VECTOR



VectorCAST

Installation Guide

VectorCAST 2026

New editions of this guide incorporate all material added or changed since the previous edition. Update packages may be used between editions. The manual printing date changes when a new edition is printed. The contents and format of this manual are subject to change without notice.

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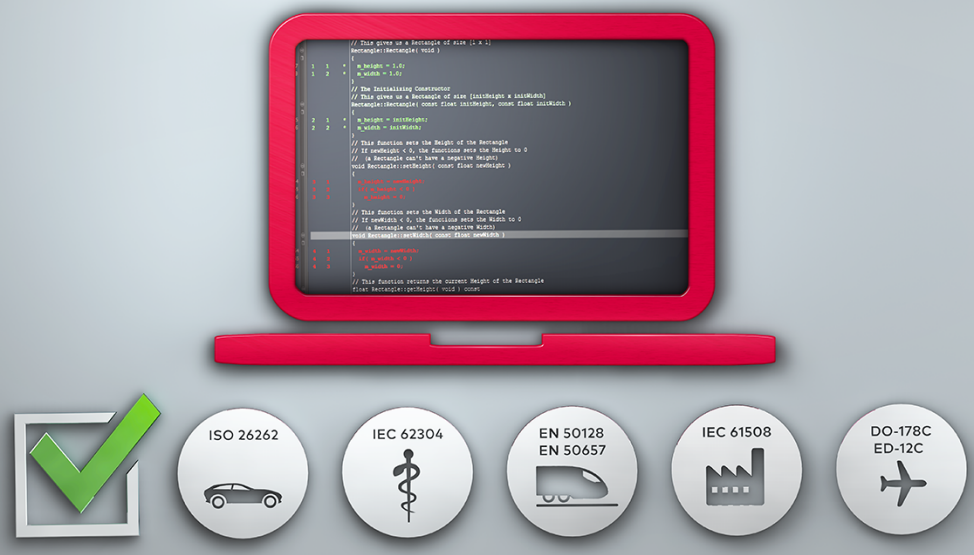


Introduction

Overview

The following sections guide you through the process of installing VectorCAST along with the license management software.

Starting with VectorCAST 2024, VectorCAST is license managed using one of two systems. You will use either the legacy license management, implemented with FlexNet Publisher (previously known as FLEXlm™) or the New Vector License Management (NVLM) implemented with the Vector License Client (VLC). Versions prior to VectorCAST 2024 used only the legacy license management.

The legacy VectorCAST license management uses FlexNet Publisher (previously known as FLEXlm™) as the license server. A User Guide for FlexNet Publisher is shipped with VectorCAST and can be found in the VectorCAST installation directory, under **`docs/PDF/`**. It is also available on the VectorCAST Download page at https://www.vector.com/vectorcast-downloads/.

The New Vector License Management uses the Vector License Client (VLC) for license management. The Help function in the VLC provides information on how to use the VLC to setup your license. This Installation Guide will guide you to where to find this information and give any steps that are specific to VectorCAST. Additional information on the VLC is found on the Vector website. This includes KnowledgeBase articles to help with specific situations.

Please note that all VectorCAST products (for example, VectorCAST/C++ Desktop Edition), are included in the downloaded installer executable. FlexNet Publisher is also included with the downloaded installer. The VLC is available from the vector.com Download Center.



If you experience any problems, please contact Technical Support at:
Email: support@vector.com
Web: https://support.vector.com

Platforms

VectorCAST 2026 is available for two platforms, 64-bit Windows and 64-bit Linux.



Note: The version requirements for FlexNet Publisher are listed in "Upgrading VectorCAST" on page 37.

Windows 64-bit Platform

The system requirement for VectorCAST version 2026 on Windows is Windows 10 or higher or Windows Server 2016 or higher.

Linux 64-bit Platform

For Linux host platforms, VectorCAST installs as a 3rd party package that is not natively plugged into any package manager such as "apt" or "rpm". Therefore, like any 3rd party package, finding and installing the necessary packages for VectorCAST is not always a straightforward process. There is no process or test that can provide a process for discovering the library requirements on any and all distributions. Nonetheless, listed below are the libraries that best represent the requirements for running VectorCAST. It is not complete or accurate for all distributions of Linux but is a good start. It is followed by package listings for CentOS 7 (7.7.1908), Ubuntu (20.04.3 LTS), and openSUSE Leap 15.5.

System Libraries

libX11.so.6
libxcb.so.1
libutil.so.1
libXau.so.6
libsmime3.so
libnss3.so
libnssutil3.so
libplds4.so
libplc4.so
libnspr4.so
libresolv.so.2
libXcomposite.so.1
libXdamage.so.1
libXext.so.6
libXfixes.so.3
libXrender.so.1
libXrandr.so.2
libexpat.so.1
libfontconfig.so.1
libX11-xcb.so.1
libxcb-dri3.so.0
libXcursor.so.1
libXi.so.6
libXtst.so.6
libxkbcommon.so.0
libdbus-1.so.3
libbz2.so.1
libuuid.so.1
libsystemd.so.0
libcap.so.2
libselinux.so.1
liblz4.so.1
libgcrypt.so.11
libgpg-error.so.0
libdw.so.1
libattr.so.1
libpcre.so.1
libelf.so.1

List of packages that are required for CentOS 7 (7.7.1908)

libX11-1.6.7-4.el7_9.x86_64
libxcb-1.13-1.el7.x86_64
libXau-1.0.8-2.1.el7.x86_64
nss-3.79.0-4.el7_9.x86_64
nss-util-3.79.0-1.el7_9.x86_64
nspr-4.34.0-3.1.el7_9.x86_64
libXcomposite-0.4.4-4.1.el7.x86_64
libXdamage-1.1.4-4.1.el7.x86_64
libXext-1.3.3-3.el7.x86_64
libXfixes-5.0.3-1.el7.x86_64
libXrender-0.9.10-1.el7.x86_64
libXrandr-1.5.1-2.el7.x86_64
expat-2.1.0-10.el7_3.x86_64
fontconfig-2.13.0-4.3.el7.x86_64
libX11-1.6.7-4.el7_9.x86_64
libxcb-1.13-1.el7.x86_64
libXcursor-1.1.15-1.el7.x86_64
libXi-1.7.9-1.el7.x86_64
libXtst-1.2.3-1.el7.x86_64
libxkbcommon-0.7.1-3.el7.x86_64
dbus-libs-1.10.24-15.el7.x86_64
bzip2-libs-1.0.6-13.el7.x86_64
libuuid-2.23.2-61.el7_7.1.x86_64
systemd-libs-219-67.el7_7.4.x86_64
libcap-2.22-10.el7.x86_64
lz4-1.7.5-3.el7.x86_64
libgcrypt-1.5.3-14.el7.x86_64
libgpg-error-1.12-3.el7.x86_64
elfutils-libs-0.176-5.el7.x86_64
libattr-2.4.46-13.el7.x86_64
pcre-8.32-17.el7.x86_64
elfutils-libelf-0.176-5.el7.x86_64

List of packages that are required for Ubuntu (20.04.3 LTS)

libx11-6:amd64
libxcb1:amd64
libexpat1:amd64
libfontconfig1:amd64

```
libxau6:amd64
libnss3:amd64
firefox: /usr/lib/firefox/libsmime3.so
firefox: /usr/lib/firefox/libnss3.so
libnss3:amd64
firefox: /usr/lib/firefox/libnssutil3.so
libnss3:amd64
firefox: /usr/lib/firefox/libplds4.so
libnspr4:amd64
firefox: /usr/lib/firefox/libplc4.so
firefox: /usr/lib/firefox/libnspr4.so
libnspr4:amd64
libxcomposite1:amd64
libxdamage1:amd64
libxext6:amd64
libxfixes3:amd64
libxrender1:amd64
libxrandr2:amd64
libx11-xcb1:amd64
libxcb-dri3-0:amd64
libxcursor1:amd64
libxi6:amd64
libxtst6:amd64
libxkbcommon0:amd64
libdbus-1-3:amd64
libbz2-1.0:amd64
libuuid1:amd64
libsystemd0:amd64
libcap2:amd64
libselinux1:amd64
liblz4-1:amd64
libgpg-error0:amd64
libdw1:amd64
libattr1:amd64
libelf1:amd64
```

List of packages that are required for openSUSE Leap 15.5

```
libX11-6-1.6.5-150000.3.27.1.x86_64
libxcb1-1.13-150000.3.9.1.x86_64
libXau6-1.0.8-1.26.x86_64
mozilla-nss-3.79.4-150400.3.29.1.x86_64
mozilla-nspr-4.34.1-150000.3.26.1.x86_64
libXcomposite1-0.4.4-1.23.x86_64
libXdamage1-1.1.4-1.23.x86_64
libXext6-1.3.3-1.30.x86_64
libXfixes3-6.0.0-150400.1.4.x86_64
libXrender1-0.9.10-1.30.x86_64
libXrandr2-1.5.1-2.17.x86_64
libexpat1-2.4.4-150400.3.12.1.x86_64
libfontconfig1-2.13.1-150400.1.4.x86_64
libX11-xcb1-1.6.5-150000.3.27.1.x86_64
libxcb-dri3-0-1.13-150000.3.9.1.x86_64
libXcursor1-1.1.15-1.18.x86_64
libXi6-1.7.9-3.2.1.x86_64
libXtst6-1.2.3-1.24.x86_64
libxkbcommon0-1.3.0-150400.1.13.x86_64
libdbus-1-3-1.12.2-150400.18.5.1.x86_64
libbz2-1-1.0.8-150400.1.122.x86_64
libuuid1-2.37.4-150500.7.16.x86_64
libsystemd0-249.16-150400.8.25.7.x86_64
libcap2-2.63-150400.1.7.x86_64
libselinux1-3.1-150400.1.69.x86_64
liblz4-1-1.9.3-150400.1.7.x86_64
libgpg-error0-1.42-150400.1.101.x86_64
libdw1-0.185-150400.5.3.1.x86_64
libattr1-2.4.47-2.19.x86_64
libpcre1-8.45-150000.20.13.1.x86_64
libelf1-0.185-150400.5.3.1.x86_64
```

FlexNet Publisher

The version requirements for FlexNet Publisher are listed in "Upgrading VectorCAST" on page 36. Note that if you are using FlexNet Publisher 11.16.4 or higher, then the Windows Universal C Runtime (CRT) is required.

