



Licensing Guide

Table of Contents

Introduction	4
LDRA issues licenses in two forms:.....	4
What are these license files?	4
Backwards Compatibility	5
Supported Operating Systems for License Servers	5
FAQ	6
Requesting a license.....	9
Installing a license.lidralic	10
Installing Standalone License Manually	12
Testing the license.....	14
License Server Setup via a License.dat	15
Server Installation	15
Starting the Server	15
Windows Servers	15
Linux Servers.....	16
Setting up the Client Machines	17
Additional Configuration	19
Configuring Ports	19
Updating the License Server	21
Changing the License Server.	22
Updating the Environment Variable (Windows)	22
Updating the Environment Variable (Linux/macOS).....	23
FlexID Dongles	24
Options File	25
Option File Keywords	25
Specifying License Restrictions Using Type	29
Options File Examples	30
Troubleshooting	32
The lidra.log file	32
Contacting licencing@lidra.com.....	34
The LicenseServerStatus.log file.....	35
Useful Diagnostic Commands	36
Invalid CTL file.....	38
Slow Responses from License Server	39

Common Error Codes	41
FlexLM Error -4, Number of users already reached	41
FlexLM Error -5, No such feature exists	41
FlexLM error -8, Invalid License Key	42
FlexLM Error -9 Invalid Host.....	43
FlexLM Error -10 Feature has Expired	46
FlexLM Error -15 Cannot Connect to License Server System	47
FlexLM Error -18 License Server does not support this feature	48
FlexLM Error -25 License server system does not support this version of this feature	49
FlexLM Error -31 Feature start date is in the future	50
FlexLM Error -96 The desired vendor daemon is down.....	50
FlexLM Error -97 The Desired Vendor Daemon is Down	51
FlexLM Error -139 Timeout	53
FlexLM Error -284 Can't find server hostid in license file	54
LDRA exited with status 53	55
Cannot Open Lock File	56

Introduction

LDRA uses *FlexLM (Flexera License Manager)* to license its products, this guide will demonstrate how to license LDRA with *FlexLM*.

FlexLM is a **License Server** that runs on a dedicated machine. If your license is Networked, then permitted users can access a license from this license server over the network.

Any additional configuration that may be required will be demonstrated, and any issues or errors will be covered in the [Troubleshooting](#) section.

If you encounter any problems during the licensing process, please consult the [Troubleshooting](#) section and the FAQ section, if your need assistance contact **licencing@ldra.com** or your local LDRA support team.

Should you need to contact **licencing@ldra.com** for assistance, please include your **Customer ID** and as much detail on the issue as possible, a screenshot of the error message is preferred. Include the **ldra.log** file located on the *FlexLM* server, this is located in the same directory as the **license.dat**.

LDRA issues licenses in two forms:

Standalone or Node-Locked: Mainly used for evaluations, usable on only one machine. Generally licensed via a combined license file, **license.ldralic**

Networked or Floating: Usable on any machine in a defined network, restricted by an IP range. licensed with a **License.dat** and **Toolsuite.ctl**.

The two license types function in exactly the same way, the only difference is that a standalone license has its availability tied to a single machine, where as a networked license has its availability tied to multiple machines, most commonly determined by IP range(s).

What are these license files?

Toolsuite.ctl – This is the control file, this is placed in the *LDRA installation directory* on the client (user) machines. Commonly referred to as the "**CTL File**"

License.dat – This is the *FlexLM* license file, this is placed in the directory containing the *FlexLM* server utilities. For networked licenses this is only installed on the server

License.ldralic – This is a combined license file containing both the above files. This is only used for standalone licenses, double clicking this license, or drag/dropping the license onto the License Configuration Dialog will automatically place the **license.dat** and **CTL File** in the appropriate directories and start the server.

Note: The CTL file is named differently dependent on the *LDRA* product, for example for the *tool suite* the CTL file is named **Toolsuite.ctl** for **LDRAcover** the CTL file is named **LDRAcover.ctl**.

This guide will refer to the CTL file as **toolsuite.ctl**. Please use the CTL file appropriate for the *LDRA* product you are using.

Backwards Compatibility

Flexlm License Servers can also issue licenses for version prior to the version stated in the license file. If you are still using older versions of *LDRA* an update to the latest version will not prevent you from using these versions.

LDRA installations and CTL files are versions specific so to use an older version you will need to have that version installed and use a CTL that matches that version.

For example, if your license is for v10.4.0 and you have a user using v10.4.0 and another using v10.1.0. Both these users can obtain a license from a license server running a 10.4.0 license, as long as they have licensed the client machine with a CTL file matching the locally installed version. Both users will consume 1 license count each.

Users of earlier versions will see no effect of the License Server update and can continue as normal. Users upgrading to the latest version should install the latest version and use the latest CTL file.

Supported Operating Systems for License Servers

Windows - 64 bit - Supported versions include Windows 7/8/10/11 and Windows Server 2008/2012/2016/2019/2022

Linux - 64 bit - Supported versions include Ubuntu and RHEL

For *LDRA* versions v9.9.0+ and v10.1.0+ and later version 11.19.2.0 or later of the *FlexLM* utilities are required. If your license server uses an older version of *FlexLM* it will need updating before you can access a license for the latest versions of *LDRA*.

You can download the latest *FlexLM* utilities from the below link:

<http://www.ldraftp.com/licensing/Download.htm>

Windows XP and Server 2003

Flexera removed support of **Windows XP** and **Server 2003** and therefore these latest versions of the *FlexLM* utilities will not function on these operating systems.

It is recommended that if your chosen license server is **Windows XP** or **Server 2003** and you need to use the latest version of *LDRA* that you change your license server machine to a supported OS.

Please note: the latest releases of the *LDRA* tools incorporates an updated version of FlexNet Publisher and as such requires users to update the FlexNet Publisher utilities used to host and serve licenses.

FlexNet Publisher has changed the criteria it uses to determine a valid hostid (for security reasons) and therefore you may encounter an “invalid hostid” error, even after receiving a license from *LDRA*. If you encounter such an error, please contact licencing@ldra.com, providing your log file and a newly generated .info file. Please bear with us whilst we work with you to overcome this issue swiftly and reissue you with appropriate license(s).

FAQ

Q. How does the *FlexLM* license server work?

A. The license server is tied to a specific machine, this is the machine that will run the License Server Application. The license server can only be run on this machine. However, access to the licenses can be obtained over a network.

For standalone licenses, the license is tied to the machine both for the running of the License Server and also the usage of the license. (No IP range required).

When you run *LDRA* it will contact the License Server for a license, as long as the license is valid for use with your version of *LDRA* and there are available users a license will be granted.

Q. Does this machine need the full *LDRA* installation on it or is there a minimal installation if we want to use a machine as just a License Server?

A. Yes, either copy the *FlexLM* directory from an existing installation onto your server, or download the *FlexLM* utilities from the email sent to you entitled "*LDRA FlexLM License Manager Utilities (Stage 1)*". If you require these utilities, please send an email to licencing@ldra.com to request them. Include your Customer ID in the email.

Q. What ports or firewall exceptions do i need to use?

A. The license server uses 2 ports, the 1st port is used by the executable **lmgrd** and is the 1st available port between 27000 and 27009 by default but can be assigned. The 2nd port is used by the vendor daemon executable **LDRA**. This is a random port by default but can be assigned. See [Configuring Ports](#) for more information.

Q. How do i request a license and what information do i need to provide?

A. Follow the instructions in Requesting a license - Networked, remember to include a suitable IP range.

Q. I have purchased the Windows version of *LDRA*, can i host the license server on Linux?

A. Yes, and vice versa. You will require the *FlexLM* utilities for the specific OS of your chosen License Server.

Q. I want to upgrade to the latest version, how do i do that and do i need a new license?

A. Send an email to licencing@ldra.com, stating you wish to update to the latest version. Include your Customer ID in the email.

Q. How do I know what my "Customer ID" is?

A. The Customer ID is the ID that is assigned to your license pool, you may have multiple license pools, each pool will have its own CTL. In the CTL the ID is displayed on the line starting with CUSTID. In your license.dat their will also be a corresponding package with this ID.

Q. Can i still use older versions of *LDRA* if i upgrade the license server?

A. Yes the license server is backwards compatible so the License Server will serve licenses prior to the version stated in the license.dat file.

Q. The machine my license server is running on is being replaced or died. How can i get a license for another machine?

A. Send an email to **licencing@ldra.com** stating you need to move license servers. Send the .info file generated by following the instructions in the [Requesting a license](#). Include your Customer ID in the email.

A Schedule B document will be issued to be signed detailing the old license server will be removed and not used.

Q. Our network IP addresses have changed, do we need a new license?

A. If your users are seeing an error "-9 Invalid Host", then you will need an updated license that includes the new IP ranges, send an email to **licencing@ldra.com** with the new IP ranges. Include your Customer ID in the email.

Q. I am unable to get a license, how can I get it working again?

A. Check the Troubleshooting for known errors and resolutions, if you are unable to resolve the issue yourself, send the ldra.log file from the license server along with a description of the issue to **licencing@ldra.com**. Include your Customer ID in the email.

Q. My evaluation license has expired but i require more time to evaluate, can I have an extension?

A. Please contact your LDRA sales representative for this request.

Q. We have a license for Windows, can we also use the Linux version of the tool?

A. No, to use multiple OS versions you will require a "Multi-Platform" license, for more information contact your *LDRA* sales representative.

Q. How can i check how many licenses are in use?

A. You can run the **Query_LicenseServer.bat** to generate a log of all the licenses and which users are currently using them.

If you want to check a specific feature only the following command can be used.

lmutil lmstat -f <feature_name>

If you do not specify a feature, all features will be listed.

See [Useful Diagnostic Commands](#) for more details

Q. Can I run multiple *FlexIm* License Servers on the same machine?

A. You can run multiple license servers for different Vendors, but not multiple from the same vendor. If you require to have multiple licenses on the same license server this is possible, they can all be merged into the same license.dat and one instance of the License Server can issue all licenses.

When running multiple license servers from different vendors make sure that the ports are not conflicting, each vendor will require their own port see [Configuring Ports](#) for more information on specifying ports.

If you have a question that is not listed above, please contact licencing@ldra.com. Include your Customer ID in the email.

Q. Does LDRA support license server redundancy?

A. Yes you can use a "Server Triad" which runs the license server on 3 machines, as long as at least 2 of the 3 machines are operational a license can be issued.

If you do not have 3 machines that can be used as a license server, another option is to issue a license which instead of being tied to a specific machine is tied to a dongle, so as long as the dongle is present the license server will run, this allows you to move the license and dongle to a new machine if your main license server is non-operational.

Q. Our license server is not running and the ldra.log shows an error "Wrong hostid on SERVER line for license file" what is the problem?

A. This is a mismatch in the license.dat issued and the system being used as a license server. This could be caused by one of the below reasons.

- The license was issued for another machine and is not for use on this machine. **Resolution:** Use only on the machine the license.dat was issued for.
- Your old machine has been decommissioned and you moved the license.dat and license server utilities to a new machine and are trying to run the license server. **Resolution:** You need a new license.dat for the new machine, create a new .info file and request a "Server Change" from licencing@ldra.com.
- The machine being used as a license server has undergone some hardware or software updates that have changed the "hostid" of the machine and the license is invalid. **Resolution:** You need a new license.dat, create a new .info file and request a "Server Change" from licencing@ldra.com.
- Windows Only, the license is placed in the FTYPE instead of the LTYPE directory, or vice versa. **Resolution:** move the license.dat to the other directory and start the license from there. If this does not resolve it contact licencing@ldra.com, include your ldra.log and .info file.
- There was removable hardware present when creating the .info file, such as a laptop dock or wifi dongle. **Resolution:** either connect the hardware again or if you need to use in both cases create a .info file without this hardware connected and request a "Server Change" from licencing@ldra.com.

Requesting a license

You will receive an email from your sales representative requesting this information. The email will be entitled *LDRA FlexLM License Manager Utilities (Stage 1)*, this email will contain a link to download the *FlexLM Server Utilities*.

Download the *FlexLM Server Utilities* and extract them to an appropriate location e.g. **C:\LDRA_FlexLM** or **~/ldra_flexlm/**

Once extracted run the **Get_licenseinfo.bat** or **Get_licenseinfo.sh** file to generate a **.info** file containing your machine information.

An example of a **.info** file:

```
#####
#
# To obtain your license, email the contents #
# of this file to licencing@ldra.com #
# including your Customer ID in the subject #
# field. #
#####
Generated: 25/03/2020 10:13:50.06

lmutil - Copyright (c) 1989-2017 Flexera Software LLC. All Rights Reserved.
Running on Physical Platform

Mac Address=c8f750761762
INTERNET=10.164.235.44
USER=User
HOSTNAME=DESKTOP-0NR2F96
DISK_SERIAL_NUM=40499bf0
F:B2D9069CF5A
L:E86AC4F9E7DD

lmgrd vll.15.0.0 build 215548 i86_n3 - Copyright (c) 1988-2017 Flexera Software LLC. All Rights Reserved.
lmgrd vll.15.0.0 build 215548 i86_n3 - Copyright (c) 1988-2017 Flexera Software LLC. All Rights Reserved.

Windows IP Configuration

Host Name . . . . . : DESKTOP-0NR2F96
Primary Dns Suffix . . . . . :
Node Type . . . . . : Mixed
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Ethernet 1:

Connection-specific DNS Suffix . :
Description . . . . . : TAP-Windows Adapter V9
Physical Address. . . . . : c8-f7-50-76-17-62
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::d817:8ff0:36ba:f33b415(Preferred)
IPv4 Address. . . . . : 10.164.235.44(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : 25 March 2020 09:31:50
Lease Expires . . . . . : 25 March 2021 09:31:50
Default Gateway . . . . . :
DHCP Server . . . . . : 10.164.235.254
DHCPv6 IAID . . . . . : 755040169
DHCPv6 Client DUID. . . . . : 00-01-00-01-24-63-31-EE-C8-F7-50-76-17-62
DNS Servers . . . . . : 10.162.235.1
NetBIOS over Tcpip. . . . . : Enabled

lmhostid: License service failed to return VM attributes. (-210,14706) - The FlexNet Licensing Service does not appear to be running

#####
#
# To obtain your license, email the contents #
# of this file to licencing@ldra.com #
# including your Customer ID in the subject #
# field. #
#####
```

Reply to the received email attaching this **.info** file.

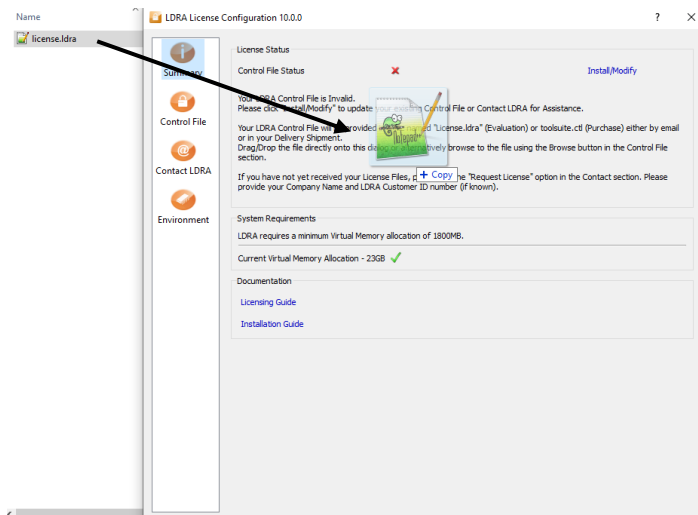
If you are requesting a Networked license, a license other machines can use by connecting to the license server running on this machine, then a suitable IP range needs to be provided. E.g. 192.168.1.* , this IP range should cover the potential users of this license. Multiple IP ranges can be provided.

If the license is to be standalone, no IP ranges are needed. Just send the generated **.info** file.

