

# TOTALVIEW INSTALLATION GUIDE



VERSION 8.8



Copyright © 2007, 2010 by TotalView Technologies. All rights reserved

Copyright © 1998–2007 by Etnus LLC. All rights reserved.

Copyright © 1996–1998 by Dolphin Interconnect Solutions, Inc.

Copyright © 1993–1996 by BBN Systems and Technologies, a division of BBN Corporation.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of TotalView Technologies.

Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

TotalView Technologies has prepared this manual for the exclusive use of its customers, personnel, and licensees. The information in this manual is subject to change without notice, and should not be construed as a commitment by TotalView Technologies. TotalView Technologies assumes no responsibility for any errors that appear in this document.

TotalView and TotalView Technologies are registered trademarks of TotalView Technologies.

TotalView uses a modified version of the Microline widget library. Under the terms of its license, you are entitled to use these modifications. The source code is available at:

[ftp://ftp.totalviewtech.com/support/toolworks/Microline\\_totalview.tar.Z](ftp://ftp.totalviewtech.com/support/toolworks/Microline_totalview.tar.Z).

All other brand names are the trademarks of their respective holders.

# Contents



<b>1</b>	<b>Installing TotalView Using tar Files</b>	
	Step 1: Unbundling Downloaded Files .....	1
	Step 2: Running the Install Program .....	2
	Step 3: Installing a Demo License .....	3
	Setting the License File Variable .....	4
	Step 4: Configuring Your Environment .....	4
	Cray XT Installation .....	4
<b>2</b>	<b>Installing or Changing a Regular License</b>	
	Planning for a Regular License .....	7
	Choosing a License Server .....	8
	Ordering a Regular Cray XT3 License .....	8
	Finding a License Server Host ID .....	8
	Creating a FLEXlm User Account .....	9
	Installing your Permanent License .....	9
	Accessing a License Server .....	9
	Starting the License Manager Manually .....	10
	Stopping the License Manager .....	10
	Testing the License Manager .....	11
	Starting the License Manager When the System Boots .....	11
	Choosing a Standalone FLEXlm Version .....	12
	Starting the Install Program .....	12
	More FLEXlm Information .....	13
<b>3</b>	<b>Installing License Keys</b>	
	Step 1: Locating the FLEXlm License Server Directory .....	15
	Step 2: Deleting Older License Keys .....	16
	Step 3: Adding New License Keys .....	17
	Step 4: Starting and Stopping the License Server .....	18
	Step 5: Configuring TotalView to Use the License Server .....	19
	Reporting Problems with License Installation .....	19
<b>4</b>	<b>Installing TotalView Individual</b>	
	Obtaining an Entitlement Code .....	21

**5 Uninstalling TotalView**  
The Three-Step Removal Process ..... 23

# Installing TotalView Using tar Files



This document provides information about installing the TotalView® Debugger Team and TotalView® Team Enterprise using tar files.

If you are using the installer, you'll find a link to a replacement for this chapter at <http://www.totalviewtech.com/Documentation/>.

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

**support@totalviewtech.com**  
1-800-856-3766 in the United States  
(+1) 508-652-7700 worldwide

## Step I: Unbundling Downloaded Files

Use the **tar** command to extract the TotalView files contained within the installation tar file. These files are either downloaded from our web site or obtained from a CD-ROM. For example:

```
tar xvf totalview-version-platform.tar  
tar xvf totalview-version-doc.tar
```

## Step 2: Running the Install Program



Before you can run TotalView, you must obtain a demo licence. You can obtain one by filling in the form located at <http://www.totalviewtech.com>. After filing in this form, we will email you a demo license.

This section describes how you install a new version of TotalView. Before starting, you should read the *Release Notes* on our web site. In addition, some operating systems may need to be patched. For more information, see the *TotalView Platforms and System Requirements Guide*.

Here is the procedure for installing TotalView:

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

```
su root
```



In some circumstances (particularly on a Macintosh), 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 TotalView as the **root** user prevents users from modifying the software. However, you should not run TotalView 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 this displayed information, the installation procedure is no longer interactive.

The **Install** program asks that you name an installation directory. If the directory you specify does not exist, the **Install** program creates it.

If you do not enter a name, the installation directory will either be **/usr/toolworks** or **/opt/toolworks**—this is system-dependent. Type a period "." to place TotalView 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:

- > **totalview.version**. This is where **Install** places TotalView.
- > **flexlm-version**: This is where **Install** places the license manager.



If you are installing TotalView on a Cray XT system, you should go to Step 5 on Page 3. For more information about your Cray installation, see "Cray XT Installation" on page 4.

