



CODEDYNAMICS INSTALLATION GUIDE

Version 2018.3



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Chapter 1

Installing CodeDynamics

Overview

This document provides information about installing CodeDynamics.

NOTE >> Rogue Wave CodeDynamics introduces a newly developed, modern interface driven by the full power of the TotalView debugging engine. The new interface does not yet directly support all the features of the debugging engine. However, most unsupported features are available through the Command Line Interface (CLI), which is easily accessible in CodeDynamics through its Command Line view.

The installation has two main steps:

- Installing the distribution files.
- Installing and activating the license.

How you proceed with the installation depends on your situation:

- **You have a demo license:** If you are installing CodeDynamics to use with a demo license, you need only follow the procedures in this chapter. If you decide to purchase a permanent CodeDynamics license, you will proceed on to the other chapters at that time.
- **You are installing CodeDynamics for the first time with a permanent license:** Follow the installation steps in this chapter, but when you get to the point of installing the demo license, skip to [Chapter 4](#), which describes how to install the LM license server, and then to [Chapter 5](#), which describes how to install your permanent license.

- **You already have CodeDynamics and are installing this new version:** Follow the installation steps in this chapter, but when you get to the point of installing the demo license skip to Chapter 3, which explains how to install your new license. (You should be able to skip over Chapter 2 since you should already have an LM license server installed.)

NOTE >> CodeDynamics requires you to specify named users in the file `<installdir>/flexlm-version/license.opt`. The product will not work without this specification. Specifying named users is described in “Setting up license.opt” on page 23.

Please contact us if you have problems installing CodeDynamics, have questions that are not answered in the product documentation or on our Web site, or suggestions for new features or improvements.

- **By email:** support@roguewave.com
- **By phone:** See Rogue Wave’s [Technical Support page](https://support.roguewave.com/) (<https://support.roguewave.com/>) for support numbers.

To determine whether your CodeDynamics license is valid for this release of CodeDynamics, see “Is My License Valid for this Release?” on page 11.

Installing CodeDynamics

Download the tar file version of the installation and use the **tar** command to extract CodeDynamics. For example:

```
tar xvf codedynamics version_platform.tar
tar xvf codedynamics.version-doc.tar
```

Before you can run CodeDynamics, you must obtain a license. You can obtain one by filling in the form located at <http://www.roguewave.com/products-services/request-demo>.

This section describes how you install a new version of CodeDynamics. Before starting, you should read the *Release Notes* on the [CodeDynamics documentation](#) web page. In addition, some operating systems may need to be patched. For more information, see the *TotalView for HPC Platforms and System Requirements* guide.

Here is the procedure for installing CodeDynamics:

1. (Optional) Go to the system upon which you will be installing CodeDynamics and become the root user:

```
su root
```

In some circumstances, you'll want to use the **sudo** command instead of **su**. If you use the **sudo** command, you'll be typing `sudo ./Install` instead of `./Install` in step 2.

Installing CodeDynamics as the **root** user prevents users from modifying the software. However, you should not run CodeDynamics as **root**.

2. Go to the directory containing the files extracted from the downloaded tar file and then start the **Install** program by typing:

```
./Install
```

For information on using this command, type `./Install -help`. If you use any of the options described in the displayed information, the installation procedure is no longer interactive.

3. The **Install** program asks you to accept the license terms for CodeDynamics. You can respond **Yes** to accept, **No** to decline, or **?** to view the license terms. You must accept the license terms to continue the installation.
4. The **Install** program asks that you name an installation directory. If the directory you specify does not exist, the program requests a new location, effectively meaning the directory you specify must already exist.

If you do not enter a name, the installation directory will either be `/usr/toolworks` or `/opt/toolworks`, depending on the system. Type a period `.` to place CodeDynamics in your current directory.

This manual refers to the installation directory's pathname as *installdir*.

The **Install** program then creates a **toolworks** directory and places two subdirectories within it:

- `codedynamics.version`. This is where **Install** places CodeDynamics.
- `flexlm-version`: This is where **Install** places the license manager.

5. You are now asked to select which components you wish to install.

If you are installing CodeDynamics for multiple platforms in a common NFS directory, you only need to install the common components once.