Installing a license.ldralic

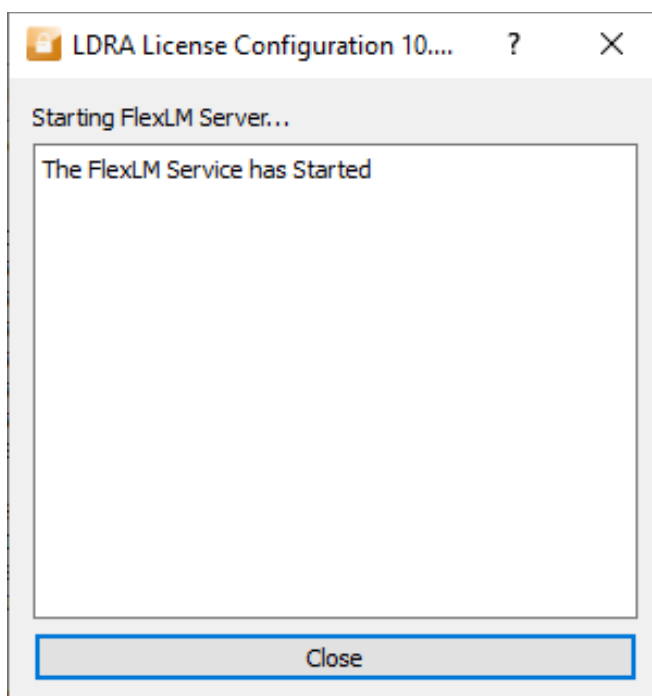
If your license file has been provided as an email attachment named **license.ldralic**, follow the instructions in this section. When installation is complete drag/drop this **license.ldralic** file onto the License Configuration Dialog.

Note, this requires administrative privileges, if you do not have these or this process fails, see [Installing Standalone License Manually](#).

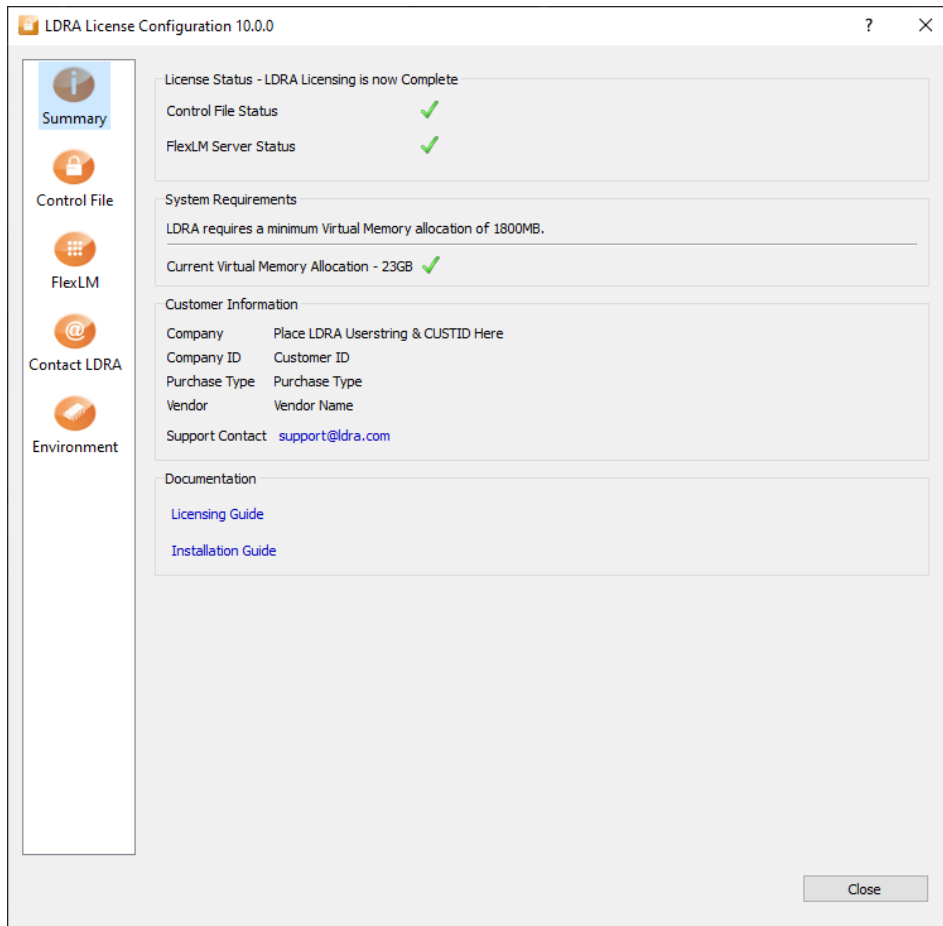


The **license.ldralic** file can also be double clicked to install the license. If nothing happens when you drag/drop the license onto the dialog, make sure you have administration rights.

The *FlexLM* section will be selected automatically and the *FlexLM* license will be installed.



When licensing is completed the summary tab should show two green ticks, this shows that licensing has been successful.



Installing Standalone License Manually

If you have issues installing the **license.ldralic** automatically, the steps below can be followed to install the license manually.

Open the **license.ldralic** in a text editor, e.g. notepad.

```
*****
* LDRA Control File *
* ===== *
* *
* *
* *
*****
COMPANY : LDRA
CUSTID : 001
LOCATION : Portside
PURTYPE : EVAL
LICTYPE : FTYPE
VENDOR : LDRA
SUPPORT : support@ldra.com
VERSION : 10.0.0
LANGUAGE : C/C++
PHASES : MSA CMP DFL XRF INF DOA CON ESA DYN DST PAN CVF
MODULES : TBSAFE TBMISRA TBPUBLISH TBEVOLVE TBSTATIC
MODULES : TBRUN TBDICT TBEXTREME TBMEM TBSECURE TBVISION
MODULES : TBTARGET TBGUI TBFLOW TBMANAGER
MODULES : TBGLHSUPPORT TBGLHCOMPARE TBBUILDTTEST TBBUILDSRIPT TBTLPTEST
MODULES : TBGLHAPI TBFARMMONITOR TBMSSCRIPT TBMMAKELOGPARSER
MODULES : TBREPORTS TBDIAGRAM
PRSNLTY : LDRA
CHECKSUM : CO9B-CO9O-4JCP-KBLJ-CKK4-BWZV-WAR4-0T1C-E9ZY-9VVX
*****
* *
* *
* *
*****
~
SERVER DESKTOP-0NR2F96 DISK_SERIAL_NUM=40499bf0
VENDOR LDRA
PACKAGE Win_C/C++ Tool suite LDRA 10.00 \
COMPONENTS="Win_C/C++ Testbed:10.00 Win_C/C++ TBGUI:10.00 \
Win_C/C++ TBDIAGRAM:10.00 Win_C/C++ TBFLOW:10.00 \
Win_C/C++ TBGLHAPI:10.00 Win_C/C++ TBVISION:10.00 \
Win_C/C++ LDRArules:10.00 Win_C/C++ DYNAMIC:10.00 \
Win_C/C++ TBMISRA:10.00 Win_C/C++ TBSAFE:10.00 \
Win_C/C++ TBRUN:10.00 Win_C/C++ TBEXTREME:10.00 \
Win_C/C++ TBPUBLISH:10.00 Win_C/C++ TBEVOLVE:10.00 \
Win_C/C++ TBREPORTS:10.00 Win_C/C++ TBVISION:10.00 \
Win_C/C++ TBsecure:10.00 Win_C/C++ Tbmem:10.00 \
Win_C/C++ TBGLHSUPPORT:10.00 Win_C/C++ TBBUILDTTEST:10.00 \
Win_C/C++ TBTLPTEST:10.00 Win_C/C++ TLPconfig:10.00 \
Win_C/C++ TBFARMMONITOR:10.00 Win_C/C++ TBGLHCOMPARE:10.00 \
Win_C/C++ Dyndflow:10.00 Win_C/C++ LDRAGenTCF:10.00 \
Win_C/C++ TBMANAGER:10.00 TBMANAGER:10.00 TBOFFICE:10.00 \
LDRALAUNCHER:10.00 " OPTIONS=SUITE SIGN="002A 6378 1DD4 5ACF \
68E5 5A62 6F93 1F00 AF98 894E 4762 EDF9 28C9 B0FF 1B9C"
FEATURE Win_C/C++ Tool suite LDRA 10.00 23-jul-2020 1 \
HOSTID="INTERNET=155.56.*.* ANY" DUP_GROUP=UHV \
ISSUER=licencing@ldra.com ISSUED=25-Mar-2020 START=25-Mar-2020 \
SIGN="006B ED24 65C0 A5D3 41A4 4E47 A000 2347 8CED 3AD3 \
9A0E AC0D 8793 F8CD"
#
#
```

The **license.ldralic** contains both license files, **license.dat** and CTL file. These are separated by the ~symbol.

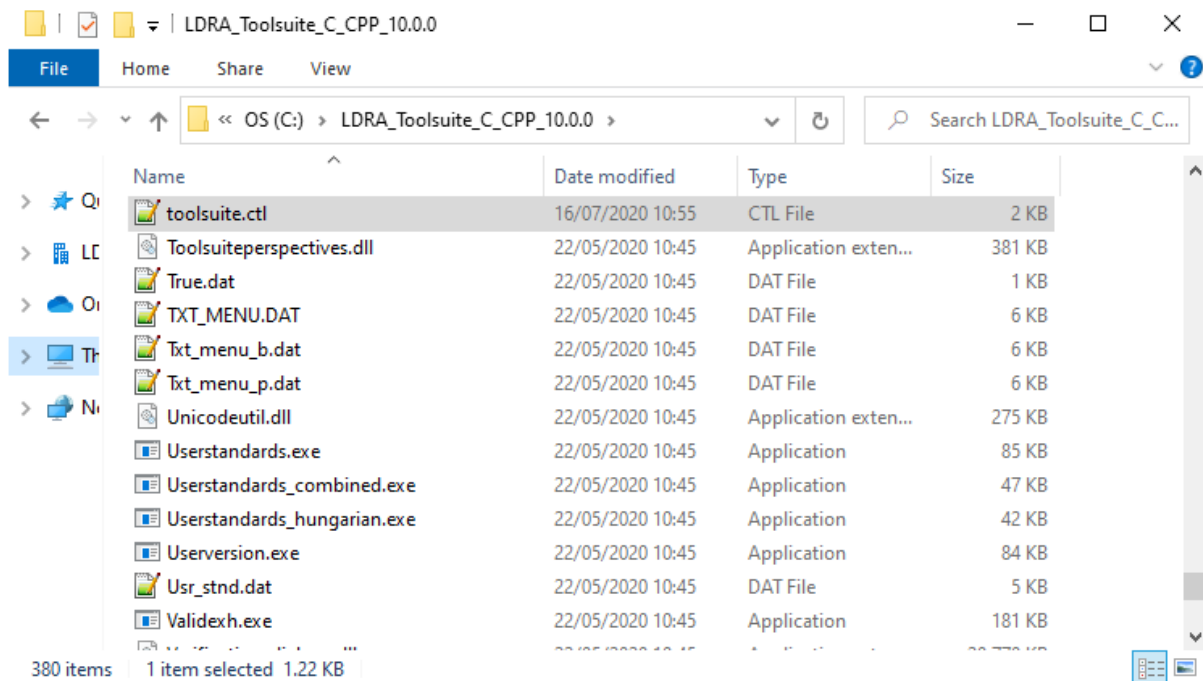
Copy the contents above the ~ symbol to a new file.

```
*****
* LDRA Control File *
* ===== *
* *
* *
* *
*****
COMPANY : LDRA
CUSTID : 001
LOCATION : Portside
PURTYPE : EVAL
LICTYPE : FTYPE
VENDOR : LDRA
SUPPORT : support@ldra.com
VERSION : 10.0.0
LANGUAGE : C/C++
PHASES : MSA CMP DFL XRF INF DOA CON ESA DYN DST PAN CVF
MODULES : TBSAFE TBMISRA TBPUBLISH TBEVOLVE TBSTATIC
MODULES : TBRUN TBDICT TBEXTREME TBMEM TBSECURE TBVISION
MODULES : TBTARGET TBGUI TBFLOW TBMANAGER
MODULES : TBGLHSUPPORT TBGLHCOMPARE TBBUILDTTEST TBBUILDSRIPT TBTLPTEST
MODULES : TBGLHAPI TBFARMMONITOR TBMSSCRIPT TBMMAKELOGPARSER
MODULES : TBREPORTS TBDIAGRAM
PRSNLTY : LDRA
CHECKSUM : CO9B-CO9O-4JCP-KBLJ-CKK4-BWZV-WAR4-0T1C-E9ZY-9VVX
*****
* *
* *
* *
*****
~
```

Save this file dependent on the LDRA product installed:

<u>Product</u>	<u>CTL File name</u>
<i>LDRA tool suite</i>	toolsuite.cti
<i>LDRAcover</i>	ldracover.cti
<i>LDRArules</i>	ldrarules.cti
<i>LDRArules-mplabx</i>	ldrarules-mplabx.cti
<i>LDRAunit</i>	ldraunit.cti

Place the CTL file in the installation directory, replacing the placeholder file. e.g.



In the **license.ldralic** file, copy the contents below the ~ symbol into a new file, save this file as **license.dat**.

Place the **license.dat** file, in the "**flexlm\ftype**" (Windows) or "**flexlm**" (Linux) folder in your installation directory e.g.

C:\LDRA_Toolsuite_C_CPP_10.0.0\Flexlm\Ftype\license.dat

~/ldra_toolsuite_c_cpp_10.0.0/flexlm/license.dat

Run the appropriate install file for your OS:

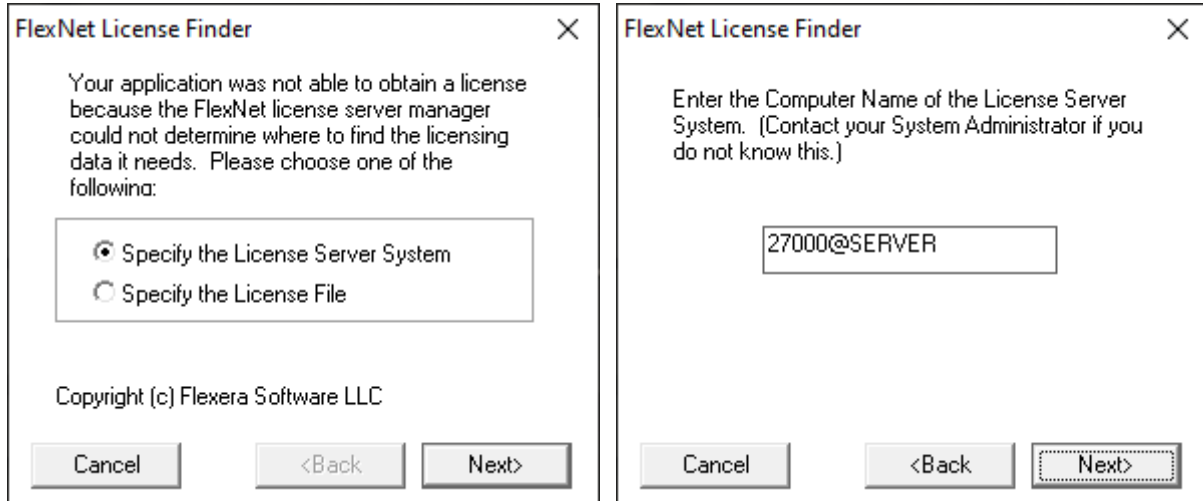
Start_LicenseServer.bat for Windows

Install_licenseService.bat to install as a service on Windows (requires Admin rights)

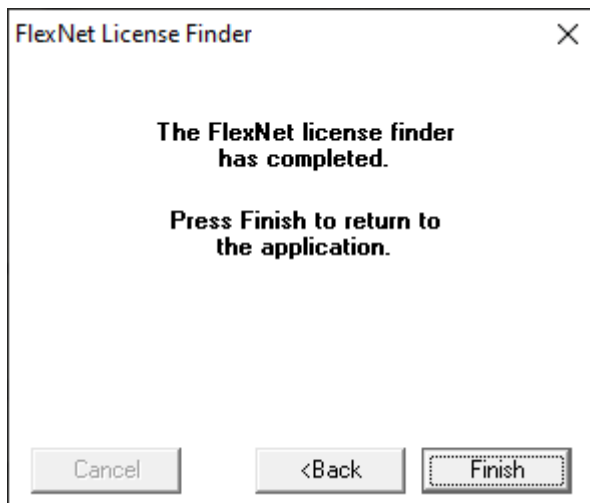
Start_licenseserver.sh for Linux servers.