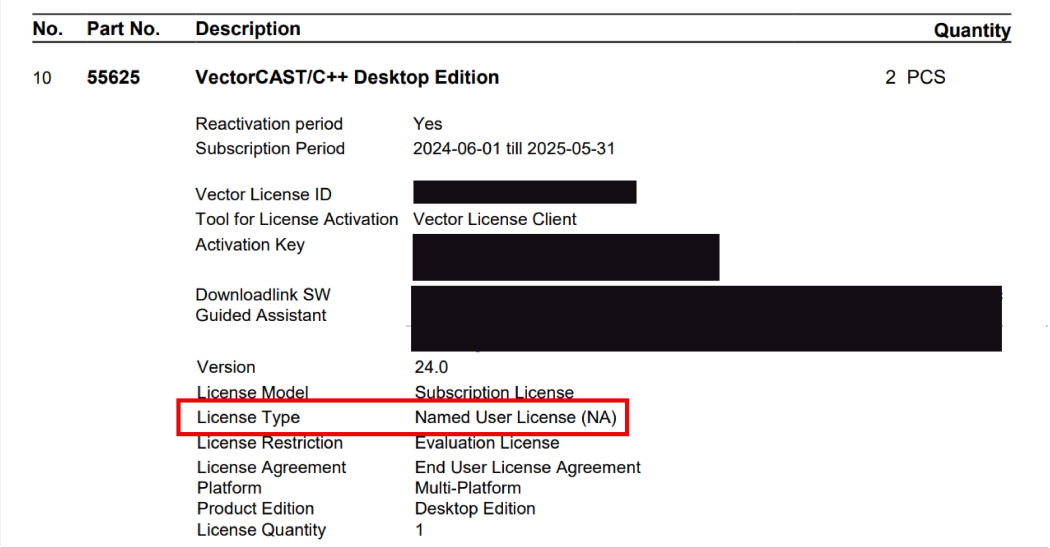
Vector License Client

The Vector License Client is available for both Windows and Linux. The currently supported operating systems for VLC can be found in the KnowledgeBase article: "Operating Systems Supported by Vector Products".

Vector License Types

VectorCAST supports several license types. This section describes the different license types and provides pointers on how to setup the license manager based on the license type.

To determine which license type you have, refer to the Delivery Note you received in your email. The subject of the email will be "**Delivery Note: [document number]_[customer number]**". In the pdf attached to the email, you will find each order listed. An example is shown below with the License Type highlighted.



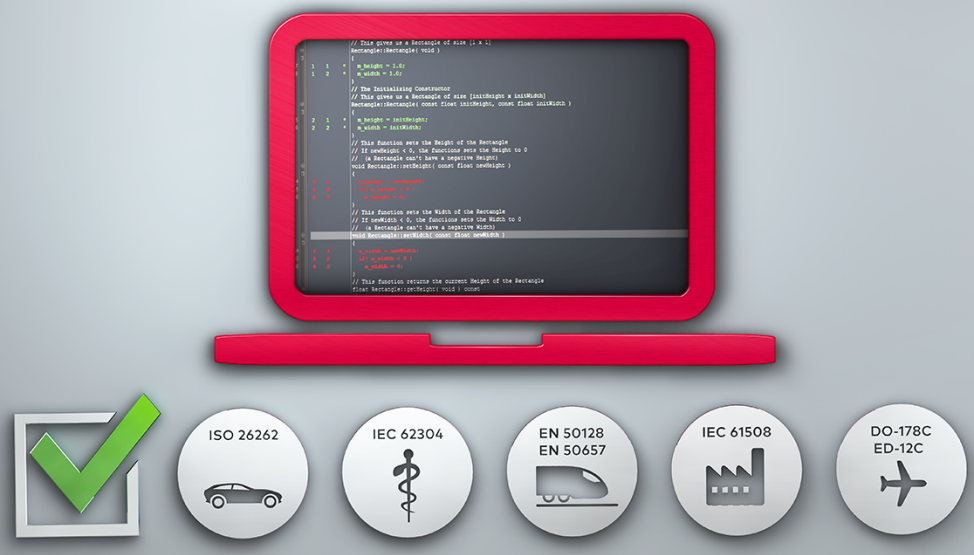
No.	Part No.	Description	Quantity
10	55625	**VectorCAST/C++ Desktop Edition**	2 PCS

Reactivation period	Yes
Subscription Period	2024-06-01 till 2025-05-31
Vector License ID	[redacted]
Tool for License Activation	Vector License Client
Activation Key	[redacted]
Downloadlink SW Guided Assistant	[redacted]
Version	24.0
License Model	Subscription License
License Type	Named User License (NA)
License Restriction	Evaluation License
License Agreement	End User License Agreement
Platform	Multi-Platform
Product Edition	Desktop Edition
License Quantity	1

Find the license type in the table below to see where the instructions to setup the license are located.

License Type	Legacy License (FLEXlm) Setup	NVLM Setup
Floating	Use the instructions in this manual for installing FlexNet Publisher.	Use instructions found in the Help for the Vector License Client. **Windows**: Refer to the sections: "Administrator: How to Activate a Network License" and "User: How To Select a License Server" (based on help version 2024-01-15T11:36:13) **Linux**: Refer to the section: "Getting Started" (based on help version 2023-01-27T14:26:37)
Named User	See Legacy Named User Licensing in this	N/A

License Type	Legacy License (FLEXlm) Setup	NVLM Setup
	manual.	
Named User (NA)	N/A	Use instructions found in the Help for the Vector License Client. **Windows**: Refer to the sections: "Administrator: How to Activate a Network License" and "User: How To Select a License Server" (based on help version 2024-01-15T11:36:13) **Linux**: Refer to the section: "Getting Started" (based on help version 2023-01-27T14:26:37)
CI License Types (CITL, CITEL, CIACL)	Use the instructions in this manual for installing FlexNet Publisher.	Use instructions found in the Help for the Vector License Client. **Windows**: Refer to the sections: "Administrator: How to Activate a Network License" and "User: How To Select a License Server" (based on help version 2024-01-15T11:36:13) **Linux**: Refer to the section: "Getting Started" (based on help version 2023-01-27T14:26:37)



VectorCAST Installer Passwords

VectorCAST Installers

Installers for VectorCAST may be encrypted. If the installer you are using is encrypted (password protected), this section will provide the steps to un-encrypt the file.

For Windows, the encrypted installer filename will have the word "**encrypted**" in it (e.g. **vcast.win64.2026-encrypted.zip**). For Linux, the encrypted installer filename will end in "**tar.gz.gpg**" (e.g. **vcast.linux64.2026.tar.gz.gpg**).

The installers available on the Vector website (e.g. https://www.vector.com/vectorcast-downloads/) are encrypted.

The password for the installers is changed for each major version and kept the same for all service packs of that major version. For example, the same password will be used for VectorCAST 2025 SP5, VectorCAST 2025 SP6 and VectorCAST 2025 SP7. A new password is created for VectorCAST 2026 and will continue to be used for all service packs for VectorCAST 2026.

Customers receive the password for the encrypted installers in the e-mail for their VectorCAST software license key.



You may also contact Technical Support at:
Email: support@vector.com
Web: https://support.vector.com

For a Windows Installer

The installers are provided in a **.zip** file. For example, the file name for the VectorCAST 2026 64-bit Windows installer is **vcast.win64.2026-encrypted.zip**. When an unzip utility is used to extract the **.zip** file, a password is required. Enter the password and the extraction continues.