6. The **Install** program asks if it should create a symbolic link (named **codedynamics**) to this installation directory.

If you are not the root user, **Install** cannot create the link, so you should answer “n” (no). If **Install** cannot create the link, you can ignore its complaints and continue installing CodeDynamics by pressing Enter.

7. If you became root using **su**, exit from root after **Install** concludes by typing:

```
exit
```

8. Test if CodeDynamics was successfully installed by typing:

```
installdir/toolworks/codedynamics.version/bin/codedynamics
```

CodeDynamics prints information that includes a version number and a message indicating that a license file is not installed.

If CodeDynamics cannot initialize the license manager, it prints the following message:

```
Unable to initialize CodeDynamics license
```

If you see this message, you need to confirm that you did install the license. You may need to set the `LM_LICENSE_FILE` environment variable to the installation directory. (This variable is described in the next step.)

Configuring Your Environment

Before you can begin using CodeDynamics, you must add CodeDynamics to your `PATH` variable. On some systems, you may need to mount the `/proc` directory.

Installing a Demo License

Before you can use CodeDynamics, you must place the demo license into the `flexlm-version` directory. This license file, which is called `license.demo`, was attached to the email message confirming your download request. If your email system didn't retain this name, you must rename it after you save it to disk.

1. If you installed CodeDynamics as the **root** user, become the **root** user again. If you used **sudo** to install CodeDynamics, use **sudo** in the following step.

2. Copy the license file to the `flexlm-version` directory.

```
cp license.demo installdir/toolworks/flexlm-version
```

3. To test that CodeDynamics can use the license file, type:

```
installdir/toolworks/codedynamics.version/bin/codedynamics
```

CodeDynamics responds by displaying the initial view of the interface.

After you purchase CodeDynamics, you will receive a permanent license.

Setting the License File Variable

If you do not want to install the `license.demo` file in the `installdir/toolworks/flexlm-version` directory, you must set your `LM_LICENSE_FILE` environment variable to the file's full pathname. For example:

```
setenv LM_LICENSE_FILE nonstandard-dir/license.demo
```

If a `LM_LICENSE_FILE` environment variable already exists, add the pathname for `license.demo` to this variable's declaration. Notice that the `LM_LICENSE_FILE` variable contains a colon-separated list of license file pathnames. For example:

```
setenv LM_LICENSE_FILE nonstandard-dir/license.demo:${LM_LICENSE_FILE}
```



License Installation Quick Setup

Overview

The procedure to install a license differs, depending on whether the installation is for a new CodeDynamics install or updating an existing CodeDynamics install.

- For a new CodeDynamics install, see [Installing a New License](#).
- For an existing CodeDynamics install, see [Updating an Existing License](#).

NOTE >> If you encounter problems using the setup steps in this quickstart, see [Installing or Changing a Regular License](#) for more detailed instructions.

Updating an Existing License

Your CodeDynamics license is implemented by FlexNet which is built into CodeDynamics.

New releases of CodeDynamics may infrequently incorporate updated FlexNet versions. Consult the CodeDynamics release notes to determine if a FlexNet update has been applied.

If your CodeDynamics release does include a newer FlexNet version than that which is currently installed on your system, choose the [FlexNet Update](#) installation option.

Otherwise, complete the steps in the [No FlexNet Update](#) section.

FlexNet Update

1. Stop the currently running license server:
`<installdir>/toolworks/flexlm-<oldversion>/bin/toolworks_init stop`
2. Open `<installdir>/toolworks/flexlm-<oldversion>/license.dat`, and note the license server manager daemon's TCP/IP port number. This is the last field on the SERVER line (for example: "7127").
3. Next, follow the steps in [Installing a New License](#). When the `Configure_License` script asks for the license server manager daemon's TCP/IP port number, enter the port number as noted above.

No FlexNet Update

1. Modify your `license.dat` file by adding the new license key(s) provided, and removing the CodeDynamics license key(s) that are duplicate (licenses with the same entitlement code) or being replaced and are therefore no longer valid.
2. Run the `toolworks_lmread` script so the running license server will reread your modified `license.dat` file:
`<installdir>/toolworks/flexlm-<version>/bin/toolworks_lmread`
This completes the license install. No further setup is necessary.