Testing the license

Launch an LDRA Application e.g. *TBvision*, when prompted with the *Flexnet License Finder* dialog, select **Specify License Server System** and click **Next**. Enter the name of your machine and click **Next**. Be sure to enter the correct port as shown below (port@hostname).



Click **Finish**



The Select file dialog should now be displayed and licensing has been completed.

Should you face any issues please refer to the [Troubleshooting](#) section. If you require further assistance, please contact licencing@ldra.com.

Common Issue: If this dialog keeps appearing after you have entered the information, the license server was not found. The values you enter in the dialog are only saved upon a successful connection. Check that the license server is running and that the ports are open. Check the details entered are correct.

License Server Setup via a License.dat

Server Installation

Firstly, the *FlexLM Server Tools* will need to be installed on your chosen server. These will have been supplied via email entitled *LDRA FlexLM License Manager Utilities (Stage 1)*. If you have not received these, you can download them from the below link:

<http://www.ldraftp.com/licensing/Download.htm>

The *FlexLM* tools should be extracted to a suitable location e.g. **C:\FlexLM** or **/home/\$user/flexlm/**

The next step is to install the **license.dat** file, this file will have been supplied via email entitled *LDRA FlexLM License Delivery*.

For Windows servers, copy this license.dat file into the **FTYPE** or **LTYPE** directory as specified in the email. e.g. **C:\FlexLM\FTYPE** or **C:\FlexLM\LTYPE**.

For Linux, macOS and Solaris servers, copy this file to the *FlexLM* directory e.g. **/home/\$user/flexlm.**

Adjust the above paths depending on the location you installed the *FlexLM Server Tools*.

Note: A "dummy" **license.dat** file will be present and should be overwritten.

Starting the Server

Run the appropriate install file for your OS:

Start_LicenseServer.bat for Windows

Install_licenseService.bat to install as a Windows Service on Windows

Start_licenseserver.sh for Linux / macOS / Solaris servers.

Windows Servers, make sure the above batch file is run from the correct directory **FTYPE** or **LTYPE** as specified in the *LDRA FlexLM License Delivery* email.

Most licenses are FTYPE licenses, however if your license server does not start due to a hostid mismatch, try starting the license.dat from the other directory. If this still does not work contact licencing@ldra.com and include the ldra.log file.

Make sure you have Administration rights, see the [Troubleshooting](#) section for more information.

For Advanced users, the *FlexLM End User Guide* (**Licensingenduserguide.pdf**) contains more commands, this guide is located in the *FlexLM* directory.

Windows Servers

In order for the *FlexLM* server to be started upon a reboot one of the following options needs to be taken:

- Install the *FlexLM* server as a service. (Requires admin rights)

To install the *FlexLM* server as a service run the **Install_LicenseService.bat** batch file.

Check that the service "*LDRA License Manager*" has been successfully created.

If not, you may require temporary administrative privileges.

- Run the **Start_LicenseServer.bat** batch file automatically upon logging into Windows.

To do this add a shortcut to the script in the below directory:

C:\ProgramData\Microsoft\Windows\Start Menu\Programs\StartUp

The license server will then be automatically started when Windows is restarted.

Linux Servers

If you require your license server to automatically start when your system is booted you can create a script in the **/etc/init.d/** directory.

Create a script in the directory **/etc/init.d/**, e.g. **ldra_flexlm_startup**

In this script call the **start_licenseserver.sh** script, be sure to include the full path to the script.

Make the script executable, **sudo chmod 755 /etc/init.d/ldra_flexlm_startup**

Register the script to be ran at startup, **sudo update-rc.d ldra_flexlm_startup defaults**

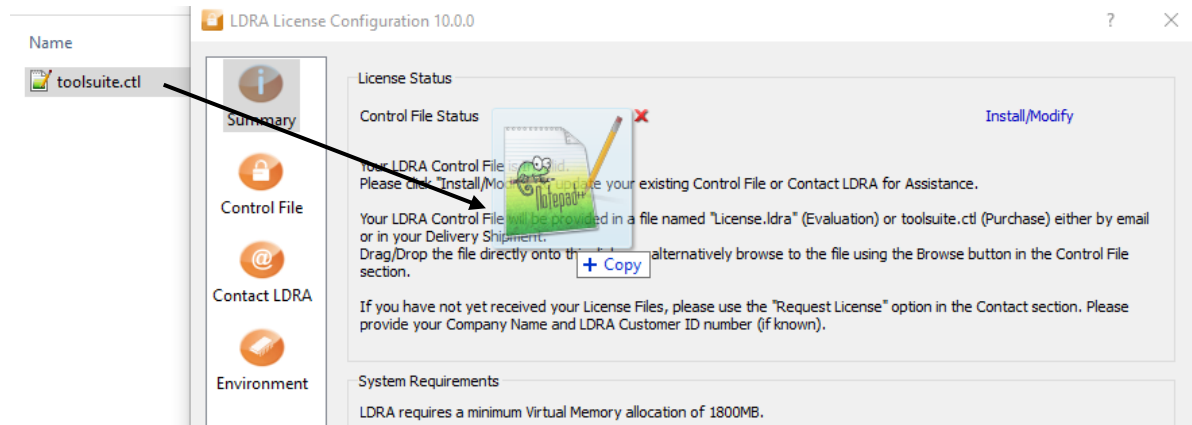
If you only require the license server to be started upon login to the machine, add the script to the end of the **.bashrc** file.

Setting up the Client Machines

Now the *FlexLM* server is up and running, the client (user) machines will have to be setup to access the server.

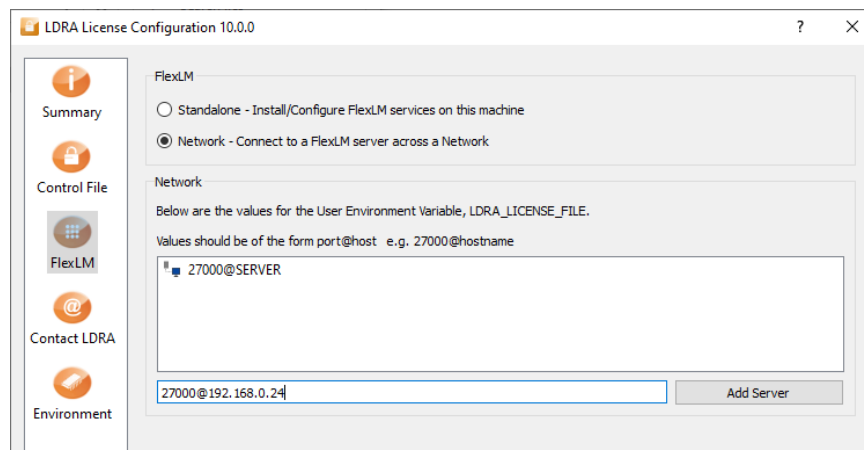
These steps will need to be repeated on every client machine.

Firstly, place the *.ctl file in the installation directory. This will have been sent via email entitled *LDRA FlexLM License Delivery*. Alternatively drag drop the *.ctl file onto the **License Configuration** dialog.



To enable *LDRA* to check out a license from the license server across a network an **Environment Variable, LDRA_LICENSE_FILE**, is required. (clients only)

From the **License Configuration** dialog select the *FlexLM* tab and select the Network radio button. Enter the value for the variable in the format, port@host i.e. **27000@myhost**.

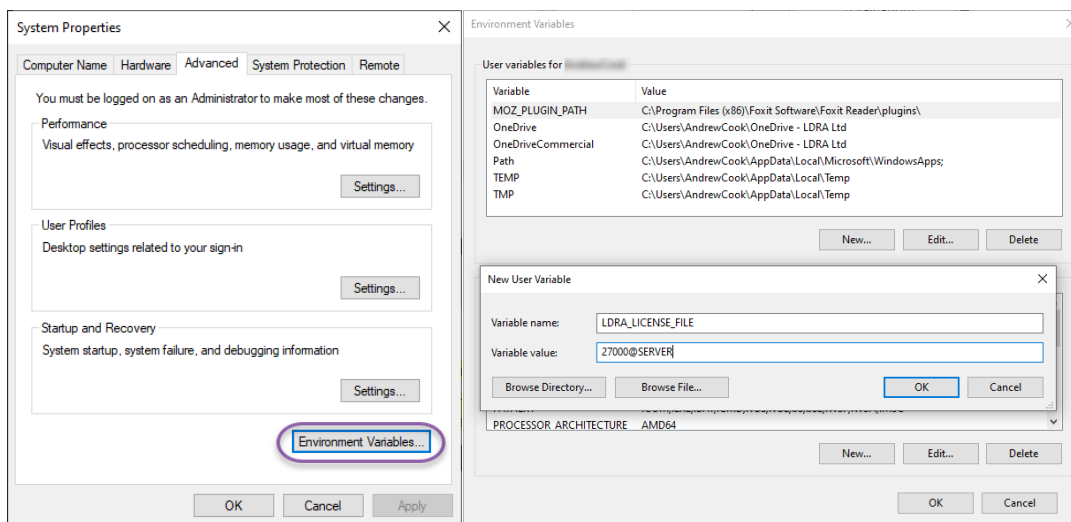
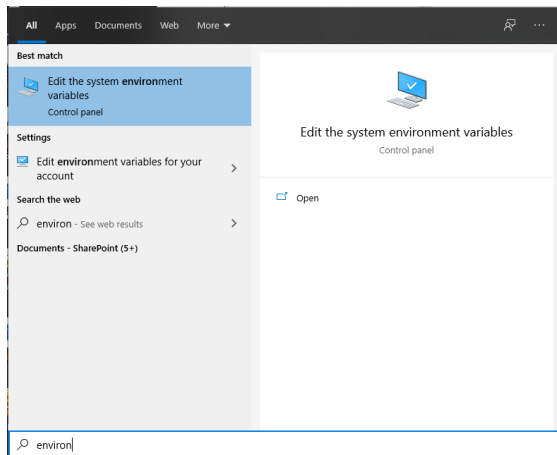


The default port is **27000**, if you have changed the port adjust the variable accordingly. See [Configuring Ports](#) for more information on how to set the ports *FlexLM* uses.

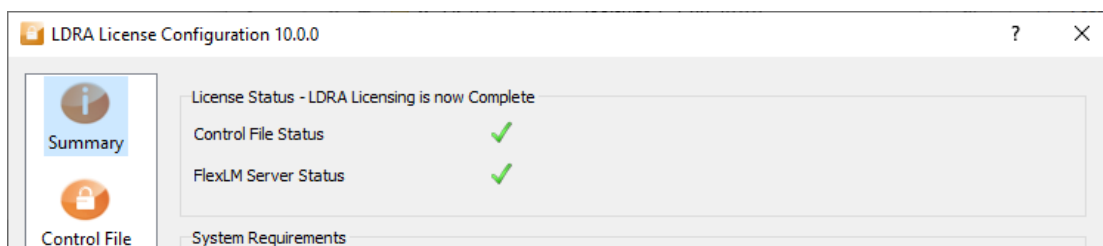
The IP of the server can be used instead of the hostname i.e. **27000@192.168.0.24**.

To enter the *Environment Variable*, you must have Administrative Privileges.

The *Environment Variable* can also be set from the **System Properties > Advanced > Environment Variables**. (Search for *Environment Variable* in Windows Search)



Licensing is now completed, and the **License Configuration** dialog should show 2 green ticks.



Test the license by opening an LDRA application e.g. *TBvision* and, if licensing is successful the application will open, check you can load in a file if so, licensing is complete. If it has not been successful check the [Troubleshooting](#) section for more information.

On Linux the variable is stored in the file `~/flexlmrc`



Additional Configuration

Configuring Ports

The *FlexLM* server uses two ports to communicate. The first port the *FlexLM* Server uses is the first available port between **27000** and **27009**. You can obtain the current port number by inspecting the **ldra.log** file, this log file is located in the same directory as you **license.dat**. Note: for networked licenses this log file is located on the server only.

```

1 11:01:25 (lmgrd) =====
2 11:01:25 (lmgrd) Please Note:
3 11:01:25 (lmgrd)
4 11:01:25 (lmgrd) This log is intended for debug purposes only.
5 11:01:25 (lmgrd) In order to capture accurate license
6 11:01:25 (lmgrd) usage data into an organized repository,
7 11:01:25 (lmgrd) please enable report logging. Use Flexera Software LLC's
8 11:01:25 (lmgrd) software license administration solution,
9 11:01:25 (lmgrd) FlexNet Manager, to readily gain visibility
10 11:01:25 (lmgrd) into license usage data and to create
11 11:01:25 (lmgrd) insightful reports on critical information like
12 11:01:25 (lmgrd) license availability and usage. FlexNet Manager
13 11:01:25 (lmgrd) can be fully automated to run these reports on
14 11:01:25 (lmgrd) schedule and can be used to track license
15 11:01:25 (lmgrd) servers and usage across a heterogeneous
16 11:01:25 (lmgrd) network of servers including Windows NT, Linux
17 11:01:25 (lmgrd) and UNIX.
18 11:01:25 (lmgrd)
19 11:01:25 (lmgrd) -----
20 11:01:25 (lmgrd)
21 11:01:25 (lmgrd)
22 11:01:25 (lmgrd) Server's System Date and Time: Thu Jul 16 2020 11:01:25 GMT Daylight Time
23 11:01:25 (lmgrd) pid 9940
24 11:01:25 (lmgrd) SLOG: Summary LOG statistics is enabled.
25 11:01:25 (lmgrd) Detecting other license server manager (lmgrd) processes...
26 11:01:25 (lmgrd) Done rereading
27 11:01:25 (lmgrd) FlexNet Licensing (v11.15.0.0 build 215548 i86_n3) started on DESKTOP-0NR2F96 (IBM PC) (7/16/2020)
28 11:01:25 (lmgrd) Copyright (c) 1998-2017 Flexera Software LLC. All Rights Reserved.
29 11:01:25 (lmgrd) World Wide Web: http://www.flexerasoftware.com
30 11:01:25 (lmgrd) license file(s): license.dat
31 11:01:25 (lmgrd) (lmgrd tcp-port 27000)
32 11:01:25 (lmgrd) (8lmgrd-SLOG) =====
33 11:01:25 (lmgrd) (8lmgrd-SLOG) === LMGRD ===
34 11:01:25 (lmgrd) (8lmgrd-SLOG) Start-Date: Thu Jul 16 2020 11:01:25 GMT Daylight Time
35 11:01:25 (lmgrd) (8lmgrd-SLOG) PID: 9940
36 11:01:25 (lmgrd) (8lmgrd-SLOG) LMGRD Version: v11.15.0.0 build 215548 i86_n3 ( build 215548 (ipv6))
37 11:01:25 (lmgrd) (8lmgrd-SLOG) === Network Info ===
38 11:01:25 (lmgrd) (8lmgrd-SLOG) Listening port: 27000
39 11:01:25 (lmgrd)
40 11:01:25 (lmgrd)