For a Linux Installer

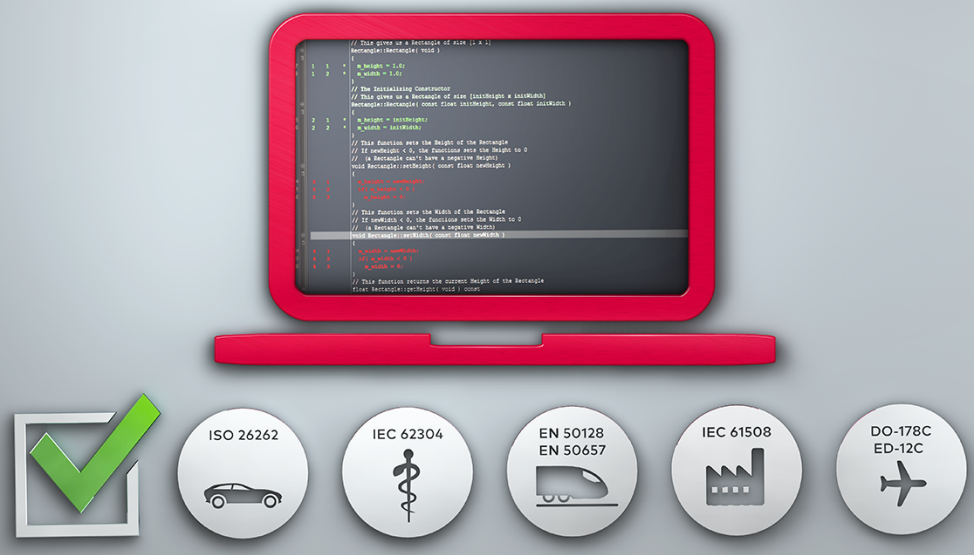
The installers are in a **TAR.GZ** file. For these files, GPG (GNU Privacy Guard) technology is used to encrypt the installer archive. If you do not have access to the GPG utility on your Linux distribution, then please request an unencrypted version from Vector Support. The command to decrypt the installer file is:

```
echo "[passphrase]" | gpg --no-mdc-warning --batch --passphrase-fd 0 -d
[release tar] | tar -xzvf -
```

To assist with the decryption of the Linux installers, you may want to create a helper utility. An example is given below:

```
unencrypt.sh:
#!/bin/sh
# Usage: unencrypt.sh <passphrase> <release_archive>
echo "$1" | gpg --no-mdc-warning --batch --passphrase-fd 0 -d "$2" | tar -
xzvf -
```

For more information, see the Vector KnowledgeBase article "VectorCAST Software Installer Password".



Installing VectorCAST on Windows

Overview

This section takes you through all the steps necessary to install VectorCAST on a Windows platform.

Note: It has been reported that the Cortex XDR may report an issue when using VectorCAST. Please consult the user documentation for Cortex XDR for possible workarounds.

Install VectorCAST on Windows

To install VectorCAST on a Windows platform, perform the following steps:

1. Unzip the VectorCAST distribution file (`vcast.win64.version.zip`). If a password is required, see "VectorCAST Installer Passwords" on page 11 for a Windows Installer.
2. Double-click on the **setup.exe** application. The VectorCAST software displays a Welcome page.
3. Click **Next** on the Welcome page. The License Agreement is displayed. Click "**I accept the terms of the license agreement**".
4. Click **Next** and select the Setup Type:
   - **Complete**: This selection installs all release files.
   - (**FLEXlm License Server**: Select this option if you only wish to install the Legacy License Server at this time.)
5. Click **Next** and select an installation directory.
   The default directory is (C:\VCAST). The installation directory must not already contain a VectorCAST install.

   Note: The directory path you use must not include spaces, or letters with umlauts or accents. Allowed characters are A-Z a-z 0-9 [!#$%&'()+-,=@^_`{}~]

   Also, the directory path must not contain an instance of VectorCAST. If you wish to reuse a directory path, VectorCAST must first be removed.
6. Click **Next**.
   The Installer begins to install VectorCAST.
   Once this is complete, the Installer will check if the Current VECTORCAST_DIR setting is different from the New VECTORCAST_DIR setting. If so, the Installer will ask if you want to modify the current VECTORCAST_DIR to the use the new value. The New value will point to the directory VectorCAST was just installed to. Select **Yes** to use the new installation of VectorCAST or select **No** to continue to point to the old installation.
   The Installer will then check to see if it can find a valid license for VectorCAST. If no valid license is detected, a window will appear directing you to this guide to find instructions for setting up a license. Click **OK** to move past this informational window.
   Installation is now complete.
7. Click the **Finish** button to exit the Installer.

Running VectorCAST on Windows

To run VectorCAST on Windows, set the VECTOR_LICENSE_FILE environment variable to use the

correct License Server, and set the VECTORCAST_DIR environment variable to point to the location in which VectorCAST is installed.

For example, if the VectorCAST installation location is C:\VCAST, set VECTORCAST_ DIR to point to that directory as follows:

```
SET VECTORCAST_DIR=C:\VCAST
```

Then set VECTOR_LICENSE_FILE to use the correct license server.

For FLEXlm, set VECTOR_LICENSE_FILE to port@server, where port is the port number in the VectorCAST license file (the default port is 27000), and server is the Host Name of the License Server.

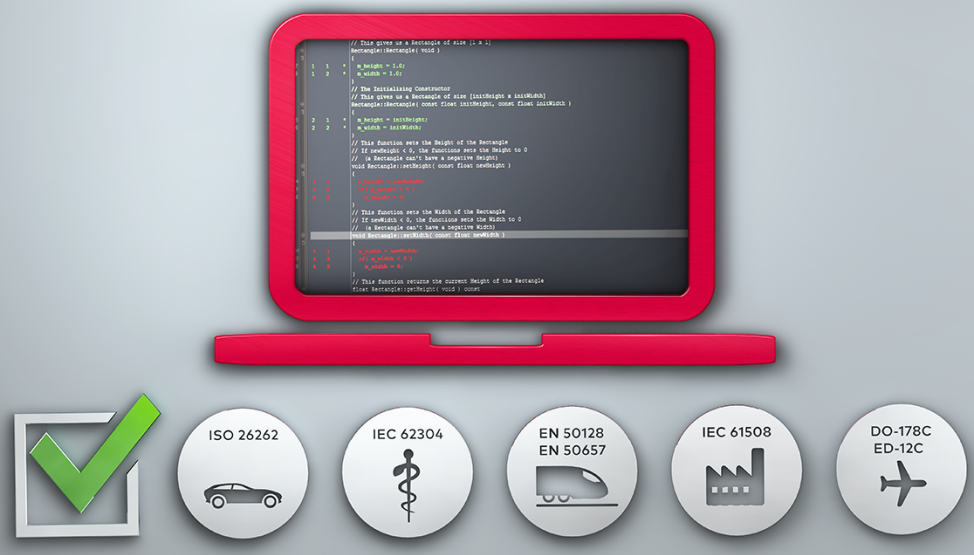
```
SET VECTOR_LICENSE_FILE=27000@HostName
```

For VLC, unset VECTOR_LICENSE_FILE.

```
SET "VECTOR_LICENSE_FILE="
```

Optionally for VLC, you may set VCAST_DESKTOP_LICENSE_TYPE to limit the desktop license checks to only one type. The variable can be set to **"floating"** or **"named_user_network"**. Setting to a value of **"floating"** limits desktop license checks to floating license type only. Setting to a value of **"named_user_network"** limits desktop license checks to named user (network activation). Note that if the variable is not set, or is set to an empty value, all desktop license types are checked until a license is found, which may impact performance.

```
SET "VCAST_DESKTOP_LICENSE_TYPE=floating"
or
SET "VCAST_DESKTOP_LICENSE_TYPE=named_user_network"
```



Installing FlexNet Publisher (the FLEXlm License Server) on Windows

Overview

This section takes you through all the steps necessary to install FlexNet Publisher (the FLEXlm License Server) on a Windows platform. The software for the server can be installed either through the VectorCAST Product Installer or it can also be downloaded directly from the VectorCAST download page.

These instructions are written using Windows 10. Other Windows versions may be slightly different.

One item to be aware of is what directory FlexNet Publisher will be run from. The default directory can be different depending on how you have installed FlexNet Publisher. There are three install scenarios:

- **Scenario 1** - Install from the VectorCAST Product Installer and select "Complete" as the setup type.
- **Scenario 2** - Install from the VectorCAST Product Installer and select "FLEXlm License Server" as the setup type.
- **Scenario 3** - Install from the standalone FLEXlm distribution installer (e.g. **`fnp_11_19_8_win86_64.zip`**)

For **Scenario 1**, FLEXlm is installed in the same directory as the VectorCAST under the folder **`FLEXlm`**. By default the location will be **`C:\VCAST\FLEXlm`**.

For **Scenario 2**, FLEXlm is installed in the directory you choose. The default directory will be **`C:\VCAST\FLEXlm`**.

For **Scenario 3**, FLEXlm is distributed as a zip file and there is no installer. The FLEXlm files will be in the directory you unzip the archive to.

The Host Name and Host ID are used by FLEXlm to establish "binding elements". If the binding elements change, the license is no longer valid. This can be challenging in a cloud environment or on virtual machines where the MAC address and Disk Serial Numbers are not reliably consistent. To address this issue, a UUID (universally unique ID) can be used as the Host ID. If the license server will be run in a cloud environment or on a virtual machine, use UUID as the Host ID type. You cannot get a UUID on a physical machine (error -211). Details on supported virtual or cloud platforms are included in the FlexNet Publisher License Administration Guide.