Installing a New License

If you have a new CodeDynamics install, this section describes the basics of installing your license.

1. Create a `license.src` file containing the CodeDynamics license key(s) provided.
2. Run the `Configure_License` script to generate the `license.dat`, configuration files, and initialization scripts:
`<installdir>/toolworks/flexlm-<version>/bin/Configure_License`
3. Start the license server by running the command `toolworks_init start`:
`<installdir>/toolworks/flexlm-<version>/bin/toolworks_init start`





Chapter 3

Installing or Changing a Regular License

Overview

This chapter describes the procedure for installing or changing a regular license.

- To install CodeDynamics software for the first time with a permanent license, see [“Planning for a Regular License”](#) on page 12.
- To create a *FlexNet* user account, see [“Creating a FlexNet User Account”](#) on page 14.
- To install CodeDynamics software and use an existing license, see [“Accessing a License Server”](#) on page 14.
- To shutdown and restart the license manager, see [“Starting the License Manager Manually”](#) on page 15.

To determine if your license is valid for the release you are installing, see [“Is My License Valid for this Release?”](#) on page 11.

Is My License Valid for this Release?

To be valid, the maintenance date for your license must be later than the official release date. You can find the maintenance date for your CodeDynamics installation in:

```
installdir/toolworks/flexlm-version/license.dat
```

Open the file in a text editor and look for a line like this:

```
INCREMENT TotalView_Codedynamics toolworks 2014.1231 permanent 20 \
```

The example above indicates a permanent 20 token team license where the maintenance expires December 31, 2014. It will always be valid to run CodeDynamics versions released before the maintenance expiration date of December 31, 2014, but will result in a "license too old" message if you attempt to use it with a version of CodeDynamics released after December 31, 2014.

Planning for a Regular License

CodeDynamics uses the FlexNet® license management software to grant or reject requests to use CodeDynamics.

FlexNet was formerly known as FLEXLM, so the string '`flexlm`' still appears in the CodeDynamics product, mainly in code and directory paths.

You do *not* need to install FlexNet if you are using an evaluation license. That is, you only need the information in this chapter after you purchase CodeDynamics and have received your regular license.

Your regular license is associated with a FlexNet license manager host (the license server) and is for a specific number of named users. Named users are managed through the file `/usr/toolworks/flexlm-version/license.opt` (assuming `/usr/toolworks` was the installation directory). See “[Setting up license.opt](#)” on page 23.

NOTE >> Configuring `license.opt` is required for your CodeDynamics installation to work.

Rogue Wave provides tools and PDF documentation for using FlexNet.

Choosing a License Server

You will need to install the FlexNet license server the first time you install a regular license. In most cases, the license manager and CodeDynamics reside on the same system. However, you can install them on different systems. The CodeDynamics tar file includes license server software for the platform CodeDynamics runs on. See “[Installing FlexNet Standalone](#)” if your license server's platform differs from that of CodeDynamics.

The license manager should reside on a machine that is reliable, always running, and a permanent part of your local network. And, most importantly, it is accessible. For example, do not place it on the other side of your firewall.

If you already have a FlexNet license manager in your network, you should not include your CodeDynamics license with the other licenses managed by that license manager. If you must combine license managers, consult the FlexNet documentation.

The TCP/IP port number used for the Rogue Wave license manager daemon must be unique and not used elsewhere. You can find port numbers that other FlexNet license managers use in their license files.

Finding a License Server Host ID

When you install CodeDynamics, the installer placed the files for the FlexNet license manager in `installdir/toolworks/flexlm-version`.

To obtain host information, run the **toolworks_hostid** script, as follows:

```
installdir/flexlm-version/bin/toolworks_hostid
```

Do *not* use the UNIX **hostid** command.

This script writes the host name and one or more FlexNet host ID values to standard output; for example:

```
The host name for this machine is: fast-server  
The host ID for this machine is: 08122b2cf32d
```

After sending us this information and completing your order we'll send you a permanent license key.

Creating a FlexNet User Account

While you can run the FlexNet license manager as **root**, you should run it as a unique non-privileged (that is, non-**root**) user. Do this by creating a user account reserved for FlexNet's use. You may need to refer to your operating system's documentation or your site's operating procedures for information on creating this account. The user name does not have to be `flexnet`. Any unique name will do.