```

The second port *FlexLM* uses is randomly selected every time the server is restarted. You can obtain the current port number by inspecting the **ldra.log** file.

```

90 11:02:43 (LDRA) Win_C/C++ Tool suite (consisting of: Win_C/C++_Testbed
91 11:02:43 (LDRA) Win_C/C++_TSGUI Win_C/C++_TSDIAGRAM Win_C/C++_TBLFLOW
92 11:02:43 (LDRA) Win_C/C++_TBGLHAPT Win_C/C++_DYNAMIC Win_C/C++_TBHIS
93 11:02:43 (LDRA) Win_C/C++_TBMISRA Win_C/C++_TBSAFE Win_C/C++_TBRUN
94 11:02:43 (LDRA) Win_C/C++_TBXTREME Win_C/C++_TBPUBLISH Win_C/C++_TBREVOLVE
95 11:02:43 (LDRA) Win_C/C++_OBJBOOK Win_C/C++_TBREPORTS Win_C/C++_TBVISION
96 11:02:43 (LDRA) Win_C/C++_Tbsecure Win_C/C++_Tbmem Win_C/C++_TBGLSUPPORT
97 11:02:43 (LDRA) Win_C/C++_TBBUILDTEST Win_C/C++_TBTLTEST Win_C/C++_TLPconfig
98 11:02:43 (LDRA) Win_C/C++_TBPARAMMONITOR Win_C/C++_TBGLSCOMPARE Win_C/C++_Dyndflow
99 11:02:43 (LDRA) Win_C/C++_LDRAGENTCF Win_C/C++_TBMARKELOGPARSER Win_C/C++_TBEXCLUDE
100 11:02:43 (LDRA) Win_C/C++_TBMANAGER TBMANAGER TBOFFICE
101 11:02:43 (LDRA) LDRALUNCHER)
102 11:02:43 (LDRA) EXTERNAL_FILTERS are OFF
103 11:02:43 (lmgrd) LDRA using TCP-port 59695
104 11:02:43 (LDRA) SLOG: Statistics log frequency is 240 minute(s).
105 11:02:43 (LDRA) SLOG: TS update poll interval is 600 seconds.
106 11:02:43 (LDRA) SLOG: Activation borrow reclaim percentage is 0.
107 11:02:43 (LDRA) (8LDRA-SLOG) =====
108 11:02:43 (LDRA) (8LDRA-SLOG) === Vendor Daemon ===
109 11:02:43 (LDRA) (8LDRA-SLOG) Vendor daemon: LDRA
110 11:02:43 (LDRA) (8LDRA-SLOG) Start-Date: Thu Jul 16 2020 11:02:43 GMT Daylight Time
111 11:02:43 (LDRA) (8LDRA-SLOG) PID: 19072
112 11:02:43 (LDRA) (8LDRA-SLOG) VD Version: v11.15.0.0 build 215548 i86_n3 ( build 215548 (ipv6))
113 11:02:43 (LDRA) (8LDRA-SLOG)
114 11:02:43 (LDRA) (8LDRA-SLOG) === Startup/Restart Info ===
115 11:02:43 (LDRA) (8LDRA-SLOG) Options file used: None
116 11:02:43 (LDRA) (8LDRA-SLOG) Is vendor daemon a CVD: No
117 11:02:43 (LDRA) (8LDRA-SLOG) Is FlexNet Licensing Service installed and compatible: No
118 11:02:43 (LDRA) (8LDRA-SLOG) FlexNet Licensing Service Version: -NA-

```

These ports can be specified by editing the **license.dat** file. The license server must be stopped to change the ports used.

In order to set/amend the ports the server must be stopped. Run **Stop_licenseserver.bat** (Windows) or **Stop_licenseserver.sh** (Linux).

Carefully add the first port to the **SERVER** line:

SERVER fangtooth 123aaa456bbb 27005

Carefully add the second port to the **VENDOR** line:

VENDOR LDRA port=1234

Start the server and view the **ldra.log** file to view the updated ports.

```

19 11:04:13 (lmgrd) -----
20 11:04:13 (lmgrd)
21 11:04:13 (lmgrd)
22 11:04:13 (lmgrd) Server's System Date and Time: Thu Jul 16 2020 11:04:13 GMT Daylight Time
23 11:04:13 (lmgrd) pid 27120
24 11:04:13 (lmgrd) SLOG: Summary LOG statistics is enabled.
25 11:04:13 (lmgrd) Done rereading
26 11:04:13 (lmgrd) FlexNet Licensing (v11.15.0.0 build 215548 i86_n3) started on DESKTOP-ONR2F96 (IBM PC) (7/16/2020)
27 11:04:13 (lmgrd) Copyright (c) 1988-2017 Flexera Software LLC. All Rights Reserved.
28 11:04:13 (lmgrd) World Wide Web: http://www.flexerasoftware.com
29 11:04:13 (lmgrd) License file(s): license.dat
30 11:04:13 (lmgrd) lmgrd tcp-port 27005
31 11:04:13 (lmgrd) (@lmgrd-SLOG8) =====
32 11:04:13 (lmgrd) (@lmgrd-SLOG8) === LMGRD ===
33 11:04:13 (lmgrd) (@lmgrd-SLOG8) Start-Date: Thu Jul 16 2020 11:04:13 GMT Daylight Time
34 11:04:13 (lmgrd) (@lmgrd-SLOG8) PID: 27120
35 11:04:13 (lmgrd) (@lmgrd-SLOG8) LMGRD Version: v11.15.0.0 build 215548 i86_n3 ( build 215548 (ipw6))
36 11:04:13 (lmgrd) (@lmgrd-SLOG8)
37 11:04:13 (lmgrd) (@lmgrd-SLOG8) === Network Info ===
38 11:04:13 (lmgrd) (@lmgrd-SLOG8) Listening port: 27005
39 11:04:13 (lmgrd) (@lmgrd-SLOG8)
40 11:04:13 (lmgrd) (@lmgrd-SLOG8) === Startup Info ===
41 11:04:13 (lmgrd) (@lmgrd-SLOG8) Is LS run as a service: No
42 11:04:13 (lmgrd) (@lmgrd-SLOG8) Server Configuration: Single Server
43 11:04:13 (lmgrd) (@lmgrd-SLOG8) Command-line options used at LS startup: -c license.dat -l ldra.log
44 11:04:13 (lmgrd) (@lmgrd-SLOG8) License file(s) used: license.dat
45 11:04:13 (lmgrd) (@lmgrd-SLOG8) =====
46 11:04:13 (lmgrd) SLOG: FNPLS-INTERNAL-VLI-4096
47 11:04:13 (lmgrd) Starting vendor daemons ...
48 11:04:13 (lmgrd) Starting vendor daemon at port 1234
49 11:04:13 (lmgrd) Using vendor daemon port 1234 specified in license file
50 11:04:13 (lmgrd) Started LDRA (pid 8896)
51 11:04:15 (LDRA) SLOG: Summary LOG statistics is enabled.
52 11:04:15 (LDRA) SLOG: FNPLS-INTERNAL-CKPT1
53 11:04:15 (LDRA) SLOG: VM Status: 0
54 11:04:15 (LDRA) SLOG: FNPLS-INTERNAL-CKPT5
55 11:04:15 (LDRA) SLOG: TPM Status: 0
56 11:04:15 (LDRA) SLOG: FNPLS-INTERNAL-CKPT6
57 11:04:15 (LDRA) Server started on DESKTOP-ONR2F96 for: Win_C/C++ Testbed
58 11:04:15 (LDRA) Win_C/C++ Test suite (consisting of: Win_C/C++ Testbed
59 11:04:15 (LDRA) Win_C/C++ Test suite (consisting of: Win_C/C++ Testbed

```

Updating the License Server

You may receive an updated **license.dat**, this could be for a feature upgrade, license extension or version upgrade.

When updating the server, backup up your old **license.dat** so you can revert to this should you face any transition issues.

Copy the new **license.dat** in its place. Add any ports or additional options you had specified in the previous **license.dat**. The re-read will fail if the new license.dat does not use the same ports as the previous license.dat.

Run the **Re-Read_LicenseFile.bat** (Windows) or **re-read_licensefile.sh** (Linux), this updates the license server for the new **license.dat**.

When the re-read is complete the license is updated and ready for use, check the **ldra.log** file for any errors. If the license server is not updated after the re-read has been performed, try stopping the license server and then starting it again.

NOTE: if your license expired the license server may have stopped entirely, in this case the re-read will not be sufficient to update the license server. In this scenario you should start the license server.

If a new CTL file was provided with the **license.dat**, make sure that all the clients are updated to use the new CTL file.

If you face any issues check the [Troubleshooting](#) section or contact **licencing@ldra.com**.

License Servers are Backwards compatible. See [Backwards Compatibility](#).

Changing the License Server.

If you need to change the server your license is hosted on, a request should be made to **licencing@ldra.com** with the new server information.

Copy the *FlexLM Server Tools* from the old server to the new server and run the **Get_licenseinfo.bat** or **get_licenseinfo.sh** file to generate a **.info** file containing the new server information. Email this **.info** file with your server change request along with your **Customer ID**.

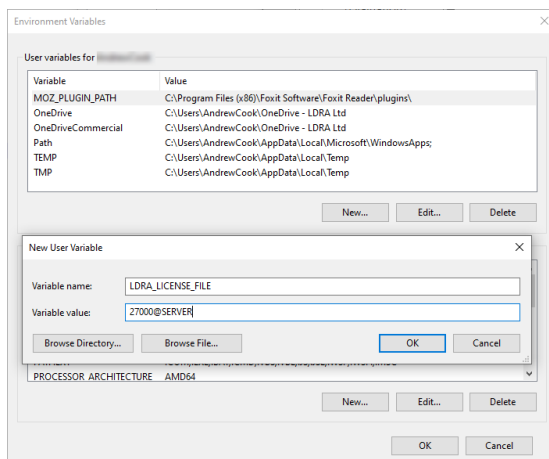
If you are unable to copy the *FlexLM* tools from the old server, please request for a new download link for the *FlexLM Server Tools* to be sent.

You will then be sent a new **license.dat** and **Toolsuite.ctl** for use with the new server. Follow the steps in Installing a [Network License](#) for the new server.

The client machines will need updating with the new **Toolsuite.ctl** and the *Environment Variable* **LDRA_LICENSE_FILE** will need updating to point to the new server.

Updating the Environment Variable (Windows)

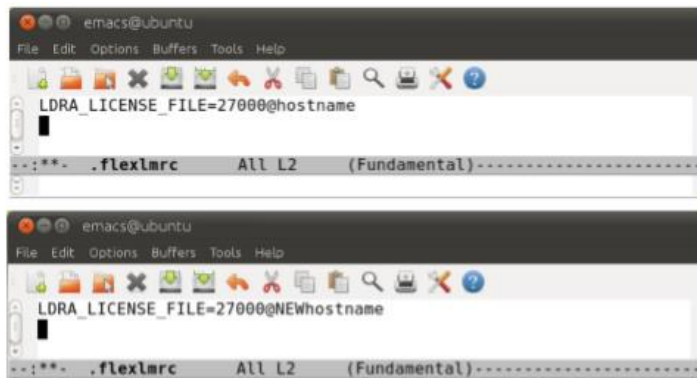
To update the *Environment Variable*, open **Control Panel** and search for *Environment Variable* (Windows 7) or from **System Properties > Advanced > Environment Variables**.



Note: Windows also saves these variable values in the registry and removing them from the above dialog does not totally remove them, to fully remove all trace the Registry Editor needs to be used. See the “Slow Responses from License Server” section for more details.

Updating the Environment Variable (Linux/macOS)

To update the *Environment Variable*, edit the **home/\$user/.flexlmrc** file



FlexID Dongles

If you are licensed using a *FlexID* dongle, make sure the dongle drivers are installed (License Server Only). If you do not have the dongle drivers request the installer from **licencing@ldra.com**.

Windows

Download the *Windows* dongle drivers from *LDRA's FTP* site.

View the **readme.html** for details on installing the drivers, ensure the dongle is **not** plugged in whilst installing the drivers. Ensure the provided DLLs are copied to the correct locations.

Linux

Install the relative package for your distribution (**.rpm .deb**), make sure the dongle is **not** plugged in when install the dongle drivers.

If you cannot install using the package, download the Manual Script Installer. View the **Readme.html** for more information.

Options File

An Options File can be used to configure additional settings to the license server.

To create an Options File for your LDRA License Server, create a file named **LDRA.opt** and place it in the same directory as the license.dat. The Options File, if present, will be used.

If you need to name the file differently, or place the file elsewhere, edit the license.dat and add **options=path/to/file** to the VENDOR line as shown below

```
VENDOR LDRA options=D:\SomePath\ldra.opt
```

If the license server was already running when implementing or modifying the Options File, you must run the "re-read" to update the license server to use the Options File. Alternatively, the Options File is read when the license server starts.

Option File Keywords

The below Keywords can be used in the options file.

INCLUDE	Allow a user to use a feature or package
INCLUDEALL	Allow a user to use all features served by this vendor daemon
EXCLUDE	Deny a user access to a feature or package
EXCLUDEALL	Deny a user access to all features served by this vendor daemon.
GROUP	Define a group of users for use with any options
GROUPCASEINSENSITIVE	Sets case sensitivity for user and host lists specified in GROUP and HOST_GROUP keywords
HOST_GROUP	Define a group of hosts for use with any options
TIMEOUT	Specify idle timeout for a feature or package, returning it to the free pool for use by another user
TIMEOUTALL	Set timeout on all features
MAX	Limit usage for a particular feature/group, prioritizes usage among users
NOLOG	Turn off logging of certain items in the debug log file
REPORTLOG	Specify that a report log file suitable for use by the FLEXnet Manager license usage reporting tool be written.
DEBUGLOG	Writes debug log information for this vendor daemon to the specified file
RESERVE	Reserve a feature or package for a user or group of users/hosts

Comments can be added to the Options File by using hash symbol, #.

INCLUDE

```
INCLUDE feature type name
```

Allows a user or group of users to access the license for the specified feature. EXCLUDE entries take precedence over INCLUDE entries

feature	the name of the feature or package to be included
type	see Specifying License Restrictions Using Type
name	the name of the type to exclude

For example, to allow the USER "Charles" to use f1:

```
INCLUDE f1 USER Charles
```

INCLUDEALL

```
INCLUDEALL type name
```

Allows a user or group of users access to all features and packages in the associated license. EXCLUDEALL entries take precedence over INCLUDEALL entries

type	see Specifying License Restrictions Using Type
name	the name of the type to exclude

For example, to remove the USER "Charles" from using any feature in the license:

```
EXCLUDEALL USER Charles
```

EXCLUDE

```
EXCLUDE feature type name
```

Excludes a user or group of users from accessing a license for the specified feature. EXCLUDE entries take precedence over INCLUDE entries

feature	the name of the feature or package to be excluded
type	see Specifying License Restrictions Using Type
name	the name of the type to exclude

For example, to remove the USER "Charles" from using a feature or package "f1":

```
EXCLUDE f1 USER Charles
```

EXCLUDEALL

```
EXCLUDEALL type name
```

Excludes a user or group of users from all features in the associated license. EXCLUDEALL entries take precedence over INCLUDEALL entries

type	see Type Specifications
name	the name of the type to exclude

For example, to remove the USER "Charles" from using any feature in the license:

```
EXCLUDEALL USER Charles
```

GROUP

```
GROUP group_name user_list
```

Defines a group of users for use with INCLUDE, INCLUDEALL, EXCLUDE, EXCLUDEALL and RESERVE option lines.

group_name	Name of the group (case sensitive)
user_list	List of user names to add to this group. Case sensitive unless GROUPCASEINSENSITIVE is "on"

For create the group "Testers" consisting of "Charles", "Sarah" and "James":

```
GROUP Testers Charles Sarah James
```

GROUPCASEINSENSITIVE

```
GROUPCASEINSENSITIVE on | off
```

If set to on, user names used with GROUP and host names with HOST_GROUP will be treated as case insensitive. By default GROUPCASEINSENSITIVE is off and user names and host names are case sensitive.

HOST_GROUP

```
HOST_GROUP group_name host_list
```

Defines a group of hosts for use with INCLUDE, INCLUDEALL, EXCLUDE, EXCLUDEALL and RESERVE option lines.

group_name	Name of the group (case sensitive)
host_list	List of host names to add to this group. Case sensitive unless GROUPCASEINSENSITIVE is "on"

For create the group "Testers" consisting of "Test1", "Dev1" and "Build1":

```
GROUP Testers Test1 Dev1 Build1
```

TIMEOUT

```
TIMEOUT feature seconds
```

Sets the time after which an inactive license is returned and available for check out. Will not reclaim licenses where a GUI is left open as that retains a license, will only apply to licenses where the feature is not being used but the license was not returned due to an issue sending the return signal back to the license server.

Feature	Name of the feature
seconds	number of seconds after which the license is reclaimed, cannot be lower than 900.