- 3 You are now asked to select which components you wish to install.  
If you are installing TotalView for multiple platforms in a common NFS directory, you only need to install the common components once.
- 4 The **Install** program asks if it should create a symbolic link (named **totalview**) 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 TotalView by pressing Enter.
- 5 If you became root using **su**, exit from root after **Install** concludes by typing:  
`exit`
- 6 Test if TotalView was successfully installed by typing:  
`installdir/toolworks/totalview.version/bin/totalview`  
TotalView prints information that includes a version number and a message indicating that a license file is not installed.  
If TotalView cannot initialize the license manager, it prints the following message:  
`Unable to initialize TotalView 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.)

## Step 3: Installing a Demo License

Before you can use TotalView, 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 TotalView as the **root** user, become the **root** user again. If you used **sudo** to install TotalView, 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 TotalView can use the license file, type:  
`installdir/toolworks/totalview.version/bin/totalview`  
TotalView responds by displaying its Root window.



*After you purchase TotalView, you will receive a permanent license. For more information, refer to the TotalView Installation Guide. You will find this guide within the TotalView help or on our web site at <http://www.totalviewtech.com/Documentation>.*

### 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 path-name 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}
```

## Step 4: Configuring Your Environment

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

On Compaq UNIX and IRIX, you must check to see if the `/proc` directory is mounted. Do this by typing:

```
ls /proc
```

If it is mounted, the `ls` command prints a list of numbers. If you see an error message, or no message at all, the directory is probably not mounted. If it isn't mounted, you need to ask your system administrator to mount it.

## Cray XT Installation



*Install TotalView where it is visible from your Linux login nodes. Do not install TotalView on your compute nodes. TotalView communicates with these nodes using a library created Cray.*

When you install TotalView on a Cray XT CNL system, the `Install` script begins by unbundling the tar file. It then invokes the rpm files contained within it. In contrast to the standard TotalView installation, the Cray installation doesn't ask where it should install TotalView as it knows where to install files.

The **Install** script also places the Cray bulk launching system and other support modules within the installation directory.

TotalView on Cray XT systems use **totalview-support** product components to provide essential interface components that allow TotalView to execute in Cray environments. Included within **totalview-support** are the **totalview-support** module, a configuration file, and a set of bulk launcher executables.

The bulk launcher is a paired set of executables that use ALPS to scalably launch the TotalView Debugger Server (**tvdsvr**) executable on compute nodes.

If you are running your program on an XT3 Catamount system

- The **tvdsvr** process is called **tvdsvr\_rs**.
- In many cases, you will need to use the **-nodes\_allowed** server command-line option to **tvdsvr\_rs**.
- Your environment must set the **RS\_DBG\_CLIENTS\_PER\_SERVER** variable.



# Installing or Changing a Regular License



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

- To install TotalView software for the first time with a permanent license, begin with the next section.
- To update an existing license, see “*Ordering a Regular Cray XT3 License*” on page 8.
- To install TotalView software and use an existing license, see “*Accessing a License Server*” on page 9.
- To shutdown and restart the license manager, see “*Starting the License Manager Manually*” on page 10.

If you are installing TotalView Individual, the information you need is Chapter 4, “Installing TotalView Individual”.

## 2

### Planning for a Regular License

TotalView uses the FLEXlm® license management software to grant or reject requests to use *TotalView*.



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

Your regular license is associated with a FLEXlm license manager host (the license server) and is for a specific number of concurrent licenses or tokens, depending upon the version you purchased.

TotalView Technologies provides tools and HTML documentation for using FLEXlm.

### Choosing a License Server

---

You will need to install the FLEXlm license server the first time you install a regular license. In most cases, the license manager and TotalView reside on the same system. However, you can install them on different systems.

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 FLEXlm license manager in your network, you should not include your TotalView license with the other licenses managed by that license manager. If you must combine license managers, consult the FLEXlm documentation.*

*The TCP/IP port number used for the TotalView Technologies license manager daemon must be unique and not be used elsewhere. You can find port numbers that other FLEXlm license managers use in their `license.dat` files.*

### Ordering a Regular Cray XT3 License

---

For Cray XT3 systems, we will generate two sets of license keys. One is for your login nodes—this license contains an LINUX/8664-XU-1P statment. These login nodes are where TotalView and the TotalView Server, (`tvdsvr`) actually run. The second set of licenses contains a CATAMOUNT/AMD64-XU-YP statement. A `tvdsvr` is started for each set of 64 or less compute nodes needed for a job. This server communicates with the compute nodes using a Cray-supplied library.

If the CATAMOUNT/AMD64 license is for less than 64 processors, you will need to add the `-nodes_allowed` command-line option to limit the number of licenses that TotalView tries to check out. This option is described in the *TotalView Reference Guide*. Adding this option to a single or bulk launch server string is described in the *TotalView User Guide*.

If your system has more than one set of CATAMOUNT licenses and the number of users and processors varies, the LINUX/8664 license user count should be the total of all the CATAMOUNT users. The TotalView Technologies Sales group will help you coordinate this.

### Finding a License Server Host ID

---

When you install TotalView, the installer placed the files for the FLEXlm license manager in `installdir/tooworks/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 the FLEXlm host ID value 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 FLEXlm User Account

While you can run the FLEXlm 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 FLEXlm'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 **flexlm**. 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 3, "Installing License Keys," on page 15.

## Accessing a License Server

When you start TotalView, it must be able to find the **license.dat** file in the **flexlm-version** directory. If TotalView 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."

If you are installing TotalView 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-number  
USE_SERVER
```