The account from which the license manager is run must have the following properties:

- The password is set to `'*'` because interactive access is not required.
- There is a unique user ID.
- There is a unique group ID.
- The login shell is `/bin/sh`.

Installing your Permanent License

This procedure is described in [Chapter 5, "Installing License Keys"](#).

Accessing a License Server

When you start CodeDynamics, it must be able to find the `license.dat` file in the `flexlm-version` directory. If CodeDynamics and the active license manager are installed on the same host and you place the `license.dat` file in its default location, you can skip to the next section, "[Starting the License Manager Manually](#)" on page 15.

If you are installing CodeDynamics and the license server on different machines, you will must place a `license.dat` file within each installation. Do this by copying the `license.client` file from the license server to `flexlm-version/license.dat` in each installation. If you are using an existing license server, this is all that you have to do.

The format for the `license.client` file is:

```
SERVER host-name host-id port-numberUSE_SERVER
```

For example:

```
SERVER fast-server 08122b2cf32d 7127 USE_SERVER
```

FlexNet ignores all lines after `USE_SERVER`.

Starting the License Manager Manually

You can start or stop the license manager by using the **toolworks_init** script. (This script is created by the **Configure_License** script when you install the license.) If, for example, the license manager software is installed in `/usr/toolworks`, the following commands start the license manager. Before entering these commands, use the **su** shell command to become the **root** user.

In some environments, you'll need to use the **sudo** command. If you use this command, you'll type something like **sudo./toolworks_init start**. Also, before you run this program, make sure that you have write permission to this directory.

```
cd /usr/toolworks/flexlm-version/bin
./toolworks_init start
```

Although the start-up script should be run as super-user (**root**), the license manager is started using the FlexNet user ID.

Check that the license manager started. Do this by examining the following file:

```
/usr/toolworks/flexlm-version/license.log
```

Stopping the License Manager

The way you stop the license manager is very similar to the way you started it. If the license manager software resides in `/usr/toolworks`, the following commands stop the license manager. (Before entering these commands, use the **su** shell command to become the **root** user or use the **sudo** command to directly invoke the following program.)

```
cd /usr/toolworks/flexlm-version/bin
./toolworks_init stop
```

Testing the License Manager

To verify that you installed the license manager correctly, manually start it and then run CodeDynamics —don't do this as **root**. After the license manager starts, set the license file variable and test the license installation by typing:

```
installdir/toolworks/codedynamics/bin/codedynamics
```

CodeDynamics should respond by displaying its main window. If it can't connect to the underlying TotalView debugging engine, you should:

- Look at the `flexlm-version/license.log` log file. This file contains status and error messages from the **lmgrd** license server.
- Use the `flexlm-version/platform/bin/lmstat` command, which lists license manager activity. For example, to list the number of licenses that are currently checked out on a **sun5** platform, type:

```
cd /usr/toolworks/flexlm-version/sun5/bin
./lmstat -a -c ../../license.dat
```

Starting the License Manager When the System Boots

Most of our customer want the license manager to automatically start when the license server boots. Do this by adding the **toolworks_init** command (see “[Starting the License Manager Manually](#)” on page 15) to the appropriate system start-up file. (Ask your system manager where this should go.) On most systems, you should also automatically stop the license manager when the system shuts down to single-user mode.

You can edit your startup files by running the **Configure_Autostart** shell script, which must be run as **root**. For example, if the license manager software is in the `/usr/toolworks` directory, run **Configure_Autostart** using the following commands. (Before entering these commands, use the **su** shell command to become the root user or use the **sudo** command to directly invoke the following program.)

```
cd /usr/toolworks/flexlm-version/bin
./Configure_Autostart
```

Configure_Autostart prompts you with some configuration questions and then makes its changes.

Installing FlexNet Standalone

The CodeDynamics tar file includes license server software for the platform CodeDynamics runs on. If your license server's platform differs from that of CodeDynamics, contact support@roguewave.com to obtain a tar file containing the files for your license server's platform.