Information Needed for a License Key

To create a license key you need to provide Vector with the Host Name and Host ID of the License Server. The Host ID can be supplied in one of three ways:

- MAC address,
- Disk Serial Number, and
- UUID.

The following instructions can be used to find the Host Name and the Host ID.



Note: If you are setting up a three-server redundant triad, special instructions are needed. Please contact Technical Support at:
Email: support@vector.com
Web: https://support.vector.com

Instructions for Obtaining the Host Name and Host ID

Go to the directory where you have your FLEXlm files. In this directory, there is a file called **lmutil.exe**. Open a command prompt in this directory.

1. **Host Name**
   To get the Host Name, type:

   ```
   hostname or ipconfig/all
   ```

2. **Host ID**
   > To get the Host ID as a MAC address, type:

   ```
   lmutil.exe lmhostid -n
   ```

   > To get the Host ID as a Disk Serial Number, type:

   ```
   lmutil.exe lmhostid -vsn
   ```

   > To get the Host ID as a UUID, type:

   ```
   lmutil.exe lmhostid -ptype VM -uuid
   ```

   >> If you receive an error (-213), then the FlexNet Licensing Service is not installed :

   ```
   lmhostid: The FlexNet Licensing Service is not
   installed. (-213,14703)
   ```

   >> If the service is not installed, install the service by typing the following in the command prompt:

   ```
   installanchorservice.exe vector clicast.exe
   ```

   >> Then type the following again:

   ```
   lmutil.exe lmhostid -ptype VM -uuid
   ```



Note: If you are using a UUID Host ID, be sure the FlexNet Licensing Service that supplies the UUID is running.

Install the License Key

When you receive a license key from Vector, install your key as follows:

1. Save the license-key file (delivered as an e-mail attachment) to a location on the License Server.

A typical license-key file looks like this:

```
SERVER flexlm 0243AC110003 27000
DAEMON vector C:\VCAST\flexlm\vector.exe
## VectorCAST/C++ (Windows /Linux) 3 seats
PACKAGE EDITION_C_ENT vector 26 F74A8629AC02 \
      COMPONENTS="VCAST_C_ENT_0700 CCAST_0701 CCAST_0788 \
      VCAST_CBA_0742 PROBE_POINTS_0700 VCAST_MCDC_0740 \
      VCAST_REQ_GATEWAY_0772 VCAST_C_ENT_0800 CCAST_0801 CCAST_0888 \
      VCAST_CBA_0842 PROBE_POINTS_0800 VCAST_MCDC_0840 \
      VCAST_REQ_GATEWAY_0872" OPTIONS=SUITE
FEATURE EDITION_C_ENT vector 26 31-dec-2026 3 40E8217C14A2 \
      VENDOR_STRING=CUST:1: START=18-May-2022 TS_OK
```

In this example, the Host name of the machine that is serving the license is flexlm, the HostID is 0243AC110003, and the license is being served from port 27000. The path to the vector daemon is **`C:\VCAST\flexlm\vector.exe`**.

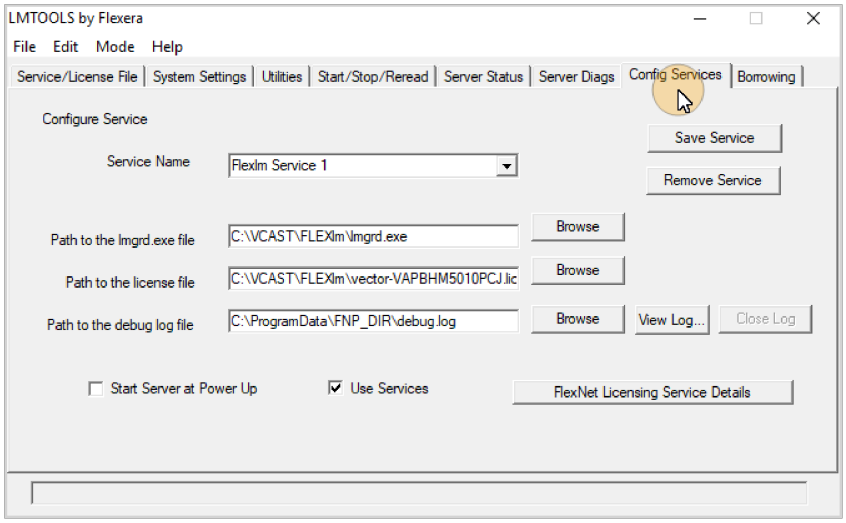
2. If necessary, modify the DAEMON line in the license-key file to point to the location of the **`vector.exe`** vendor daemon on the license server. For example:

```
DAEMON vector C:\VCAST\flexlm\vector.exe
```

Start the License Server

To start FLEXlm on the License Server:

1. Run the program **`lmtools`** found in the installation directory for FLEXlm. (Refer to the screen shot in Step 2 below).
2. Click the **Config Services** tab. The following screen appears:

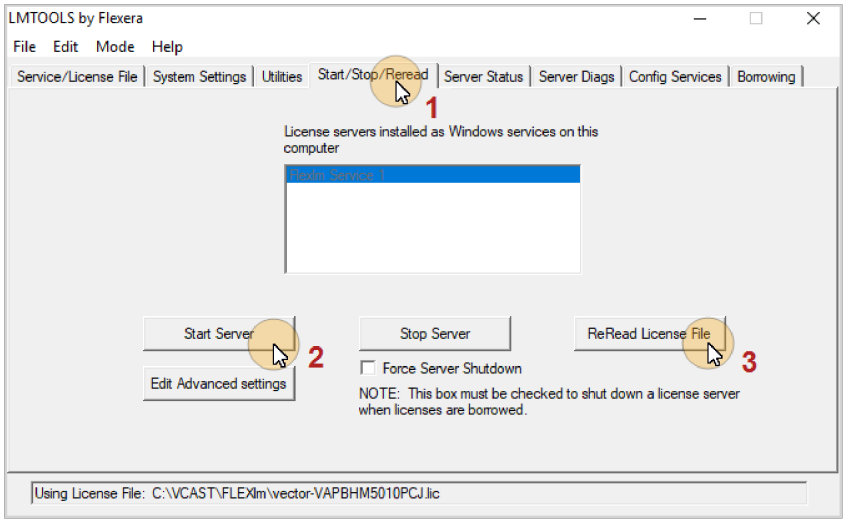


In the Service Name field, enter a new name, such as Vector License Server.

3. Use the **Browse** button associated with **Path to the lmgrd.exe file** to enter the full

pathname for **`lmgrd.exe`**.
By default, this file is located at **`C:\vcast\FLEXlm\`**.
If you installed VectorCAST in a different directory, use that path instead of **`C:\vcast`**.

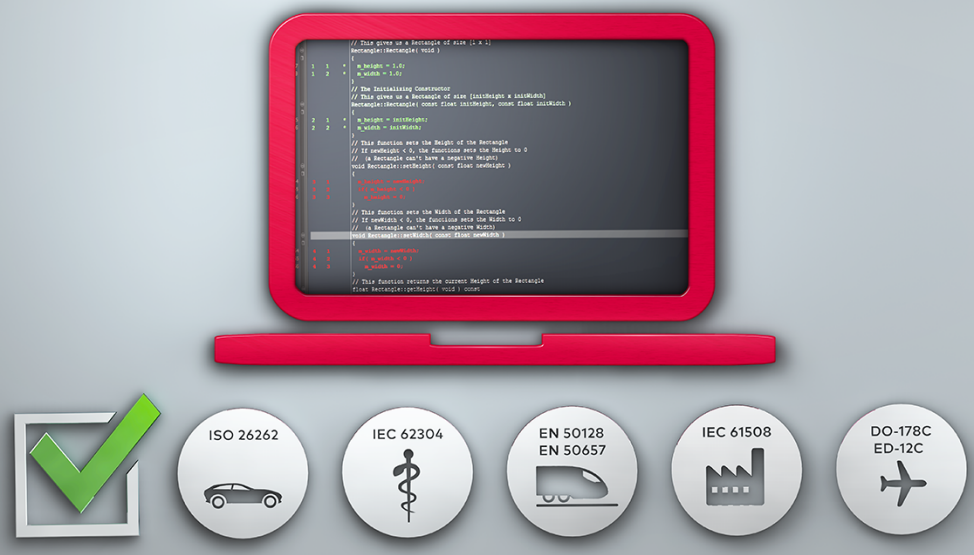
4. Use the **Browse** button associated with **Path to the license file** to enter the full path name for the VectorCAST license key (hostname.lic).
   This file is located in the directory in which you stored it in "Install the License Key" on page 18.
5. In the **Path to the debug log file** field, enter the full pathname for a debug log file.
   If this folder does not exist, you must create it first.
6. Check the box preceding **Use Services**.
7. If you want the license server to start automatically when the server machine is rebooted, also select **Start Server at Power-Up**.
8. Click the **Save Service** button (upper right), and confirm when asked.
9. Select the **Start/Stop/Reread** tab at the top of the screen:



10. Click **Start Server**, then click **Reread License File**.
11. Exit the LMTools utility: Select **File => Exit,** or click the close icon (✕).