For create the group "Testers" consisting of "Test1", "Dev1" and "Build1":

```
GROUP Win_C/C++_TBRUN 900
```

TIMEOUTALL

`TIMEOUT seconds`

Same as TIMEOUT but applies to all features in the license

MAX

`MAX num_lic feature type name`

Limits usage for a user or group, when used for a group it limits the usage for the group as a whole not each individual user within the group.

<code>num_lic</code>	usage limit for this user or group
<code>feature</code>	feature or package that this applies to
<code>type</code>	see Specifying License Restrictions Using Type
<code>name</code>	name of the type or group to apply the limitation

In place of the name, ALL_USERS or ALL_GROUPS can be used to apply the limitation to all users, this only applies to MAX only.

To limit "Bob" to 5 users but all other users to 4 for the feature "f1":

```
MAX 5 f1 USER Bob
MAX 4 f1 USER ALL_USERS
```

Likewise to limit the group "DEV" to 5 licenses and other groups to 4 licenses:

```
MAX 5 f1 GROUP DEV
MAX 4 f1 GROUP ALL_GROUPS
```

The ALL_USERS or ALL_GROUPS must come after the individual user or group.

REPORTLOG

Specifies the report log file for the vendor daemon.

`REPORTLOG [+]path/to/file`

Preceding the path to the file with a + character appends logging entries, otherwise the file is overwritten each time the license server is stopped and started.

On Windows, path names that include spaces must be enclosed in double quotes.

DEBUGLOG

`DEBUGLOG [+]path/to/file [AUTO_ROLLOVER size]`

By default the LDRA License Server will output both the Imgrd and vendor daemon logging to the same file, ldra.log.

Setting **DEBUGLOG** specifies a location for the debug log output from the vendor daemon associated with this options file.

Preceding the path to the file with a + character appends logging entries, otherwise the file is overwritten each time the license server is stopped and started.

The optional argument `AUTO_ROLLOVER` can be used to archive the log when it reaches the specified size, this prevents the log getting too large to read when there are lots of check in/outs or when using the `+` option to append the log.

The size can be in KB, MB or GB. E.g.

```
DEBUGLOG +C:\Flex_logs\LDRA.log AUTO_ROLLOVER 512KB
```

At midnight, auto rollover should happen and `debug.log` contents should have moved out to the newly generated file in the format **LDRA<hostname><date> T<time>.log**

Note that this affects output from only the vendor daemon associated with this options file. The debug log output of `Imgrd` is not captured in this file. See **REPORTLOG** for `Imgrd` logging.

On Windows, pathnames which include spaces must be enclosed in double quotes.

NOLOG

Suppresses logging the selected type of event in the debug log file.

```
NOLOG {IN | OUT | DENIED | UNSUPPORTED}
```

For example to only log unsuccessful attempts:

```
NOLOG IN
NOLOG OUT
```

RESERVE

This option applies to concurrent licenses held in license files and trusted storage.

```
RESERVE num_lic feature type name
```

Reserves licenses for a specific user.

<code>num_lic</code>	usage limit for this user or group
<code>feature</code>	feature or package that this applies to
<code>type</code>	see Specifying License Restrictions Using Type
<code>name</code>	name of the type or group to apply the limitation

Any license reserved for a user or group are dedicated to that user or group, even when the license is not being used. This allows you to reserve a license for essential users so that they always obtain a license.

Specifying License Restrictions Using Type

Some option keywords restrict who may use licenses or where licenses may be used. These options take a type argument that specifies what the restriction is based on.

When using the option keywords `EXCLUDE`, `EXCLUDEALL`, `INCLUDE`, `INCLUDEALL`, `MAX`, and `RESERVE`, the following values can be used for type:

- **USER**—User name of the user requesting a license. User names are case sensitive and cannot contain spaces.

- **GROUP**—Name of the group of users. (Before you can restrict an option by a specific group, the options file must also include a GROUP option that defines the group.)
- **HOST**—System host name or IP address where the application is executing. Host names are not case sensitive. The IP address can contain wildcard characters.
- **HOST_GROUP**—Name of the group of hosts. (Before you can restrict an option by a specific group, the options file must also include a HOST_GROUP option that defines the group.)
- **INTERNET**—IP address of the system where the application is executing.

The types listed above take a single member. For example:

```
EXCLUDE f1 USER joe
```

To specify a list of users or hosts, first define the list using the GROUP or HOST_GROUP option lines, then use the GROUP or HOST_GROUP type to specify the group name. For example:

```
GROUP stars joe barbara susan
EXCLUDE f1 GROUP stars
```

Options File Examples

The following information gives some examples of options files intended to illustrate ways to effectively control access to your licenses.

Simple Options File Example

```
RESERVE 1 f1 USER robert
RESERVE 3 f1 HOST mainline
EXCLUDE f1 USER lori
```

This options file:

- Reserves one license for the feature “f1” for the user “robert.”
- Reserves three licenses for the feature “f1” for anyone on the system with the host name “mainline.”
- Prevents the user “lori” from using the “1” feature on any machine on the network.

The sum total of the licenses reserved must be less than or equal to the number of licenses specified in the FEATURE line. In the example above, there must be a minimum of four licenses on the “compile” FEATURE line. If fewer licenses are available, only the first set of reservations (up to the license limit) is used.

Limiting Access for Multiple Users

Each INCLUDE, INCLUDEALL, EXCLUDE, EXCLUDEALL, MAX, and RESERVE line must have a single user name (or group) listed. To affect more than one user name create a GROUP. For example to exclude “bob,” “howard,” and “james” from using the feature called “toothbrush,” create the following options file:

```
EXCLUDE toothbrush USER bob
EXCLUDE toothbrush USER howard
```

```
EXCLUDE toothbrush USER james
```

However, there is an easier way. Create a GROUP and exclude the list of users from using the feature. Like the previous example, the following options file excludes “bob,” “howard,” and “james” from using the feature called “toothbrush”:

```
# First define the group "Hackers"
GROUP Hackers bob howard james
# Then exclude the group
EXCLUDE toothbrush GROUP Hackers
```

Now when you want to allow or deny access to any feature to that group, you have an alias list to make it simple.

EXCLUDE Example

```
#First Define the group "painters"
GROUP painters picasso mondrian klee
EXCLUDE spell GROUP painters
EXCLUDE spell USER bob
EXCLUDE spell INTERNET 123.123.123.*
```

This options file:

- Prevents the users “picasso,” “mondrian,” and “klee” from using the feature “spell” on any machine on the network.
- Prevents the user “bob” from using the feature “spell” on any machine on the network.
- Prevents any user logged into a host with an IP address in the range 123.123.123.0 through 123.123.123.255 from using the feature “spell.”
- Allows any other user, as long as they are not on the excluded IP addresses, and they are not a member of the “painters” GROUP, and they are not “bob,” to use feature “spell” (by implication).

Note that “bob” could have been added to the group “painters.” However, “painters” might be used for some other purpose in the future so the license administrator chose to handle “bob” as a special case here. In this case, the two EXCLUDE statements concatenate to create a list of four users.

INCLUDE Example

```
INCLUDE paint USER picasso
INCLUDE paint USER mondrian
INCLUDE paint HOST bigbrush
```

This options file:

- Allows the user “picasso” to use the feature “paint” on any machine on the network.
- Allows the user “mondrian” to use the feature “paint” on any machine on the network.
- Allows any user, as long as they are on the host “bigbrush,” to use feature “paint.”
- Denies access to the feature “paint” to anyone except “picasso,” “mondrian,” or anyone from the host “bigbrush” (by implication).

Troubleshooting

Should you face any issues during the licensing process, please check this section for solutions prior to contacting licencing@ldra.com.

The ldra.log file

The ldra.log file is useful for diagnosing any errors and should be included in any support requests to licencing@ldra.com.

The **ldra.log** file is created when a server is started, stopping and restarting the license server will clear the **ldra.log** file. The ldra.log file is only available on the license server.

The **ldra.log** file will be in the same directory as the **license.dat** on your server unless you have configured your license server from the default.

An example of the **ldra.log** file is shown below:

```
16:01:06 (lmgrd) Server's System Date and Time: Thu Jul 16 2020 16:01:06 GMT Daylight Time
16:01:06 (lmgrd) pid 28956
16:01:06 (lmgrd) SLOG: Summary LOG statistics is enabled.
16:01:06 (lmgrd) Done rereading
16:01:06 (lmgrd) FlexNet Licensing (v11.15.0.0 build 215548 i86_n3) started on DESKTOP-0NR2F96 (IBM PC) (7/16/2020)
16:01:06 (lmgrd) Copyright (c) 1988-2017 Flexera Software LLC. All Rights Reserved.
16:01:06 (lmgrd) World Wide Web: http://www.flexerasoftware.com
16:01:06 (lmgrd) License file(s): license.dat
16:01:06 (lmgrd) lmgrd tcp-port 27005
16:01:06 (lmgrd) (@lmgrd-SLOG@) =====
16:01:06 (lmgrd) (@lmgrd-SLOG@) === LMGRD ===
16:01:06 (lmgrd) (@lmgrd-SLOG@) Start-Date: Thu Jul 16 2020 16:01:06 GMT Daylight Time
16:01:06 (lmgrd) (@lmgrd-SLOG@) PID: 28956
16:01:06 (lmgrd) (@lmgrd-SLOG@) LMGRD Version: v11.15.0.0 build 215548 i86_n3 ( build 215548 (ipv6))
16:01:06 (lmgrd) (@lmgrd-SLOG@)
16:01:06 (lmgrd) (@lmgrd-SLOG@) === Network Info ===
16:01:06 (lmgrd) (@lmgrd-SLOG@) Listening port: 27005
16:01:06 (lmgrd) (@lmgrd-SLOG@)
16:01:06 (lmgrd) (@lmgrd-SLOG@) === Startup Info ===
16:01:06 (lmgrd) (@lmgrd-SLOG@) Is LS run as a service: No
16:01:06 (lmgrd) (@lmgrd-SLOG@) Server Configuration: Single Server
16:01:06 (lmgrd) (@lmgrd-SLOG@) Command-line options used at LS startup: -c license.dat -l ldra.log
16:01:06 (lmgrd) (@lmgrd-SLOG@) License file(s) used: license.dat
16:01:06 (lmgrd) (@lmgrd-SLOG@) =====
16:01:06 (lmgrd) SLOG: FNPLS-INTERNAL-VL1-4096
16:01:06 (lmgrd) Starting vendor daemons ...
16:01:06 (lmgrd) Starting vendor daemon at port 1234
16:01:06 (lmgrd) Using vendor daemon port 1234 specified in license file
16:01:06 (lmgrd) Started LDRA (pid 5532)
16:01:08 (LDRA) SLOG: Summary LOG statistics is enabled.
16:01:08 (LDRA) SLOG: FNPLS-INTERNAL-CKPT1
16:01:08 (LDRA) SLOG: VM Status: 0
16:01:08 (LDRA) SLOG: FNPLS-INTERNAL-CKPT5
16:01:08 (LDRA) SLOG: TPM Status: 0
16:01:08 (LDRA) SLOG: FNPLS-INTERNAL-CKPT6
16:01:08 (LDRA) Server started on DESKTOP-0NR2F96 for:
16:01:08 (LDRA) Win_C/C++_Tool_suite (consisting of: Win_C/C++_Testbed
16:01:08 (LDRA) Win_C/C++_TBGUI Win_C/C++_TBDIAGRAM Win_C/C++_TBFlow
16:01:08 (LDRA) Win_C/C++_TBGLHAPI Win_C/C++_DYNAMIC Win_C/C++_TBHIS
16:01:08 (LDRA) Win_C/C++_TBMISRA Win_C/C++_TBSAFE Win_C/C++_TBRUN
16:01:08 (LDRA) Win_C/C++_TBEXTREME Win_C/C++_TBPUBLISH Win_C/C++_TBEVOLVE
16:01:08 (LDRA) Win_C/C++_OBJBOX Win_C/C++_TBREPORTS Win_C/C++_TBVISION
16:01:08 (LDRA) Win_C/C++_TBsecure Win_C/C++_TBMem Win_C/C++_TBGLHSUPPORT
16:01:08 (LDRA) Win_C/C++_TBBUILDTEST Win_C/C++_TBTLPTEST Win_C/C++_TLPconfig
16:01:08 (LDRA) Win_C/C++_TBFARMMONITOR Win_C/C++_TBGLHCOMPARE Win_C/C++_Dyndflow
16:01:08 (LDRA) Win_C/C++_LDRAGenTCF Win_C/C++_TBMKELOGPARSER Win_C/C++_TBEXCLUDE
16:01:08 (LDRA) Win_C/C++_TBMANAGER TBMANAGER TBOFFICE
16:01:08 (LDRA) LDRA LAUNCHER
16:01:08 (LDRA) EXTERNAL FILTERS are OFF
16:01:08 (lmgrd) LDRA using TCP-port 1234
16:01:08 (LDRA) SLOG: Statistics Log Frequency is 240 minute(s).
16:01:08 (LDRA) SLOG: TS update poll interval is 600 seconds.
16:01:08 (LDRA) SLOG: Activation borrow reclaim percentage is 0.
16:01:08 (LDRA) (@lmgrd-SLOG@) =====
```


After starting or updating the license server the ldra.log file should be checked for errors.

```
11:29:10 (LDRA) Win_C/C++_TBFARMMONITOR Win_C/C++_TBGLHCOMPARE Win_C/C++_Dyndflow
11:29:10 (LDRA) Win_C/C++_LDRAGenTCF Win_C/C++_TBMAKELOGPARSER Win_C/C++_TBEXCLUDE
11:29:10 (LDRA) Win_C/C++_TBMANAGER TBMANAGER TBOFFICE
11:29:10 (LDRA) LDRALAUNCHER
11:29:10 (LDRA) Wrong hostid on SERVER line for license file:
11:29:10 (LDRA) license.dat
11:29:10 (LDRA) SERVER line says 8b729b6001dd, hostid is "c8f750761762 4889e7d4d515 4a89e7d4d514 00ffa9a33b16 4889e7d4d514"
11:29:10 (LDRA) Invalid hostid on SERVER line
11:29:10 (LDRA) Disabling 1 license from feature LDRALAUNCHER(00EE 7C24 BA1D 8888 )
11:29:10 (LDRA) Disabling 1 license from feature TBMANAGER(00EE 7C24 BA1D 8888 )
11:29:10 (LDRA) Disabling 1 license from feature TBOFFICE(00EE 7C24 BA1D 8888 )
11:29:10 (LDRA) Disabling 1 license from feature Win_C/C++_DYNAMIC(00EE 7C24 BA1D 8888 )
```

The above example shows that the hostid of the license server machine does not match the hostid specified on the SERVER line in the license.dat. Causes for this could be:

- The license.dat is being used on a different machine than it was issued for
- Hardware on the machine has changed.
- Removal of a laptop docking station can cause this issue if the license was tied to the mac address for this docking station.

```
11:37:07 (LDRA) EXPIRED: Win_C/C++_TLPcontlg
11:37:07 (LDRA) EXPIRED: Win_C/C++_TBFARMMONITOR
11:37:07 (LDRA) EXPIRED: Win_C/C++_TBGLHCOMPARE
11:37:07 (LDRA) EXPIRED: Win_C/C++_Dyndflow
11:37:07 (LDRA) EXPIRED: Win_C/C++_LDRAGenTCF
11:37:07 (LDRA) EXPIRED: Win_C/C++_TBMAKELOGPARSER
11:37:07 (LDRA) EXPIRED: Win_C/C++_TBEXCLUDE
11:37:07 (LDRA) EXPIRED: Win_C/C++_TBMANAGER
11:37:07 (LDRA) EXPIRED: TBMANAGER
11:37:07 (LDRA) EXPIRED: TBOFFICE
11:37:07 (LDRA) EXPIRED: LDRALAUNCHER
11:37:07 (LDRA) License server system started on DESKTOP-0NR2F96
11:37:07 (LDRA) No features to serve, exiting
11:37:07 (LDRA) EXITING DUE TO SIGNAL 27 Exit reason 4
11:37:10 (lmgrd) LDRA exited with status 27 (No features to serve)
11:37:10 (lmgrd) LDRA daemon found no features. Please correct
11:37:10 (lmgrd) license file and re-start daemons.
```

The above example shows that the license has expired, this is most common in evaluations and you should contact your LDRA Sales Representative if you need an extension.