Use the **tar** command to extract the files from the FlexNet standalone tar file. For example:

```
tar xvf flexlm-version.tar
```

Starting the Install Program

Here is the procedure for installing FlexNet:

1. (Optional) Become the root user on the system where you will install the license server software:

```
su root
```

We recommend that you become the root user when installing FlexNet as this prevents users from modifying the software after you install it.

On some systems, you will use the **sudo** command. In this case, you would invoke the **Install** program in step 2 by typing `sudo ./Install`.

1. From the directory containing the unbundled files, start the **Install** program:

```
./Install
```

For information on using this command, type `./Install -help`. If you use any of the options displayed by this command, the software is non-interactively installed.

2. The **Install** program asks you to accept the license terms. You can respond **Yes** to accept, **No** to decline, or **?** to view the license terms. You must accept the license terms to continue the installation.
3. The **Install** program asks that you name an installation directory. If the directory you specify does not exist, the program requests a new location, effectively meaning the directory you specify must already exist. The **Install** program then creates a `toolworks` directory and places the `flexlm-version` directory within it. Type a period "." if you want **Install** to place FlexNet in your current directory.

If you do not enter a name, the installation directory is either `/usr/toolworks` or `/opt/toolworks`—this is system dependent.

1. You are then asked which components you wish to install. You should install the license common files and the license platform files for your license server.
2. If you became root to install FlexNet, use the **exit** command.

More FlexNet Information

These instructions provide only basic information on installing the FlexNet license manager. For more information, see:

User Guide

A PDF version of the FLEXlm License Administration Guide is installed at `flexlm-version/doc/fnp_LicAdmin.pdf`.

Flexera Software Web Site

FlexNet is a product of Flexera Software. The web site at <https://www.flexerasoftware.com/producer/products/software-monetization/flexnet-licensing/> contains additional information about FlexNet.



Chapter 4

Installing License Keys

Overview

This chapter describes the procedure for installing or changing a regular license. The topics in this chapter are:

- “Step 1: Locating the FlexNet License Server Directory” on page 20
- “Step 2: Deleting Older License Keys” on page 21
- “Step 3: Adding New License Keys” on page 22
- “Step 4: Starting and Stopping the License Server” on page 24
- “Step 5: Configuring CodeDynamics to Use the License Server” on page 26
- “Reporting Problems with License Installation” on page 27

You must install the FlexNet version license management software on the machine you have selected as your license server. FlexNet is included in the distribution and was installed by the installation script.

Step 1: Locating the FlexNet License Server Directory

Locate the `flexlm-version` directory that was installed in Step 1. This directory should be located in the directory `installdir/toolworks`.

The default values for `installdir` are `/usr` and `/opt` depending on your platform.

Set the **FLEXLM** environment variable to:

```
installdir/toolworks/flexlm-version
```

For example:

```
setenv FLEXLM /usr/toolworks/flexlm-version
```

The **FLEXLM** environment variable is only used during this installation process. The license management daemons do not use or need it.

Step 2: Deleting Older License Keys

If you received new licenses keys because you moved your server or traded in existing license keys, the older license keys are no longer valid and must be removed in order for you to be in compliance with the Rogue Wave Permanent License Agreement.

If you do not need to remove previous license keys, skip to “[Step 3: Adding New License Keys](#)” on page 22.

The host information and license key information for the license keys that you need to remove are included in the email we sent you. For each of these license keys, that email listed:

- The `hostname` of the license server.
- The `hostid` of the license server.
- The FlexNet `INCREMENT` lines that contain the now invalid license key.

Here is how to remove an invalid license key:

1. Locate the machine that corresponds with the `hostid` for the invalid key. Since hostnames are dynamic, you can use the `${FLEXLM}/bin/toolworks_hostid` script to validate the `hostid` of the license server. The FlexNet `hostid` is unique for each license server regardless of `hostname` and IP address changes.
2. Locate the `installdir/toolworks/flexlm-version` directory on the license server.
3. If necessary, become the root user.
4. Make a temporary backup of the existing `${FLEXLM}/license.dat` file. For example:

```
cp ${FLEXLM}/license.dat ${FLEXLM}/license.dat.bak
```
5. Using a text editor, edit the `${FLEXLM}/license.dat` file to delete the `-INCREMENT` and comment lines—comment lines begin with `##`—matching the key being removed. Save this file.
6. If other license keys still exist in the `license.dat` file, tell the license server to reread the `license.dat` and verify that these licenses still work. If they do, you can delete the `license.dat.bak` temporary backup file.