If you experience any problems, please contact Technical Support at:
Email: support@vector.com
Web: https://support.vector.com

For answers to frequently asked questions, and to access FLEXlm user help (the FlexNet License Administration Guide), refer to the FlexNet License Administration Guide available in PDF format. The guide is found on the VectorCAST download page (https://www.vector.com/vectorcast-downloads/) or in the VectorCAST distribution under **`docs/pdf`**.



Installing the Vector License Client on Windows

Overview

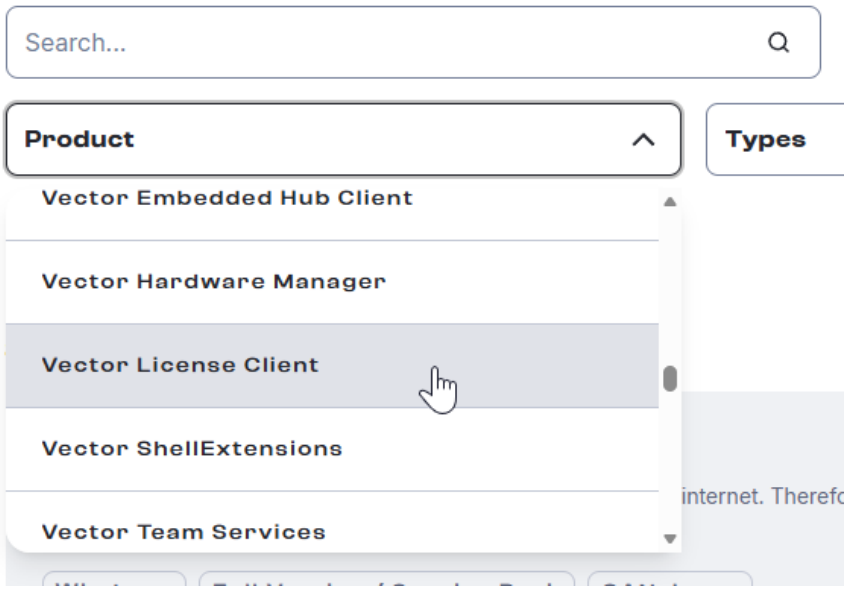
Important: To use VectorCAST with the Vector License Client, the environment variable VECTOR_LICENSE_FILE **MUST** be unset. Otherwise, it will use the FLEXlm license server.

The Vector License Client is used not only for VectorCAST but also for many other Vector products. If you already have the Vector License Client installed, there is no need to re-install it. The licenses for VectorCAST can be set up with your existing client; however, updating to the latest version of the client is recommended.

Important: As you will see in the Vector License Client Help information, Administrator rights are required to install and set up the Vector License Client. Specifics are in the Vector License Client help file.

Install the Vector License Client on Windows

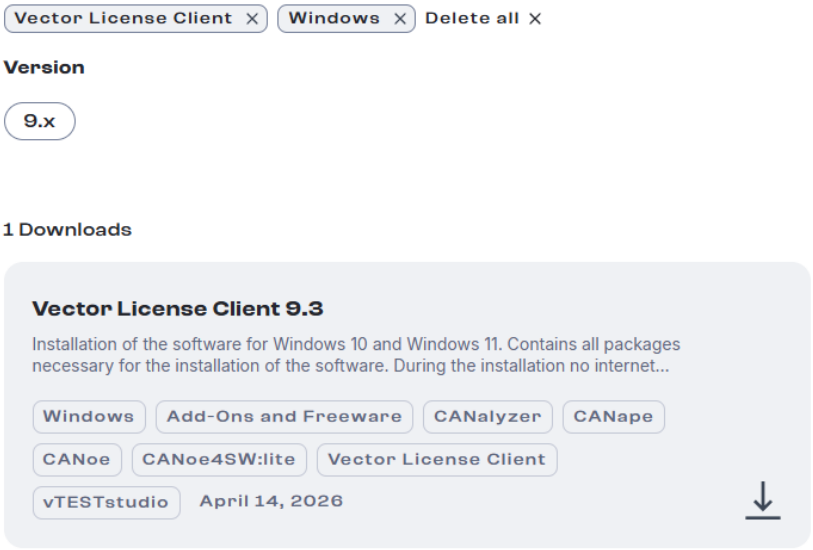
The Vector License Client is available from the vector.com download site. You can find the downloads by going to https://www.vector.com/downloads, and then selecting **Vector License Client**.



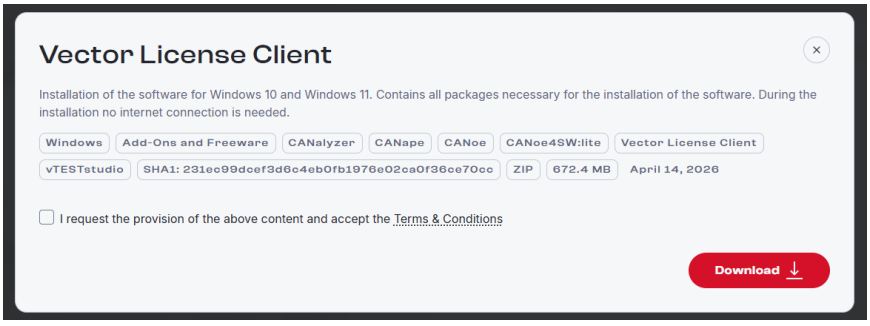
From the downloads menu, select the Windows Operating System.



Then select the Vector License Client.



Once selected you will be redirected to a download information page where you can read additional information about the download. At the bottom of the page, you will see a button labeled **Download**. Select that button and the download will begin. The downloaded file will be a ZIP archive. Extract the installer file from the archive and run the installer executable. Depending on your Windows settings, you may be asked to allow the setup program to make changes to your device. You will then see the setup wizard for the Vector License Client.

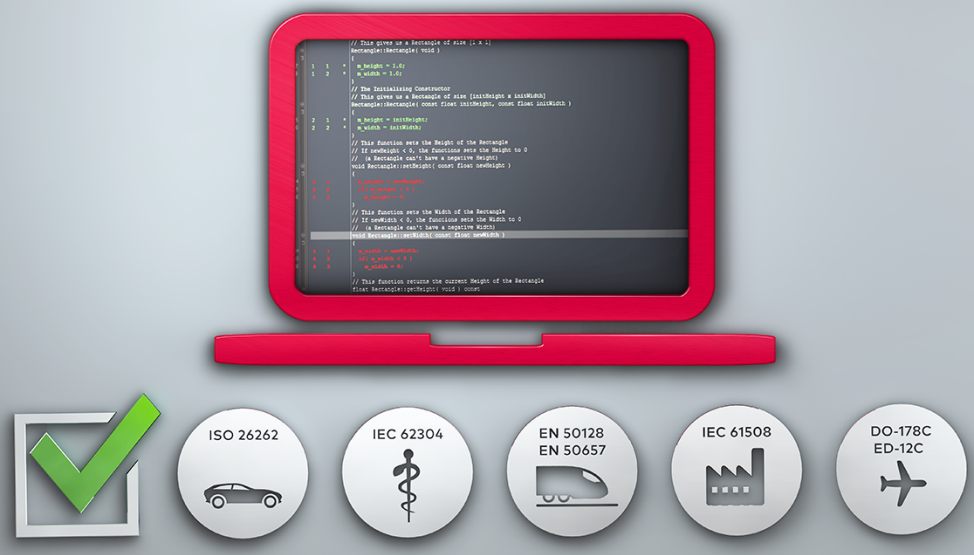


Once Vector License Client is installed, you can find additional help by selecting the **Help** button at the top of the application or by using the online help for Vector License Client.

From the Start Page, you will see a Getting Started section. It is recommended to begin there with help to setup your license.



If you experience any problems, please contact Technical Support at:
Email: support@vector.com
Web: https://support.vector.com



Installing VectorCAST on Linux

Overview

This section takes you through all the steps necessary to install VectorCAST on a Linux platform.

Install VectorCAST on Linux

1. Become the installation user: either log on as the designated user, or use the **su** command. . For the purpose of this example, we assume the username is '**vector**'.
2. Create a directory for the VectorCAST installation.
   VectorCAST should be installed in a directory visible to all users with appropriate permissions set. For the purposes of this example, the installation directory is **/home/vector/vcast**. You create this directory by entering:

   ```
   cd /home/vector
   mkdir vcast
   ```

   Set the default directory to the directory just created:

   ```
   cd vcast
   ```

3. Copy the VectorCAST installer to the directory. If the installer is encrypted, see "VectorCAST Installers" on page 12 for a Linux Installer. Enter:

   ```
   tar -xzvf vcast.platform.version.tar.gz
   ```

   Set the VECTORCAST_DIR environment variable:
   Using sh, enter:

   ```
   export VECTORCAST_DIR=/home/vector/vcast
   ```

   Using csh, enter:

   ```
   setenv VECTORCAST_DIR /home/vector/vcast
   ```



Note: If you created a directory other than **/home/vector/vcast** as the installation directory, use that path here.