The log file will show the time and the user that checked out or returned a license for each feature. The user is recorded in the format **username@hostname** e.g. **General@fantooth** where **General** is the *Windows* username and **fangtooth** is the hostname of the client machine.

Unsuccessful attempts will be recorded in the **ldra.log** file with **DENIED**.

```
101 16:39:38 (LDRA) (@LDRA-SLOG@) =====
102 16:39:52 (LDRA) TCP_NODELAY NOT enabled
103 16:39:52 (LDRA) DENIED: "Win_C/C++_Tool_suite" User@DESKTOP-0NR2F96 (Invalid host. (-9,333))
104 16:39:52 (LDRA) DENIED: "LDRALAUNCHER" User@DESKTOP-0NR2F96 (Invalid host. (-9,333))
```

The reason for the failure is outputted to the **ldra.log** file, in the example above the reason **Invalid Host** is given. This means that there is a mismatch in host information between the license file and the client machine.

Further information on error codes, their causes and resolutions can be found in this Troubleshooting section.

Successful license check outs are indicated in the ldra.log file by OUT, returned licenses are indicated by IN.

```
18:03:40 (LDRA) (@LDRA-SLOG@) =====
18:03:52 (LDRA) TCP_NODELAY NOT enabled
18:03:53 (LDRA) OUT: "m_C/C++_TBVISION" USER1@MACHINE1
18:03:53 (LDRA) OUT: "m_C/C++_TBSAFE" USER1@MACHINE1
18:04:24 (LDRA) OUT: "LDRALAUNCHER" USER3@MACHINE3
18:04:25 (LDRA) OUT: "m_C/C++_TBVISION" USER2@MACHINE2
18:04:25 (LDRA) OUT: "m_C/C++_TBSAFE" USER2@MACHINE2
18:04:36 (LDRA) OUT: "m_C/C++_Testbed" USER1@MACHINE1
18:04:36 (LDRA) OUT: "m_C/C++_DYNAMIC" USER1@MACHINE1
18:04:36 (LDRA) OUT: "m_C/C++_Dyndflow" USER1@MACHINE1
18:04:50 (LDRA) OUT: "m_C/C++_Testbed" USER1@MACHINE1
18:04:50 (LDRA) OUT: "m_C/C++_DYNAMIC" USER1@MACHINE1
18:04:50 (LDRA) OUT: "m_C/C++_Dyndflow" USER1@MACHINE1
18:05:04 (LDRA) OUT: "m_C/C++_Testbed" USER1@MACHINE1
18:05:04 (LDRA) OUT: "m_C/C++_DYNAMIC" USER1@MACHINE1
18:05:04 (LDRA) OUT: "m_C/C++_Dyndflow" USER1@MACHINE1
18:05:15 (LDRA) OUT: "m_C/C++_Testbed" USER3@MACHINE3
18:05:15 (LDRA) OUT: "m_C/C++_DYNAMIC" USER3@MACHINE3
18:05:18 (LDRA) OUT: "m_C/C++_Dyndflow" USER3@MACHINE3
18:05:18 (LDRA) OUT: "m_C/C++_TBSAFE" USER3@MACHINE3
18:05:19 (LDRA) OUT: "m_C/C++_TBMISRA" USER3@MACHINE3
18:05:19 (LDRA) OUT: "m_C/C++_TBRUN" USER3@MACHINE3
18:05:19 (LDRA) OUT: "m_C/C++_TBPUBLISH" USER3@MACHINE3
18:05:20 (LDRA) OUT: "m_C/C++_TBEXTREME" USER3@MACHINE3
18:05:20 (LDRA) OUT: "m_C/C++_TBMANAGER" USER3@MACHINE3
18:05:20 (LDRA) OUT: "m_C/C++_TBGUI" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_Testbed" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_TBMANAGER" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_TBGUI" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_DYNAMIC" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_TBMISRA" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_TBSAFE" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_TBRUN" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_TBEXTREME" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_TBPUBLISH" USER3@MACHINE3
18:05:24 (LDRA) IN: "m_C/C++_Dyndflow" USER3@MACHINE3
```

Contacting licencing@ldra.com

When contacting licencing@ldra.com please include the ldra.log file along with as much information on the issue as possible. Describe the error message you received, where possible include a screenshot of the error message.

Please include your Customer ID in all emails to **LDRA**, your **Customer ID** can be found in your CTL file.

```
*****
*   LDRA Control File   *
*   =====           *
*                       *
*                       *
*****

COMPANY   : LDRA
CUSTID    : XXXXXX
LOCATION   : Portside UK
PURTYPE   : PERPETUAL
LICTYPE   : FTYPE
VENDOR    : LDRA
```

The more details you can provide in your email, will help us to resolve the issue more efficiently.

The LicenseServerStatus.log file

The **LicenseServerStatus.log** file will display the licensed features that are being issued by the license server. The number of licenses available and in use for each licensed feature is displayed.

The **LicenseServerStatus.log** can be viewed from the client machine.

To view the **LicenseServerStatus.log** run the **Query_licenseserver.bat** (Windows) or **query_licenseserver.sh** (Linux)

Alternatively run the following command from the *FlexLM* directory:

lmutil lmstat -f >LicenseServerStatus.log (Windows)

./lmutil lmstat -f >LicenseServerStatus.log (Linux)

The **LicenseServerStatus.log** file can be viewed in a text editor.

The **LicenseServerStatus.log** displays the current usage at time of requesting the information.

```
lmutil - Copyright (c) 1989-2012 Flexera Software LLC. All Rights Reserved.
Flexible License Manager status on Mon 1/12/2015 12:08

[Detecting lmgrd processes...]
License server status: 270000@fangtooth
License file(s) on fangtooth: C:\Flexlm\Ftype\license.dat:

fangtooth: license server UP (MASTER) v11.9
Vendor daemon status (on fangtooth):
LDRA: UP v11.12
Feature usage info:

Users of win_C/C++_Tool_suite: (Total of 4 licenses issued; Total of 1 license in use)
"win_C/C++_Tool_suite" v9.50, vendor: LDRA
nodeLocked license, locked to Internet address "INTERNET=192.168.56.*"
General fangtooth fangtooth (v9.50) (fangtooth/27000 201), start Mon 1/12 12:08

Users of win_C/C++_TBVISION: (Total of 3 licenses issued; Total of 1 license in use)
"win_C/C++_TBVISION" v10.00, vendor: LDRA
nodeLocked license, locked to Internet address "INTERNET=192.168.56.*"
General fangtooth fangtooth (v9.45) (fangtooth/27000 101), start Mon 1/12 12:08

Users of TBMANAGER: (Total of 2 licenses issued; Total of 0 licenses in use)

Users of win_C/C++_Testbed: (Total of 4 licenses issued; Total of 1 license in use)
"win_C/C++_Testbed" v9.50, vendor: LDRA
nodeLocked license, locked to Internet address "INTERNET=192.168.56.*"
General fangtooth fangtooth (v9.45) (fangtooth/27000 701), start Mon 1/12 12:08

Users of win_C/C++_TBGUI: (Total of 4 licenses issued; Total of 1 license in use)
"win_C/C++_TBGUI" v9.50, vendor: LDRA
nodeLocked license, locked to Internet address "INTERNET=192.168.56.*"
General fangtooth fangtooth (v9.45) (fangtooth/27000 1801), start Mon 1/12 12:08

Users of win_C/C++_TBCALL: (Total of 4 licenses issued; Total of 0 licenses in use)
Users of win_C/C++_TBFLOW: (Total of 4 licenses issued; Total of 0 licenses in use)
```

Total / In Use licenses for this feature

Who the license was signed out by and when

Licensed Features not currently in use

If no features are shown in the log, check the following:

1. The license server is running.
2. The environment variable **LDRA_LICENSE_FILE** is correct pointing to the server.
3. The client machine's IP is in the range in the license file. Please note that this log file will show all *FlexLM* licenses for all vendors/software not just *LDRA*.

Useful Diagnostic Commands

There are a few commands that can help confirm where the issue lies. The *FlexLM* utilities come with an executable "Imutil", this can be used to display the status of license availability and some diagnostics.

Imutil Imstat -f <FEATURE>, can be used to check the availability of a specific feature. To check for license usage for the feature **LDRALAUNCHER**, use the command

Imutil Imstat -f LDRALAUNCHER

This will produce the output below

```
Imutil - Copyright (c) 1989-2017 Flexera Software LLC. All Rights Reserved.
Flexible License Manager status on Tue 12/11/2018 09:44
[Detecting Imgrd processes...]
License server status: 27000@winten
    License file(s) on winten: C:\flexlm\Ftype\license.dat:
    winten: license server UP (MASTER) v11.15.0
Vendor daemon status (on winten):
    LDRA: UP v11.15.0
Feature usage info:
Users of LDRALAUNCHER: (Total of 63 licenses issued; Total of 2 licenses in
use)
"LDRALAUNCHER" v9.75, vendor: LDRA, expiry: permanent(no expiration
date)
nodelocked license, locked to Internet address "INTERNET=192.168.1.*"
jim jim-PC /dev/tty (v9.75) (winten/27000 1702), start Tue 12/11 9:40
jack jack-PC1 jack-PC2 (v9.75) (winten/27000 1902), start Tue 12/11 9:42
```

This output shows which License server you have connected to and the version of *FlexLM* that the server is using

```
License server status: 27000@winten
    License file(s) on winten: C:\flexlm\Ftype\license.dat:
    winten: license server UP (MASTER) v11.15.0
Vendor daemon status (on winten):
    LDRA: UP v11.15.0
```

It shows how many licenses are available for the specified feature and how many are in use

```
Users of LDRALAUNCHER: (Total of 63 licenses issued; Total of 2 licenses in
use)
```

It shows information on the latest version the license supports and whether the license is permanent or if the license has an expiry date.

```
"LDRALAUNCHER" v9.75, vendor: LDRA, expiry: permanent(no expiration
date)
```

It shows what the license is locked to, in this example an IP range 192.168.1.*

```
nodelocked license, locked to Internet address "INTERNET=138.253.*.*"
```

The last thing shown is the users that are currently using this feature

jim jim-PC /dev/tty (v9.75) (winten/27000 1702), start Tue 12/11 9:40

jack jack-PC1 jack-PC2 (v9.75) (winten/27000 1702), start Tue 12/11 9:42

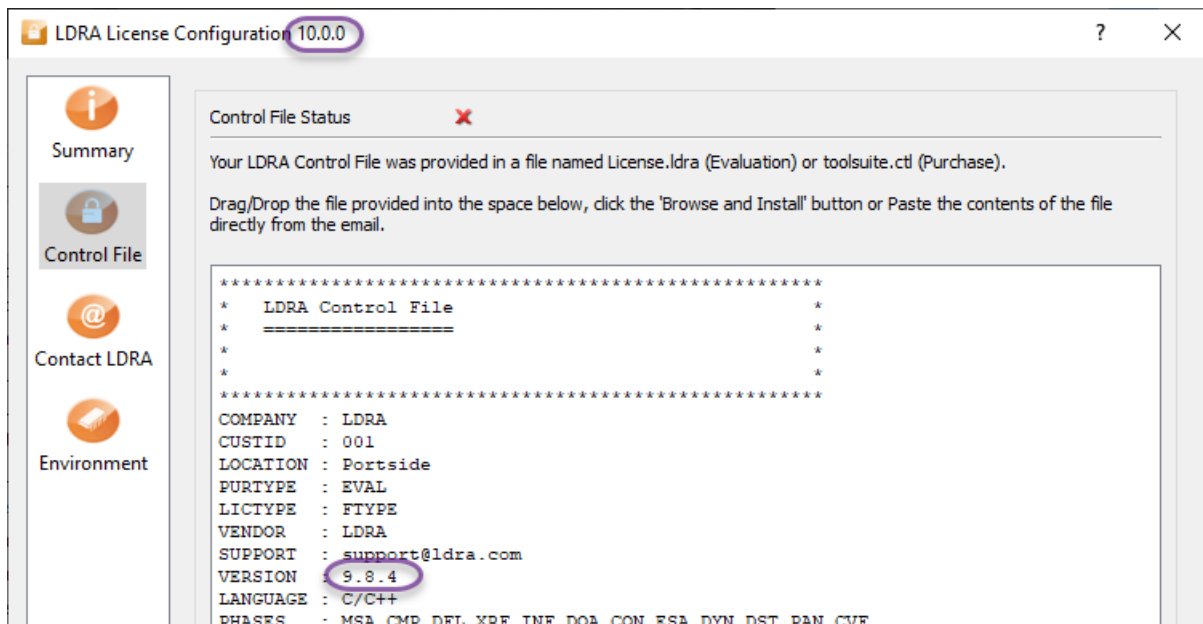
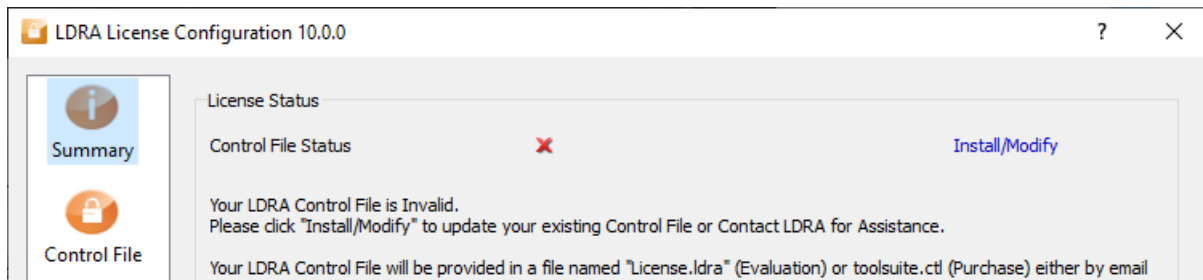
The format for this information is:

"user" "hostname" "display" "(version)" "(license server/ports)", "date/time of checkout"

If the user is accessing a license whilst using remote desktop connection or similar remote access, the "display" will list the machine the remote session is launched from.

Invalid CTL file

If you get an error that the CTL file is invalid, firstly check that the version and language match the installation.



Make sure the CTL file has not been altered, improper editing of this file will invalidate it.

If the issue remains, send the CTL file to **licencing@ldra.com**, include the version of LDRA you have installed and the language e.g. 9.4.3 C/C++.

Slow Responses from License Server

A cause of a slow checkout could be due to high ping between the client and the license server caused by distance between them (geographically) or the routing that the signal takes.

It could also be caused by having unresponsive license servers in your license path as a license will be attempted to be obtained from these unresponsive servers before a successful checkout is found from another server.

You can have multiple license paths in this variable for multiple servers, e.g.

27000@server1; 27000@server2;

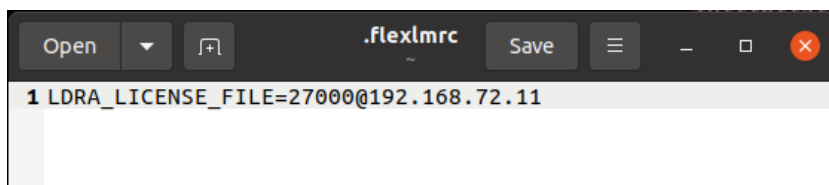
It will contact these servers in turn, starting with the 1st in the list, if it fails to get a license, it will retry 3 times, then move onto the next server in the list until it successfully obtains a license.

So, using the above example, if **server2** is the correct server and **server1** was an old server that is out of commission, the license request would try **server1**, fail and retry 3 times before moving on to the next server in the list and getting a license from **server2**. This adds an unnecessary delay to the checkout while the non-existent server is retried.

If you are experiencing slow checkouts of licenses, check your license path for old servers or incorrect values and remove them.