Use the following command to tell the license server to reread your `license.dat` file:

```
${FLEXLM}/bin/toolworks_lmread
```

If no license keys remain in the `license.dat` file, use the following command to stop the license server:

```
${FLEXLM}/bin/toolworks_init stop
```

Step 3: Adding New License Keys

This step describes how to create or update the `license.dat` file that the license manager uses to allow access to CodeDynamics.

If your license server is already serving one or more CodeDynamics licenses (that is, the file `${FLEXLM}/license.dat` already exists), go to “Revising Your `license.dat` File” on page 23.

Adding a New `license.dat` File

The `Configure_License` script, which is located in the `${FLEXLM}/bin` directory, creates the `license.dat` file and the `toolworks_init` script. `Configure_License` needs to read the `license.src` file. This file, which you will create, contains CodeDynamics license keys.

Here is the procedure for creating this `license.src` file:

1. Change to the `flexlm-version` directory on the license server
`cd ${FLEXLM}`
2. Copy and paste the new Rogue Wave license keys — this is the information that you received through email — into a file named `license.src` in the `<installdir>flexlm-version` directory.

The text in your `license.src` is derived from your host information, number of license keys, and license configurations.

3. Run the `${FLEXLM}/bin/Configure_License` script on the license server. You must run this script while your current directory is `flexlm-version`. The script creates the following files:

- `${FLEXLM}/license.dat`
- `${FLEXLM}/license.opt`

NOTE >> If you already have a `license.opt` file the script asks whether you want to overwrite it. Answer “n” to preserve your existing file with its named users. If you answer “y”, a new file without named users is created, but your existing file is saved as `license.opt.old`.

- `${FLEXLM}/license.client`
- `${FLEXLM}/license.log`
- `${FLEXLM}/bin/toolworks_init`

4. Proceed to the section “Setting up `license.opt`” on page 23. This section describes how to specify named users, which is required for your CodeDynamics installation to work.

Revising Your license.dat File

If you are currently using CodeDynamics, you need to revise your `${FLEXLM}/license.dat` file. You do not need to create a new `${FLEXLM}/license.src` file nor do you need to rerun the **Configure_License** script unless you have deleted or changed the location of the `flexlm-version` directory.

If the `${FLEXLM}/license.dat` file does not exist, you will need to follow the procedure described in “Adding a New license.dat File” on page 22 at the beginning of this topic. Since Rogue Wave does not resupply all of your license keys when there is a license change, you will need to combine the license keys that you already have with the newly delivered keys.

Here is the procedure for revising your existing `license.dat` file:

1. Back up your existing `${FLEXLM}/license.dat` file. For example,

```
cp ${FLEXLM}/license.dat ${FLEXLM}/license.dat.bak
```
2. Using a text editor, edit the `${FLEXLM}/license.dat` file and append the new CodeDynamics license keys delivered in this email message to the end of the `${FLEXLM}/license.dat` file.
3. Tell the license server to reread your `license.dat` file:

```
${FLEXLM}/bin/toolworks_lmreread
```

Setting up license.opt

CodeDynamics licensing is governed by the file `license.opt` file, located in the `flexlm-version` subdirectory of the installation directory. A designated license administrator needs to manage this file. This file is generated by the script **Configure_License** and looks like this:

```
NOLOG IN
NOLOG OUT

# Ignore the following for TotalView licenses.

# Code Dynamics uses USER_BASED licensing, customer license admins will
# need to list the usernames for people allowed use CodeDynamics. Remove
# the number signs in front of the GROUP, INCLUDE, and MAX lines below and
# replace user1 user2 ... in GROUP with actual usernames.
# The number of usernames should not exceed the number after "USER_BASED="
# in the purchased license or no users will be allowed to check out licenses.

#GROUP TVG user1 user2 user2 user4

#INCLUDE TotalView_Codedynamics GROUP TVG

# Use MAX 2 to ensure fair access for all users.
```

```
#MAX 2 TotalView_Codedynamics USER ALL_USERS
```

When changes are made to this file, the administrator needs to run the utility `<installdir>/flemlm-version/bin/toolworks_lmread`, which causes the license server to reread its license files, including `license.opt`.