Running VectorCAST on Linux

To run VectorCAST on Linux, set the **VECTOR_LICENSE_FILE** environment variable to use the correct License Server, and set the **VECTORCAST_DIR** environment variable to point to the location in which VectorCAST is installed.

For example, if the VectorCAST installation location is **/home/vector/vcast,** set **VECTORCAST_DIR** to point to that directory as follows:

Using sh, enter:

```
export VECTORCAST_DIR=/home/vector/vcast
```

Using csh, enter:

```
setenv VECTORCAST_DIR /home/vector/vcast
```

Then set **VECTOR_LICENSE_FILE** to use the correct license server.

For FLEXlm, set **VECTOR_LICENSE_FILE** to port@server, where *port* is the port number in the VectorCAST license file (the default port is 27000), and server is the Host Name of the License Server. For example:

Using sh, enter:

```
export VECTOR_LICENSE_FILE=27000@HostName
```

Using csh, enter:

```
setenv VECTOR_LICENSE_FILE 27000@HostName
```

For VLC, unset **VECTOR_LICENSE_FILE**.

Using sh, enter:

```
unset VECTOR_LICENSE_FILE
```

Using csh, enter:

```
unsetenv VECTOR_LICENSE_FILE
```

Optionally for VLC, you may set VCAST_DESKTOP_LICENSE_TYPE to limit the desktop license checks to only one type. The variable can be set to **"floating"** or **"named_user_network"**. Setting to a value of **"floating"** limits desktop license checks to floating license type only. Setting to a value of **"named_user_network"** limits desktop license checks to named user (network activation). Note that if the variable is not set, or is set to an empty value, all desktop license types are checked until a license is found, which may impact performance.

Using sh, enter:

```
export VCAST_DESKTOP_LICENSE_TYPE=floating
```

Using csh, enter:

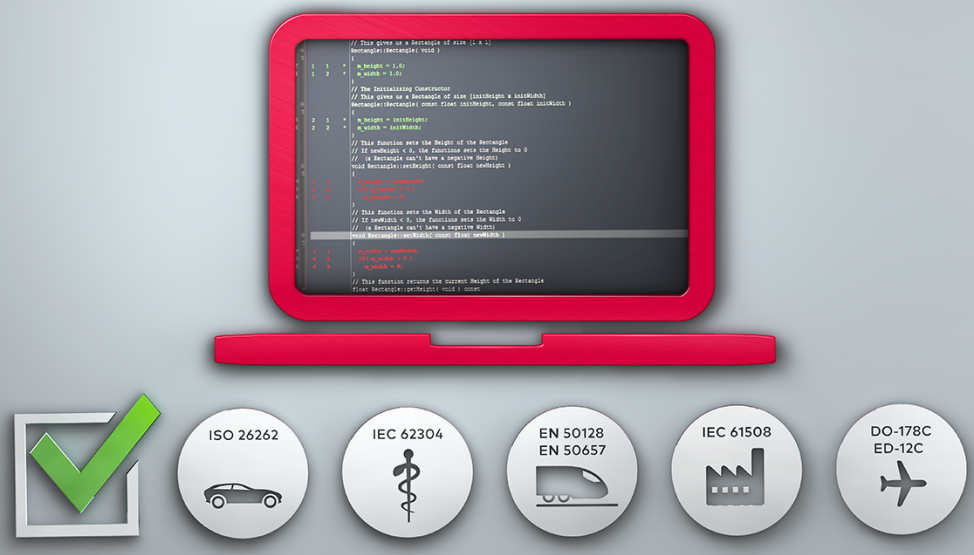
```
setenv VCAST_DESKTOP_LICENSE_TYPE floating
```

Using sh, enter:

```
export VCAST_DESKTOP_LICENSE_TYPE=named_user_network
```

Using csh, enter:

```
setenv VCAST_DESKTOP_LICENSE_TYPE named_user_network
```



Installing FlexNet Publisher (the FLEXlm License Server) on Linux

Overview

This section takes you through all the steps necessary to install FlexNet Publisher (the FLEXlm License Server) on a Linux platform. The software for the server is included within the VectorCAST installation tree. It can also be downloaded directly from the VectorCAST download page.

These instructions are written using CentOS 8. Other Linux versions may be different.

The Host Name and Host ID are used by FLEXlm to establish "binding elements". If the binding elements change, the license is no longer valid. This can be challenging in a cloud environment or on virtual machines where the MAC address is not reliably consistent. To address this issue, a UUID (universally unique ID) can be used as the Host ID. If the license server will be run in a cloud environment or on a virtual machine, use UUID as the Host ID type. You cannot get a UUID on a physical machine (error -211). Details on supported virtual or cloud platforms is included in the FlexNet Publisher License Administration Guide.

Information Needed for a License Key

To create a license key you need to provide Vector with the Host Name and Host ID of the License Server. The Host ID can be supplied in one of two ways:

- MAC address, or
- UUID.

The following instructions can be used to find the Host Name and the Host ID.



Note: If you are setting up a three-server redundant triad, special instructions are needed. Please contact Technical Support at:
Email: support@vector.com
Web: https://support.vector.com

Instructions for Obtaining the Host Name and Host ID

Go to the directory where you have your FLEXlm files. In this directory is a file called **`lmutil`**. Open a terminal and '**`cd`**' to this directory.

1. **Host Name**
   To get the Host Name, type:

   ```
   uname -n
   ```

2. **Host ID**
   > To get the Host ID as a MAC address, type:

   ```
   ./lmutil lmhostid -n
   ```

   > To get the Host ID as a UUID, type:

   ```
   ./lmutil lmhostid -ptype VM -uuid
   ```

>> If you receive an error (-213), then the FlexNet Licensing Service is not installed :

```
lmhostid: The FlexNet Licensing Service is not
installed. (-213,14703)
```

>> If the service is not installed, install the service (run as root):

```
cd publisher/
./install_fnp.sh --nolsb \
FNPLicensingService/FNPLicensingService
cd ..
```

>> Then type the following again:

```
./lmutil lmhostid -ptype VM -uuid
```

Note: for more command options for the **`./install_fnp.sh`** utility, type **`./install_fnp.sh --help`**



Note: If you are using a UUID Host ID, be sure the FlexNet Licensing Service that supplies the UUID is running.

Install the License Key

When you have received a License Key from Vector, install it as follows:

1. Save your license-key file (delivered as an e-mail attachment) to a location on the License Server.

   For the purposes of this example, the location is **`/home/vector/flexlm/vector-FLEXLM.lic`**.

   For example, a typical license-key file looks like this:

```
SERVER flexlm 0243AC110003
DAEMON vector /home/vector/flexlm/vector
## VectorCAST/C++ (Windows /Linux) 3 seats
PACKAGE EDITION_C_ENT vector 26 F74A8629AC02 \
      COMPONENTS="VCAST_C_ENT_0700 CCAST_0701 CCAST_0788 \
      VCAST_CBA_0742 PROBE_POINTS_0700 VCAST_MCDC_0740 \
      VCAST_REQ_GATEWAY_0772 VCAST_C_ENT_0800 CCAST_0801 CCAST_0888 \
      VCAST_CBA_0842 PROBE_POINTS_0800 VCAST_MCDC_0840 \
      VCAST_REQ_GATEWAY_0872" OPTIONS=SUITE
FEATURE EDITION_C_ENT vector 26 31-dec-2026 3 40E8217C14A2 \
      VENDOR_STRING=CUST:1: START=18-May-2022 TS_OK
```

   In the example above, the name of the machine that is serving the license is flexlm, the HostID is 0243AC110003, and the port is the default 27000. The path to the vector daemon is **`/home/vector/flexlm/vector`**.

2. Modify the **DAEMON** line in the license-key file to point to the location of the `vector` vendor daemon on the license server. For example,

```
DAEMON vector /home/vector/flexlm/vector
```

Start/Stop the License Server

If you require additional information about FLEXlm, a User Guide for FlexNet Publisher is shipped with VectorCAST and can be found in the VectorCAST installation directory, under **`docs/PDF/`**. It is also available on the VectorCAST Download page at https://www.vector.com/vectorcast-downloads/.