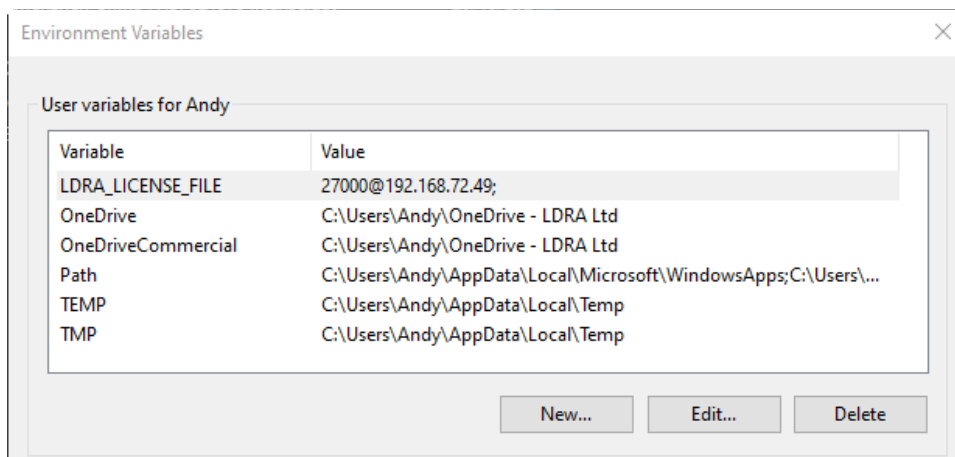
A license server location is defined via the variable **LDRA_LICENSE_FILE**.

On Linux this is stored in the file **~/.flexlmrc**



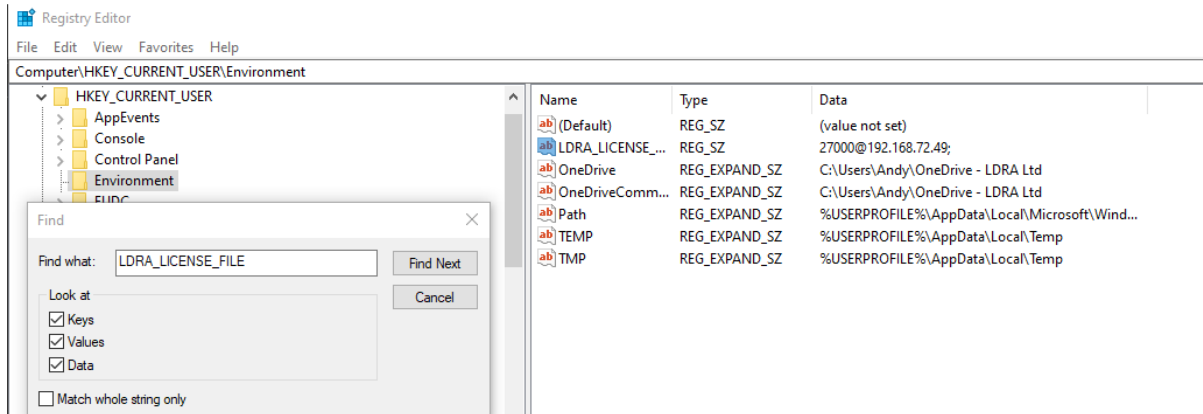
Remove any unwanted values from this file.

On Windows this is a *User Environment Variable*.



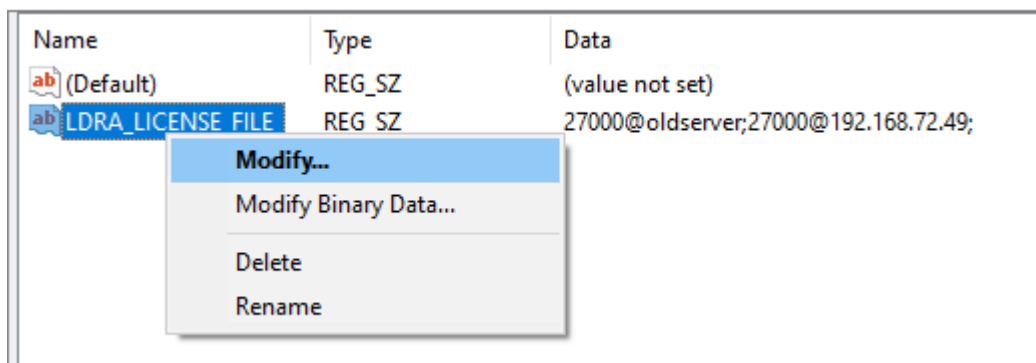
On Windows this may require you to also search the Windows registry and remove the unwanted values. If you are unsure at how to use the Registry Editor please speak to your IT department.

Search the registry for **LDRA_LICENSE_FILE**.

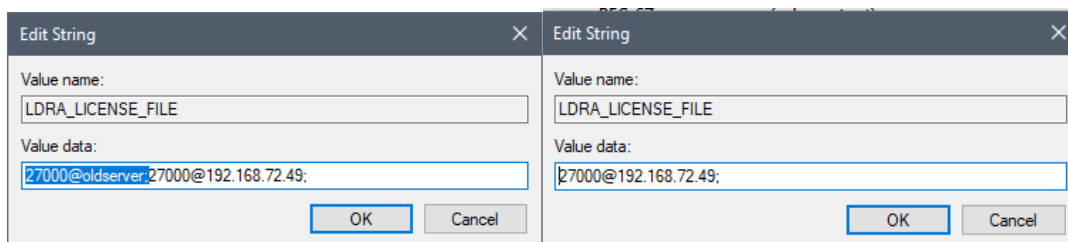


This may occur in several places so search for additional instances.

If you find a value that needs editing, right click on the **LDRA_LICENSE_FILE** and select **Modify**.



Delete the unwanted server information, click **OK** to accept the changes.



Common Error Codes

All license errors are reported by *LDRA* as error/exit code **103**.

FlexLM has several error codes for different errors, these consist of a number and a description, for example "*FlexLM Code -5 No such feature exists*".

FlexLM Error -4, Number of users already reached

Cause:

All the licenses for the feature you requested are in use.

Resolution:

Free up a license and try again. Keeping an *LDRA* application GUI open consumes a license, the license is not returned until all *LDRA* GUIs are closed on that machine. Using the command line obtains a license at start and then returns the license at the end of each command line call.

You can run the command **lmutil lmstat -f <FEATURE>**, where **<FEATURE>** is the name of the feature that the error message mentions as having reached the maximum users, this will show how many users are in use. See the previous section "**Useful Diagnostic Commands**" for more details on using this command.

If you think you should have licenses available, send the *ldra.log* and a description of the issue to **licencing@ldra.com**, include your Customer ID. If you have run the **lmutil lmstat -f <FEATURE>** command, include the output from this command.

If you would like to purchase or rent additional users, please contact your *LDRA* Sales Representative or **sales@ldra.com**.

FlexLM Error -5, No such feature exists

Cause:

The feature you are requesting does not exist on the license server.

This is a mismatch between the CTL and the license server.

Resolution:

Check you are using the correct CTL and that you are connecting to the correct license server.

If you still have an issue, send an image of the error or copy paste the text into an email and send to **licencing@ldra.com**, include your Customer ID.

FlexLM error -8, Invalid License Key

Cause:

This is normally caused by the license.dat file being edited, Improper editing of the license files will invalidate them.

If you have edited the file to add ports or other information, make sure you have not accidentally edited any other parts of the license file.

Resolution:

Download the **license.dat** sent to you via email and replace your existing license.dat being careful not to alter the contents.

If the problem still persists, contact **licencing@ldra.com** stating the error and include the **license.dat** file.

FlexLM Error -9 Invalid Host

Cause:

Your machine is not a valid host for the license.

Valid host is determined by the **HOSTID** in the license.

If your license is networked the **HOSTID** will be your IP.

Known causes for *FlexLM* not using the same IP as what you think is the IP for your machine:

- Using a VPN or network translation that is altering the IP that the license server machine is seeing as the client machines IP
- There are multiple networks on your machine and the "default" network that FlexLM is seeing as the IP for your machine is not the one that is used in the license.
- This can be because you have installed Virtual Box and the IP for the connection is set as the default network. Virtual Box uses 192.168.56.1 as its virtual network IP on the host machine and this can often get set to the default network as it is set up after the main network.

Resolution:

Standalone Licenses

If your license is standalone, there may be an error in the **HOSTID** or the information may have changed since the license was issued, generate a new .info file and email this to **licencing@ldra.com**, include a description of the error and your **Customer ID**.

Network Licenses

If your license is networked then this means your IP is not in the range specified in the license file, please check that your IP is in this range. Check that there is no translation of IP between the client and the server. If you are using a VPN your IP may be different from normal.

If required alter the default network to the correct network.

Consult your IT department before making any changes.

If you require a new license for a new IP range, please send an email to your *LDRA* Sales Representative or **licencing@ldra.com**. Include the new IP and the reason for its requirement in the license.

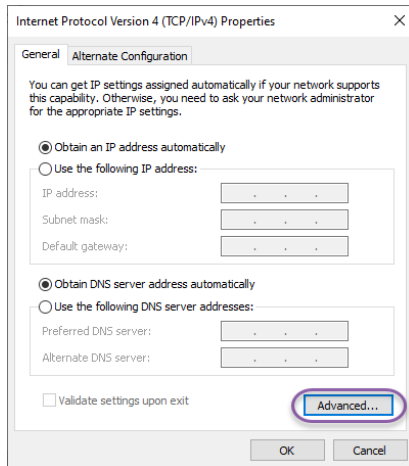
The IP *FlexLM* reads can be seen by using the following command from the *FlexLM* directory

Imutil Imhostid -n -internet	Windows
./Imutil Imhostid -n -internet	Linux/macOS

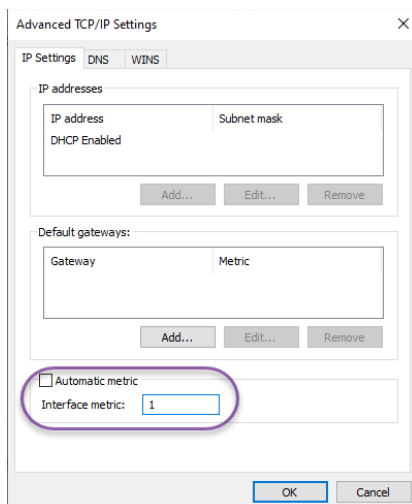
For Windows Clients

If you have more than one network then the Network that resides in this IP range needs to be set to default, as this is the IP *FlexLM* reads.

From the **Network Connections** dialog select **Advanced Settings** for the network that should be default.



Uncheck the Automatic Metric checkbox to enable entering a value in the box below. The lowest number for all your networks will be default, the default value is 10 for all the networks and the default is the last added network.

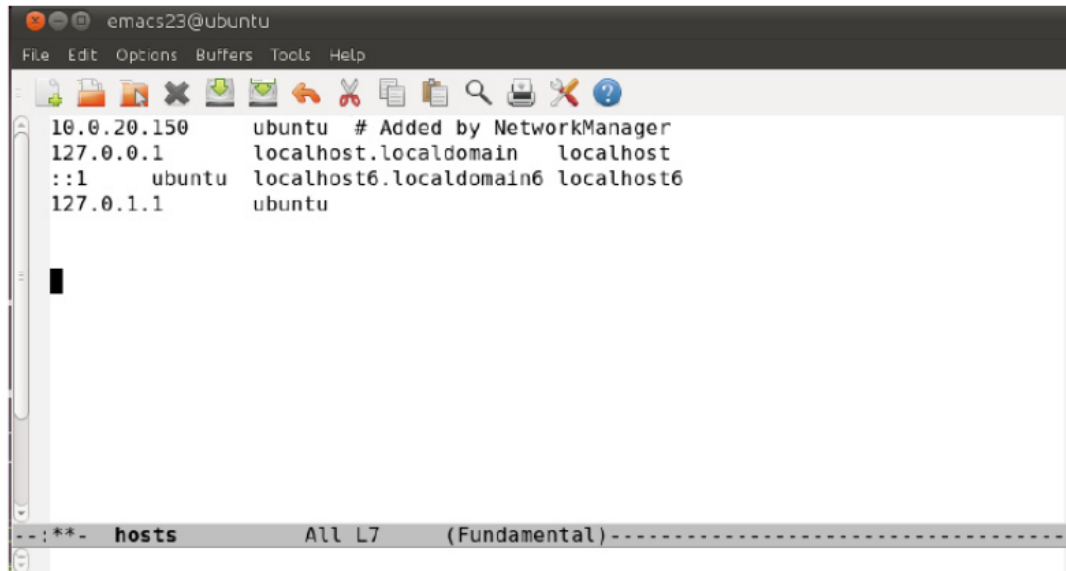


For Linux Clients

FlexLM reads the host information from the file, `etc/hosts`. Make sure that this file has been set up to include the hostname and IP of your machine.

Please consult with you Network Administrator or IT Department before amending this file.

An example of a hosts file where Ubuntu is the hostname and the IP of the machine is set to **10.0.20.150**



```
emacs23@ubuntu
File Edit Options Buffers Tools Help
10.0.20.150  ubuntu # Added by NetworkManager
127.0.0.1    localhost.localdomain localhost
::1         ubuntu  localhost6.localdomain6 localhost6
127.0.1.1    ubuntu

--:**- hosts All L7 (Fundamental)-----
```

FlexLM Error -10 Feature has Expired

Cause:

Your license is timed and has expired.

Resolution:

For Evaluations contact your Local Sales Representative if you require additional time to evaluate.

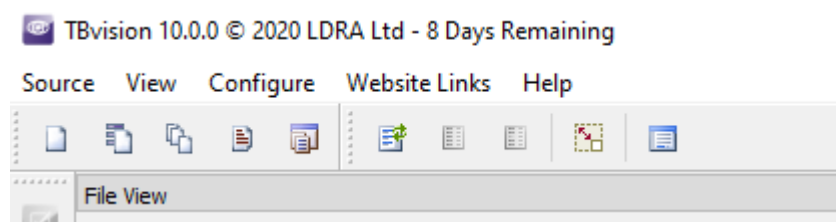
For Subscription licenses that have reach the end of the term, contact your Local Sales Representative to arrange a renewal.

For Off-Site licenses, contact **licencing@ldra.com** and request an extension. Please note, if you are a sub-contractor, license extensions need to come from the license owner, if you are not the license owner please ask the license owner to request the extension on your behalf.

If you have received a temporary license for another reason and are entitled to an extension or permanent licenses, please contact either you **LDRA Sales Representative** or **licencing@ldra.com**.

If you are unsure why your license has expired then please contact **licencing@ldra.com**, include your Customer ID and details of the issue.

Please note that the time remaining is displayed in the Title Bar of **LDRA** when it is below 30 days.