NOTE >> Changes to `license.opt` do not take effect until **12 hours** after the file is reread.

If we assume you, as the administrator, have a license for five users, you need only uncomment the `GROUP`, `INCLUDE`, and `MAX` lines, and replace the four 'user' placeholders with five actual user names:

```
NOLOG IN
NOLOG OUT
...
GROUP TVG lisa bob frank rachel pete

INCLUDE TotalView_Codedynamics GROUP TVG

# use MAX 2 to insure fair access for all users

MAX 2 TotalView_Codedynamics USER ALL_USERS
```

NOTE >> If the number of defined users exceeds the number allowed by `USER_BASED=n`, the license becomes unusable. The administrator must then redefine the user list with an allowed number of users and run `toolworks_lmread`. Note, however, that changes to `INCLUDE` statements do not take effect until 12 hours after they are reread, so the license would be unusable during that wait period.

The `Max 2` statement allows each user in the named include group to run two instances of CodeDynamics concurrently. This gives users some flexibility if, for example, they want to run CodeDynamics concurrently on a desktop machine and a lab machine. Based on these specifications, therefore, up to 10 instances of CodeDynamics could be running at the same time. But it is still **not** possible for any given user to run more than two instances of the product concurrently.

For complete information about `license.opt` and other aspects of flexlm license management, see the document `<installdir>/flemlm-version/doc/fnp_LicAdmin.pdf`.

Step 4: Starting and Stopping the License Server

Run the following command as **root** to start the license server.

```
${FLEXLM}/bin/toolworks_init start
```

As an alternative, you can run the commands within this section as an argument to the **sudo** command.

If you configured your license server to run as a non-privileged user, the initialization script ensures that the license management daemons are started and run under the non-privileged user even if you run the script as **root**.

To stop the license manager, become **root**, and then use the following command:

```
${FLEXLM}/bin/toolworks_init stop
```

If you would like the license manager to automatically start when the system is booted, run the following script as **root**:

```
${FLEXLM}/bin/Configure_Autostart
```

Step 5: Configuring CodeDynamics to Use the License Server

CodeDynamics must be able to find the `${FLEXLM}/license.dat` file. If you are running CodeDynamics and the license server in the installation directory on the same machine, you can skip this step.

If CodeDynamics and the license manager are not running on the same machine, you will need to place a `${FLEXLM}/license.dat` file on each additional installation. Copy the `${FLEXLM}/license.client` file from the license server into the `flexlm-version` directory on each remote machine and rename that file to `license.dat`.

As an alternative, you can specify the full path to the `license.dat` file in your `LM_LICENSE_FILE` environment variable. A client-style `license.dat` has the following form:

```
SERVER hostname hostid port-number USE_SERVER
```

Reporting Problems with License Installation

If you have difficulties installing your license keys, please send email to support@roguewave.com and include the following:

- Your `license.dat` file.
- Your `license.src` file (if applicable).
- The license delivery email.
- The `license.log` file created when you attempted to start the license manager and CodeDynamics.
- The text displayed in your window when you tried to start the license manager.
- The text displayed in your window when you tried to start CodeDynamics.



Uninstalling CodeDynamics

The Three-Step Removal Process

To remove or uninstall CodeDynamics:

1. If the license server is running, stop it. If the license manager software is installed in **/usr/local/toolworks**, the following commands stop the license manager. Before entering these commands, you may need to use the **su** shell command to become the **root** user or use the **sudo** command to directly invoke the following program.

```
cd /usr/toolworks/flexlm-version/bin  
./toolworks_init stop
```

2. Remove the installation directory. The default location is

```
/usr/toolworks
```

If you have more than one version of CodeDynamics, just remove what you don't want. If you are just removing a version, you do not need to stop the license manager.

3. The home directories of all CodeDynamics users have a **.totalview** subdirectory. Remove it.

If you're not interested in using CodeDynamics after trying it, we'd really appreciate you sending email to **support@roguewave.com** and letting us know why.

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