1. To start the license manager (FLEXlm) on the License Server, enter:

```
./lmgrd -c path_to_license_file
```

2. To view the status of the license server, enter:

```
./lmutil lmstat
lmutil - Copyright(c)1989-2018 Flexera. All Rights Reserved.
Flexible License Manager status on Thu 10/15/2015 09:10
License server status: 1234@birch
  License file(s) on birch: /home/USERS/licenses/birch.lic:
   alder: license server UP (MASTER) v11.16.1.0
Vendor daemon status (on birch):
  vector: UP v11.16.1.0
```

3. To stop the license manager on the license server, enter:

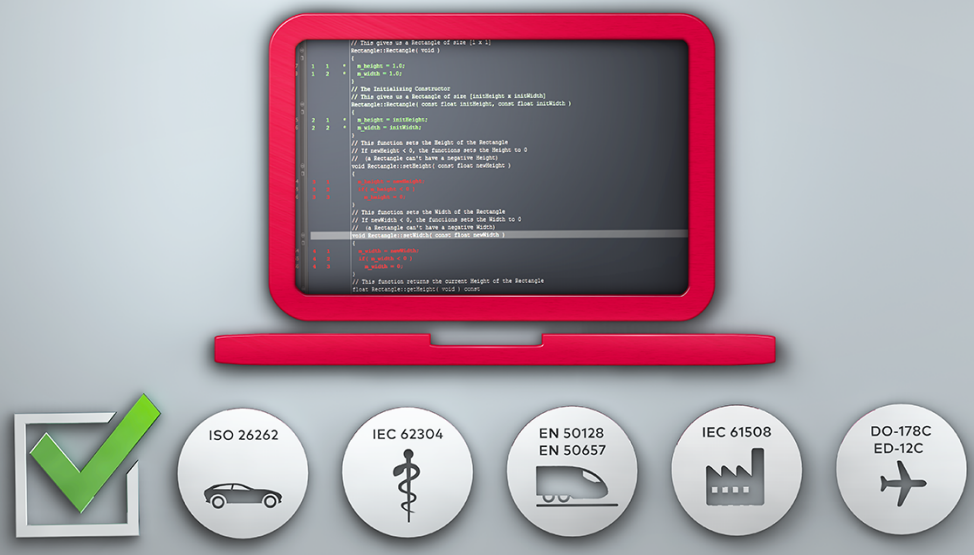
```
./lmutil lmdown -c path_to_license_file
```

4. To specify the debug log file, enter:

```
./lmgrd -c path_to_license_file -l path_to_log_file
```



Note: If you are already using FLEXlm for VectorCAST and receive a new license, you will need to replace the previous license with the new one and stop and re-start the license server. Be sure to update the DAEMON line in the new license file.



Installing the Vector License Client on Linux

Overview

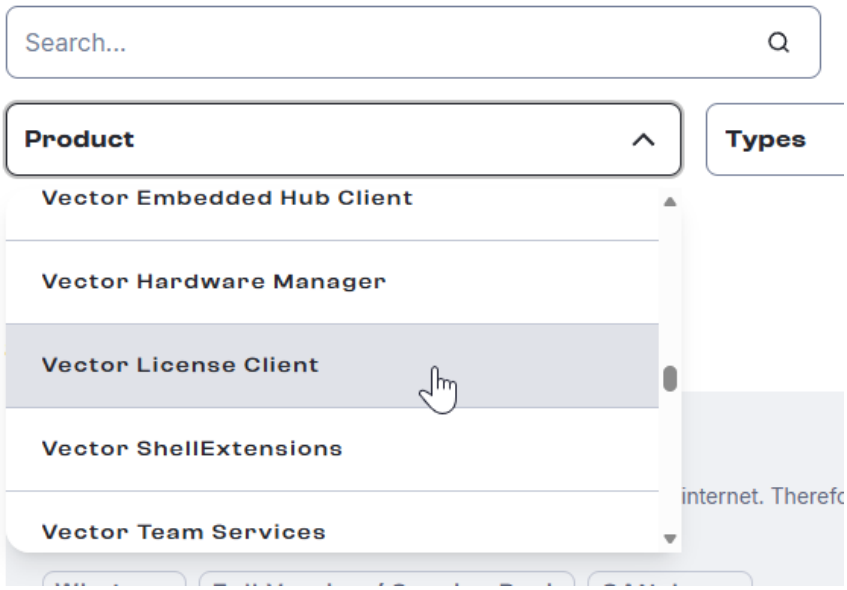
Important: To use VectorCAST with the Vector License Client, the environment variable VECTOR_LICENSE_FILE **MUST** be unset. Otherwise, it will use the FLEXlm license server.

The Vector License Client is used not only for VectorCAST but also for many other Vector products. If you already have the Vector License Client installed, there is no need to re-install it. The licenses for VectorCAST can be set up with your existing client; however, updating to the latest version of the client is recommended.

Important: As you will see in the Vector License Client Help information, Administrator rights are required to install and set up the Vector License Client. Specifics are in the Vector License Client help file.

Install the Vector License Client on Linux

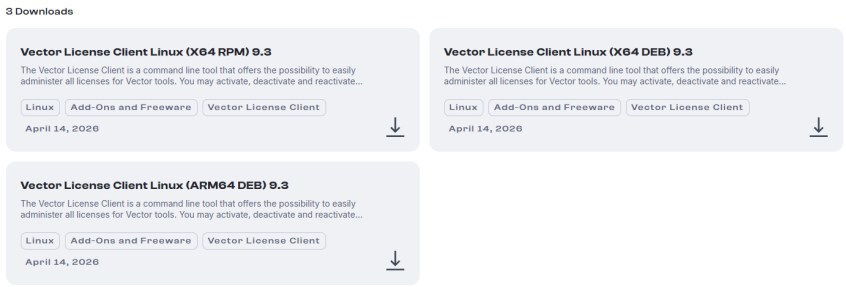
The Vector License Client is available from the vector.com download site. You can find the downloads by going to https://www.vector.com/downloads, and then selecting **Vector License Client**.



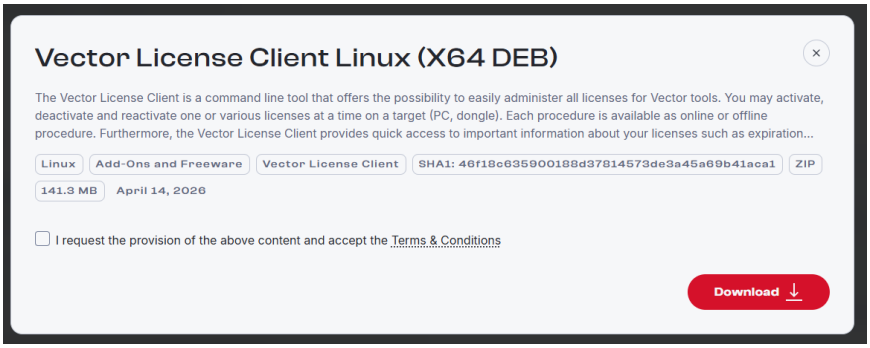
From the downloads menu, select the Linux Operating System.



From the downloads listing, select the Vector License Client Linux version. You will see that the Linux version is supplied on both a DEB and RPM format. You may use whichever format is appropriate for your Linux distribution.



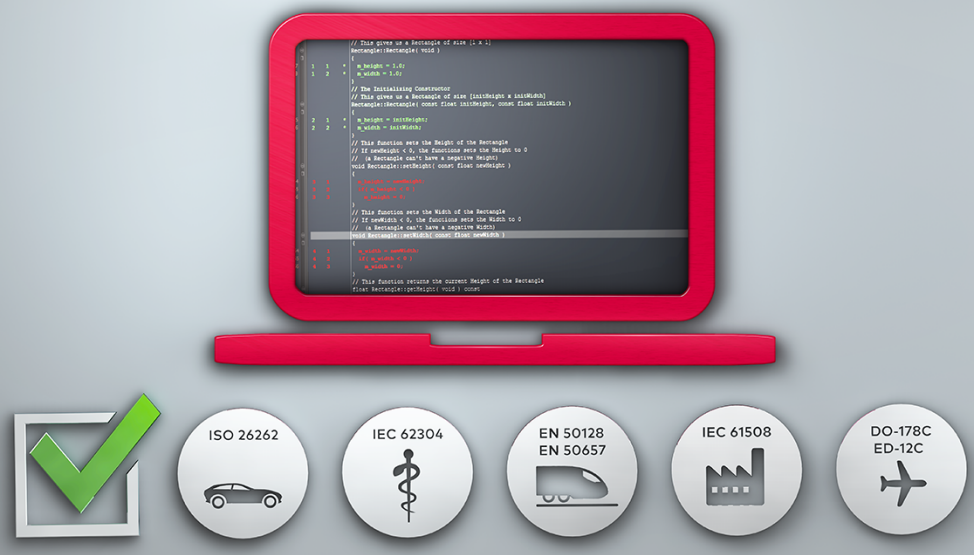
Once selected you will be redirected to a download information page where you can read additional information about the download. At the bottom of the page, you will see a button labeled **Download**. Select that button and the download will begin.



In the archive you will find the file **`install.sh`**. You may use this as an install script. It is suggested you read the file to be sure the operations are valid for your installation before running the script. The script must be executed as root.



If you experience any problems, please contact Technical Support at:
Email: support@vector.com
Web: https://support.vector.com



Upgrading VectorCAST

Upgrading VectorCAST

Note: This section only applies if you are using the legacy license manager, FLEXlm. If you are running FLEXlm (aka FlexNet Publisher) on Windows, it is recommended to use Windows 10 (or higher) or Windows Server 2016 (or higher).

Visit the VectorCAST download page on our web site to see if a new version of VectorCAST has been released. By request, your organization is notified about new releases of VectorCAST. If you decide to upgrade your VectorCAST installation, you should first determine if you will need to upgrade the FLEXnet licensing binaries.