Also the **ldra.log** file will issue warnings that the license is due to expire when below 30 days. Requests for extensions should be made prior to expiry to avoid interruptions.

```
11:43:23 (LDRA) Warning: Win_C/C++ Tool_suite expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ Testbed expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBGUI expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBDIAGRAM expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBFLW expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBGLHAPI expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBDMIC expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBHS expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBMISRA expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBSAFE expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBWIN expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBEXTREME expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBPUBLISH expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBREVOLVE expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBBOX expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBREPORTS expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBVISION expires 23-jul-2020
11:43:23 (LDRA) Warning: Win_C/C++ TBsecure expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBmem expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBGLHSUPPORT expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBUILDTST expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBTLPTEST expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TLPconfig expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBFARMONITOR expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBGLHCOMPARE expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ Dynflow expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ LDRAGENTCF expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBMASLOPARSER expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBEXCLUDE expires 23-jul-2020
11:43:24 (LDRA) Warning: Win_C/C++ TBMANAGER expires 23-jul-2020
11:43:24 (LDRA) Warning: TBMANAGER expires 23-jul-2020
11:43:24 (LDRA) Warning: TBOFFICE expires 23-jul-2020
11:43:24 (LDRA) Warning: LDRALAUNCHER expires 23-jul-2020
11:43:24 (LDRA) Server started on DESKTOP-0MR196 for:
11:43:24 (LDRA) Win_C/C++ Tool_suite (consisting of: Win_C/C++_Testbed
11:43:24 (LDRA) Win_C/C++ TBGUI Win_C/C++ TBDIAGRAM Win_C/C++ TBFLW
11:43:24 (LDRA) Win_C/C++ TBGLHAPI Win_C/C++ TBDMIC Win_C/C++ TBHS
11:43:24 (LDRA) Win_C/C++ TBMISRA Win_C/C++ TBSAFE Win_C/C++ TBWIN
11:43:24 (LDRA) Win_C/C++ TBEXTREME Win_C/C++ TBPUBLISH Win_C/C++ TBREVOLVE
11:43:24 (LDRA) Win_C/C++ TBBOX Win_C/C++ TBREPORTS Win_C/C++ TBVISION
11:43:24 (LDRA) Win_C/C++ TBsecure Win_C/C++ TBmem Win_C/C++ TBGLHSUPPORT
11:43:24 (LDRA) Win_C/C++ TBTLPTEST Win_C/C++ TLPconfig
11:43:24 (LDRA) Win_C/C++ TBFARMONITOR Win_C/C++ TBGLHCOMPARE Win_C/C++ Dynflow
11:43:24 (LDRA) Win_C/C++ LDRAGENTCF Win_C/C++ TBMASLOPARSER Win_C/C++ TBEXCLUDE
11:43:24 (LDRA) Win_C/C++ TBMANAGER TBMANAGER TBOFFICE
11:43:24 (LDRA) LDRALAUNCHER)
```

FlexLM Error -15 Cannot Connect to License Server System

Cause:

The license server cannot be found, this can be because the license server machine is offline or disconnected from the network, or the variable used to specify the license server machine is wrong

Resolution:

Check the license server machine can be "pinged".

Check that the value of the **LDRA_LICENSE_FILE** environment variable is correct. Try using the IP of the license server machine instead of the hostname.

Check the license server is running. Check the **ldra.log** on the license server machine to see if the server is running and if there are any errors. Start the License Server if needed.

Make sure any ports you have specified are open.

See [Updating the Environment Variable \(Windows\)](#) or [Updating the Environment Variable \(Linux/macOS\)](#) for more information on setting the Environment Variable

See [Configuring Ports](#) for more information on what ports are used and how to set these.

If you still require assistance with resolving this error send the following to **licencing@ldra.com**:

- Description of the error
- ldra.log file from the server
- An image showing the value of the LDRA_LICENSE_FILE environment variable value
 - Linux, this is listed in the .flexlmrc file
 - Windows, this is listed on the Environment Variable dialog

FlexLM Error -18 License Server does not support this feature

Cause:

The feature you are attempting to get a license for is not available on the license server you are requesting it from.

This can be because the CTL you are using is the wrong one, or you are connecting to the wrong license server if you have more than one.

Resolution:

Check that the CTL file you are using is the latest one and the correct one for the licenses you are using.

If you have recently upgraded from C to C/C++, this issue would be present if you were using the CTL for C, with the new license for C/C++. Likewise, if you recently upgraded to MultiOS, you would see this issue if you were using the old CTL for a single OS license.

Check that you have purchased or should be licensed for this feature.

Send the **ldra.log** file to **licencing@ldra.com** along with a description of the error. What feature is displayed in the dialog? Include a screenshot where possible.

FlexLM Error -25 License server system does not support this version of this feature

Cause:

The feature you are attempting to achieve a license for has a version that is newer than the license server supports. E.g. You are using v10.4.0 but the license server only supports 10.2.0.

Resolution:

This happens when the license server has not been updated to the latest license but the client has been.

Make sure the license server is using the latest license.dat, be sure to run the re-read on the license.dat file to update the license server.

FlexLM Error -31 Feature start date is in the future

Cause:

The feature you are attempting to achieve a license for has a start date in the future.

For example, if your license is an evaluation you may have asked for it to start on a specified date.

Resolution:

Wait for the start date and the license will become available, you can see the start date by opening the license.dat in a text editor and searching for the **START=dd-Mmm-yyyy**.

If your license should not have a start date in the future, or your requirements have changed, please request your license to be reissued without a future start date. Contact your local LDRA Sales Representative or licencing@ldra.com.

FlexLM Error -96 The desired vendor daemon is down

Cause:

There is an error on the license server involving the "vendor daemon", this is the **LDRA.exe**.

This issue is commonly caused by the port being used by the **lmgrd.exe** and the **LDRA.exe** not being open or free.

Another cause is that the **LDRA.exe** is blocked from running by your systems antivirus or firewall software.

Resolution:

Check the ports are open, check that the **LDRA.exe** can run on your system and is not blocked.

Check the **ldra.log** for errors.

If you need assistance with resolving this issue, send the **ldra.log** and a description of the issue to licencing@ldra.com including your Customer ID in the email.

FlexLM Error -97 The Desired Vendor Daemon is Down

Cause:

The license server is not running due to the license being invalid for this machine. The machine information contained in the **license.dat** file does not match the machine you are running the license server on.

Resolution:

The **ldra.log** file will give more detail as to what information is incorrect.

```
15:13:05 (lmgrd) -----
15:13:05 (lmgrd) Please Note:
15:13:05 (lmgrd)
15:13:05 (lmgrd) This log is intended for debug purposes only.
15:13:05 (lmgrd) In order to capture accurate license
15:13:05 (lmgrd) usage data into an organized repository,
15:13:05 (lmgrd) please enable report logging. Use Flexera Software LLC's
15:13:05 (lmgrd) software license administration solution,
15:13:05 (lmgrd) FlexNet Manager, to readily gain visibility
15:13:05 (lmgrd) into license usage data and to create
15:13:05 (lmgrd) insightful reports on critical information like
15:13:05 (lmgrd) license availability and usage. FlexNet Manager
15:13:05 (lmgrd) can be fully automated to run these reports on
15:13:05 (lmgrd) schedule and can be used to track license
15:13:05 (lmgrd) servers and usage across a heterogeneous
15:13:05 (lmgrd) network of servers including Windows NT, Linux
15:13:05 (lmgrd) and UNIX.
15:13:05 (lmgrd) -----
15:13:05 (lmgrd)
15:13:05 (lmgrd) Server's System Date and Time: Tue Jul 21 2020 15:13:05 GMT Daylight Time
15:13:05 (lmgrd) pid 26256
15:13:05 (lmgrd) SLOG: Summary LOG statistics is enabled.
15:13:11 (lmgrd) "DESKTOP-0NR2F96": Not a valid server hostname, exiting.
15:13:11 (lmgrd) Valid license server system hosts are: "DESKTOP-F92MDJ8S"
15:13:11 (lmgrd) Using license file "license.dat"
```

The above **ldra.log** file, for the license server hosted on "DESKTOP-0NR2F96 ", states that fangtooth is not a valid server and that the valid host is "DESKTOP-F92MDJ8S ". The license file shows that the hostname in the license file is "DESKTOP-F92MDJ8S ".

```
SERVER DESKTOP-F92MDJ8S c8f750761762
VENDOR LDRA
PACKAGE Win_C/C++_Tool_suite LDRA 10.00 \
COMPONENTS="Win_C/C++_Testbed:10.00 Win_C/C++_TBGUI:10.00 \
Win_C/C++_TBDIAGRAM:10.00 Win_C/C++_TBFLOW:10.00 \
```

Make sure that you are running the license server on the correct machine.

If the **ldra.log** file shows that the error:

```
15:30:45 (LDRA) LDRALAUNCHER)
15:30:45 (LDRA) Wrong hostid on SERVER line for license file:
15:30:45 (LDRA) license.dat
15:30:45 (LDRA) SERVER line says COMPOSITE=E86AC4F9E7DD, hostid is COMPOSITE=A9556CAF96D9
15:30:45 (LDRA) Invalid hostid on SERVER line
15:30:45 (LDRA) Disabling 1 license from feature LDRALAUNCHER(0078 12E9 797B 72A2 )
15:30:45 (LDRA) Disabling 1 license from feature TBMANAGER(0078 12E9 797B 72A2 )
15:30:45 (LDRA) Disabling 1 license from feature TBOFFICE(0078 12E9 797B 72A2 )
15:30:45 (LDRA) Disabling 1 license from feature Win_C/C++_DYNAMIC(0078 12E9 797B 72A2 )
15:30:45 (LDRA) Disabling 1 license from feature Win_C/C++_Dyndflow(0078 12E9 797B 72A2 )
15:30:45 (LDRA) Disabling 1 license from feature Win_C/C++_TBGUI(0078 12E9 797B 72A2 )
15:30:45 (LDRA) Disabling 1 license from feature Win_C/C++_TBDIAGRAM(0078 12E9 797B 72A2 )
15:30:45 (LDRA) Disabling 1 license from feature Win_C/C++_TBFLOW(0078 12E9 797B 72A2 )
```

Check that the **FlexLM** license server is being ran from the correct directory, **FTYPE** or **LTYPE**. The email containing your **license.dat** will have specified **FTYPE** or **LTYPE**.

If you have altered the hardware on your server or re-installed the operating system it is possible that the information used in this license has been changed. A new **license.dat** will therefore need to be issued.

If the **license.dat** is intended for this machine, then generate a new **<hostname>.info** file and send this to **licencing@ldra.com** along with the **ldra.log** file. This information will then be checked against the license and a new license files sent if required.

FlexLM Error -139 Timeout

Cause:

Communication between the license manager and the vendor daemon has timed out.

Resolution:

Ensure that both ports are open and clear, both the license manager port (27000 by default) and the vendor daemon (LDRA.exe).

If you have just updated your license.dat, make sure you have carried over the port specification to the new license.dat.

If you have changed the ports, make sure that they are correct and open.

See Configuring Ports section for more details on what ports are used and how to change them.

FlexLM Error -284 Can't find server hostid in license file

Can also be displayed as **FlexLM Error -233**, **FlexLM Error -202** or **FlexLM Error -175** in older versions of *FlexLM*.

Can also be displayed as “**Can't find server name in license file**”.

Cause:

This is an error with the CTL file, it does not match the **license.dat** on the server

Resolution:

Check the CTL is the latest one issued to you. If you have recently changed license server machines you will have been issued a new CTL for this new license server.

If you are using an older version of *LDRA* and we did not issue you a new CTL for this version when you changed license server, please request a new CTL for this version from **licencing@ldra.com**.

If you have recently changed servers make sure the *Environment Variable* has been updated to the new server.

See [Updating the Environment Variable \(Windows\)](#) or [Updating the Environment Variable \(Linux/macOS\)](#) for more information on setting the *Environment Variable*.

If you have added a domain to the server name in the license file e.g. **hostname.ldra.com**, you may need new CTL file, email **licencing@ldra.com** include the CTL file and specify the domain you have added.

If you still have an issue please email **licencing@ldra.com** include the CTL file and **Customer ID** in the email along with a description of the error.

LDRA exited with status 53

```
19:49:27 (lmgrd) (@lmgrd->LOG@) =====
19:49:27 (lmgrd) SLOG: FNPLS-INTERNAL-VL1-40000
19:49:27 (lmgrd) Starting vendor daemons ...
19:49:28 (lmgrd) Started LDRA (pid 6464)
19:49:33 (lmgrd) LDRA exited with status 53 (this status is reserved but will never be generated)
19:49:33 (lmgrd) Since this is an unknown status, license server
19:49:33 (lmgrd) manager (lmgrd) will attempt to re-start the vendor daemon.
```

Cause:

Missing dependencies (DLL's)

Resolution:

Install the Microsoft Visual C++ Redistributable package for 2019 64 bit, available for download from Microsoft's [website](#).

Microsoft Visual C++ Redistributable latest supported downloads

Article • 01/13/2023 • 4 minutes to read • 5 contributors

[Feedback](#)

The Visual C++ Redistributable installs Microsoft C and C++ (MSVC) runtime libraries. These libraries are required by many applications built by using Microsoft C and C++ tools. If your app uses those libraries, a Microsoft Visual C++ Redistributable package must be installed on the target system before you install your app. The Redistributable package architecture must match your app's target architecture. The Redistributable version must be at least as recent as the MSVC build toolset used to build your app. We recommend you use the latest Redistributable available for your version of Visual Studio, with some exceptions noted later in this article.

For details on how to install and redistribute Visual Studio components, see [Redistributing Visual C++ Files](#).

Visual Studio 2015, 2017, 2019, and 2022

This table lists the latest supported English (en-US) Microsoft Visual C++ Redistributable packages for Visual Studio 2015, 2017, 2019, and 2022. The latest supported version has the most recent implemented C++ features, security, reliability, and performance improvements. It also includes the latest C++ standard language and library standards conformance updates. We recommend you install this version for all applications created using Visual Studio 2015, 2017, 2019, or 2022.

Architecture	Link	Notes
ARM64	https://aka.ms/vs/17/release/vc_redist.arm64.exe	Permalink for latest supported ARM64 version
X86	https://aka.ms/vs/17/release/vc_redist.x86.exe	Permalink for latest supported x86 version
X64	https://aka.ms/vs/17/release/vc_redist.x64.exe	Permalink for latest supported x64 version. The X64 Redistributable package contains both ARM64 and X64 binaries. This package makes it easy to install required Visual C++ ARM64 binaries when the X64 Redistributable is installed on an ARM64 device.

Cannot Open Lock File

(LDRA) Cannot open lock file (C:\FLEXLM\LDRA): Permission denied

MULTIPLE "LDRA" license server systems running

If you receive the above error messages in the **ldra.log** and there are no other **LDRA FlexLM** servers running, the error is caused by altering the directory structure of the **FlexLM** Server Tools supplied by **LDRA**.

```
15:44:33 (lmgrd) (@lmgrd-SLOG@) =====
15:44:33 (lmgrd) SLOG: FNPLS-INTERNAL-VL1-4096
15:44:33 (lmgrd) Starting vendor daemons ...
15:44:33 (lmgrd) Started LDRA (pid 12244)
15:44:33 (LDRA) EXITING DUE TO SIGNAL 32 Exit reason 9
15:44:38 (lmgrd) LDRA exited with status 32 (Exited because another server was running)
15:44:38 (lmgrd) MULTIPLE "LDRA" license server systems running.
15:44:38 (lmgrd) Using Task Manager, stop LDRA and run lmreread
15:44:38 (lmgrd)
15:44:38 (lmgrd) This error probably results from:
15:44:38 (lmgrd) 1. Another copy of the license server manager (lmgrd) is running.
15:44:38 (lmgrd) 2. Another copy of the vendor daemon is running.
15:44:38 (lmgrd) 3. The locking mechanism(s) were removed by an
15:44:38 (lmgrd) outside program.
15:44:38 (lmgrd)
```

The above log file shows an error "Exited because another server was running", in this case there is not another server running and the cause is that the directory structure was **C:\FlexLM\LDRA\FTYPE**

OS (C:) > Flexlm > LDRA > Ftype

Name	Date modified
Install_licenseservice.bat	19/03/2018 14:31
Installs.exe	24/10/2014 18:08
LDRA.exe	29/05/2018 10:37
ldra.log	21/07/2020 15:44
license.dat	21/07/2020 15:44
Lmgrd.exe	29/05/2018 10:37
Msvcp100.dll	18/03/2010 07:15

To resolve this issue make sure the directory structure is as supplied in the zip archive:

> OS (C:) > Flexlm > Ftype

Name	Date modified
Install_licenseservice.bat	19/03/2018 14:31
Installs.exe	24/10/2014 18:08
LDRA.exe	29/05/2018 10:37
ldra.log	21/07/2020 15:46
license.dat	21/07/2020 15:44
Lmgrd.exe	29/05/2018 10:37
Msvcp100.dll	18/03/2010 07:15

The **FlexLM** directory can be a sub-directory, it cannot have a subdirectory named **LDRA**.

The Directory structure **C:\FlexLM\LDRA\FlexLM\FTYPE** for example is invalid.

If you need to distinguish **FlexLM** directories for each vendor, rename the folder with the vendor prefix or with a "vendors" directory.

The Directory Structure **C:\FlexLM\LDRA_FLEXLM\FTYPE** is valid.

The Directory Structure **C:\FlexLM\VENDORS\LDRA\FTYPE** is valid

