMIN** options.
master server	In a three-server (redundant triad) network, one of the servers must be the master server. The server listed first in the license file automatically assumes the role of master. The other two license servers machines are backup servers. In a one-server network, that server is automatically the master.
options file	See license options file.
path	When used in the context of a license file path, the list of places that are searched in order to locate a valid license file. The path is built from values in the **ANSYSLMD_LICENSE_FILE** environment variable, settings in the `ansyslmd.ini` file, or an actual license file.
quorum	You may designate either one or three machines to be license servers. In a three-server (redundant triad) network, license manager daemons must be running on the majority (2) of the server machines (a quorum) before requests for licenses will be processed.
redundant (triad) servers	Having multiple machines designated as license servers for an Ansys product. Redundancy can be achieved either by having three license server machines working together in tandem, where two of the three must be running at all times but serving from a single set of licenses, or by having any number of license server machines running independently, each serving from different license files.
server	See license server.
Tamper Resistant License	A sixty character encryption used in the licensing file.
task	See license task.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

TRL	Tamper Resistant License
vendor daemon	FlexNet terminology used to refer to the vendor-specific component of the FlexNet license manager. The Ansys vendor daemon is `ansyslmd`.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.

Release 2025 R2 - © ANSYS, Inc. All rights reserved. - Contains proprietary and confidential information of ANSYS, Inc. and its subsidiaries and affiliates.