- VectorCAST 5.1a and above requires that FLEXlm version 11.7 or above be used.
- VectorCAST 5.1h and above requires that FLEXlm version 11.9 or above be used.
- VectorCAST 6.4a and above requires that FLEXlm version 11.12 or above be used.
- VectorCAST 2018 and above requires that FLEXlm version 11.14.1 or above be used.
- VectorCAST 2019 and above requires that FLEXlm version 11.16.1 or above be used.
- VectorCAST 2020 and above requires that FLEXlm version 11.16.1 or above be used.
- VectorCAST 2021 and above requires that FLEXlm version 11.16.1 or above be used.
- VectorCAST 2022 and above requires that FLEXlm version 11.18.2 or above be used.
- VectorCAST 2026 and above requires that FLEXlm version 11.19.8 or above be used.

To determine the version of the FLEXlm license manager, enter in a Command Prompt or shell in the installation directory for FLEXlm:

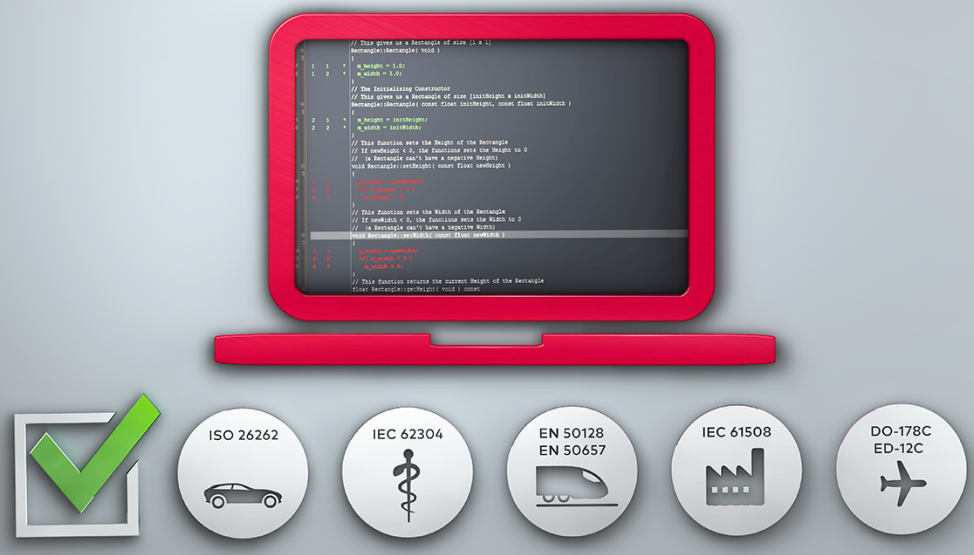
```
lmutil lmver lmgrd

lmutil - Copyright (c) 1989-2018 Flexera. All Rights Reserved.
FLEXnet Licensing v11.16.1.0 build 239104 (ipv6) i86_n3 (lmgr.lib), Copyright (c)
1989-2018 Flexera. All Rights Reserved.
```

If you *do* need to upgrade your FLEXlm binaries, follow these steps (run from the installation directory for FLEXlm):

1. Obtain a new license key from Vector.
2. Stop the license server by entering:

   ```
   lmutil lmstat
   lmutil lmdown -c path_to_old_license_file
   ```

3. Follow the instructions for installing FlexNet Publisher found in this document.



Legacy Named User Licensing

Legacy Named User Licensing

A Legacy VectorCAST Named User license file enables a customer to assign VectorCAST product licenses to specific human users as identified by their network login user name. This section is intended as an overview of Legacy Named User licenses.

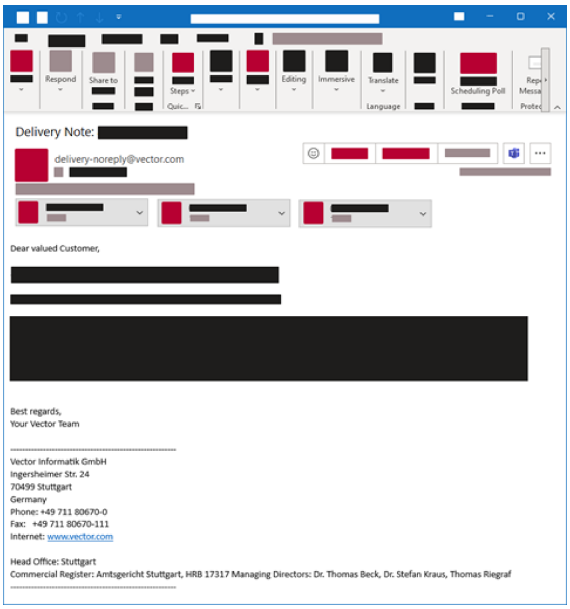
Note: This section does not apply to NVLM Named User Licenses.

Legacy Named User licenses may not be assigned to anonymous or fictitious users. The Legacy Named User license is implemented using the same FlexNet Publisher licensing technology as the VectorCAST floating licenses, but the license file is encoded to only allow usage by a sub-set of users.

The association between licenses and users is controlled by the customer through the use of a FlexNet Publisher License Options file. For more details about the FlexNet utilities, as well as the license and options file formats, refer to the FlexNet Publisher License Administration Guide. A User Guide for FlexNet Publisher is shipped with VectorCAST and can be found in the VectorCAST installation directory, under **`docs/PDF/`**.

Named User License File

Your VectorCAST license was sent in an email. The email will have the words “Delivery Note:” at the beginning of the subject line. The Delivery Note email will have your license file and a sample options file attached.



The first two lines of the license file attached to the email will look something like this:

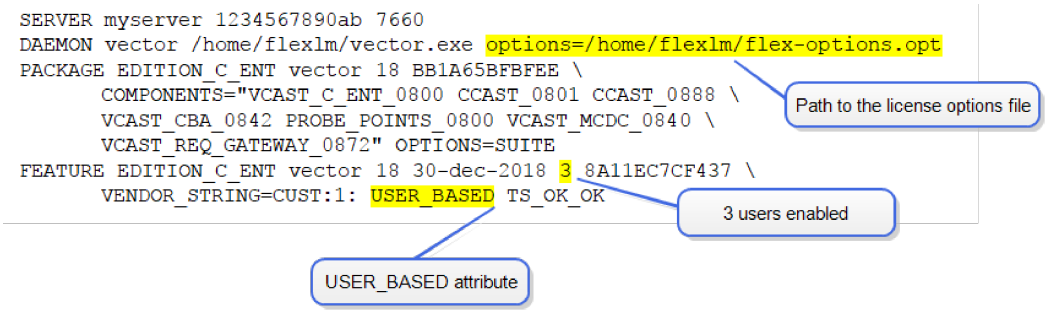
```
SERVER myserver 101234567890ab
DAEMON vector /home/flexlm/vector.exe
```

In addition to the changes described in the sections on installing the license server, the DAEMON line will also need to be edited to provide the path and filename of your options file as shown in the example below.

A Named User license file is different from a floating license file in two ways:

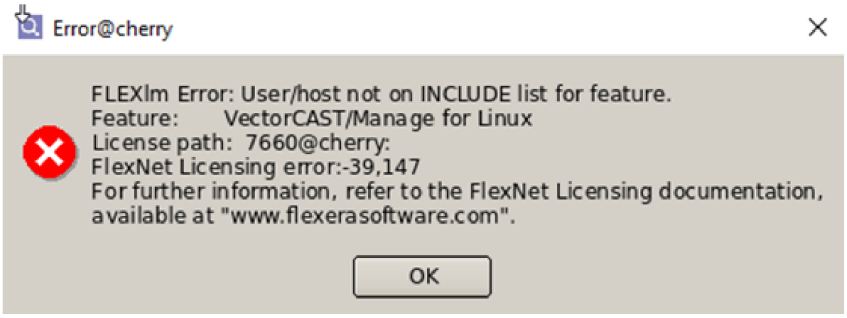
- The DAEMON line specifies the path to a license options file.
- Each FEATURE or INCREMENT line has a “USER-BASED” attribute.

For example, the following named user license file enables three named users for VectorCAST C++ Enterprise:



Additional Notes on Named User Licenses

1. An INCLUDE line is required for each FEATURE or INCREMENT line from the license file.
   - If you omit an INCLUDE line, those FEATURES will not be available.
2. A GROUP line makes options file maintenance easier, since you only need to change the list of users in a single place, rather than changing each INCLUDE line if a user leaves or joins your project.
3. The number of users in the option file must be less than or equal to the total number of licenses for that feature. If you provide too many user IDs for a feature, access to that feature will be denied.
4. If a user who is not listed in the options file tries to start VectorCAST, they will get an error dialog:



5. Every instance of the application uses a license, so if one user who is authorized by the License Options file starts three instances of VectorCAST, then three licenses are consumed.
6. If you edit the options and do **`lmreread`**, user changes will not get enabled for 12 hours.

7. The number of userIDs in the options file must be less than or equal to the maximum licensed users.

   - If you provide too many names, you will get the following fatal error in the debug log on the server:
   "USER_BASED license error for EDITION_C_ENT Number of INCLUDE names (5) exceeds limit of 3"

   - If you provide too few names, you will get the following informational message in the debug log:
   "Number of INCLUDED entries for USER_BASED feature VECTORCAST_MANAGE is 2, maximum is 3"

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