For example:

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

FLEXlm 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/local/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/local/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 FLEXlm user ID.

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

```
/usr/local/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/local/toolworks**, the following commands stop the license manager. (Before entering these com-

mands, use the **su** shell command to become the **root** user or use the **sudo** command to directly invoke the following program.)

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

### Testing the License Manager

To verify that you installed the license manager correctly, you should manually start the license manager and then run TotalView —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/totalview/bin/totalview
```

TotalView should respond by displaying its Root window. If it isn't displayed, 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/local/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 10) 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/local/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/local/toolworks/flexlm-version/bin
./Configure_Autostart
```

**Configure\_Autostart** prompts you with some configuration questions and then makes its changes.

## Choosing a Standalone FLEXlm Version

TotalView Technologies supplies a stand-alone version of the version FLEXlm license manager. The following table indicates the supported platforms and the **tar** file associated with each.

Distribution Name	FLEXlm license manager for ..
<code>flexlm-version-darwin-power.tar</code>	Apple Mac OS X running on Power
<code>flexlm-version-darwin-x86.tar</code>	Apple Mac OS X running on Intel
<code>flexlm-version-alpha.tar</code>	Compaq Tru64 UNIX
<code>flexlm-version-hpux11-ia64.tar</code>	HP HP-UX for IA-64
<code>flexlm-version-linux-ia64.tar</code>	HP Linux for Itanium, Red Hat IA-64 Linux 7.2 and 8.0
<code>flexlm-version-linux-power.tar</code>	IBM Power Linux
<code>flexlm-version-linux-x86.tar</code>	RedHat Linux
<code>flexlm-version-linux-x86-64.tar</code>	RedHat Linux
<code>flexlm-version-irix6-mips.tar</code>	IRIX
<code>flexlm-version-power-darwin.tar</code>	Apple Mac OS X
<code>flexlm-version-RS6000.tar</code>	IBM RS/6000
<code>flexlm-version-solaris-x86.tar</code>	Sun Solaris Opteron
<code>flexlm-version-sun5.tar</code>	Sun SPARC Solaris

Use the **tar** command to extract the files that you downloaded from our web site. For example:

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

### Starting the Install Program

Here is the procedure for installing FLEXlm:

- 1 (Optional) Become the root user on the system where you will install TotalView:

```
su root
```

We recommend that you become the root user when installing FLEXlm 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**.

- 2 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.

- 3 The **Install** program asks that you name an installation directory. If the directory you name does not exist, the **Install** program creates it. 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 FLEXlm 10.8 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.
- 4 You are then asked which components you wish to install. You should answer *yes* to all questions.
- 5 If you became root to install FLEXlm, use the **exit** command.

### More FLEXlm Information

---

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

**User Guide**      An HTML version of the FLEXlm user manual is installed in `flexlm-version/doc/flexuser`.

**Macrovision Web Site**  
FLEXlm is a product of Macrovision Corporation. Their web site at <http://www.macrovision.com/> contains additional information about FLEXlm as well as utilities that can help you manage your license server.



# Installing

# License Keys



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

- "Step 1: Locating the FLEXlm License Server Directory" on page 15
- "Step 2: Deleting Older License Keys" on page 16
- "Step 3: Adding New License Keys" on page 17
- "Step 4: Starting and Stopping the License Server" on page 18
- "Step 5: Configuring TotalView to Use the License Server" on page 19
- "Reporting Problems with License Installation" on page 19

If you are installing TotalView Individual, the installer will install the license keys for you. You should go to Chapter 4, "Installing TotalView Individual," on page 21 for more information.

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

If you want to install TotalView and the license server on different machines, you can download the FLEXlm software from <ftp://ftp.totalviewtech.com/toolworks/flexlm/>.

## Step 1: Locating the FLEXlm 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.

## Step 2: Deleting Older License Keys

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 license 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 TotalView Technologies Permanent License Agreement.

If you do not need to remove previous license keys, skip to “Step 3: Adding New License Keys” on page 17.

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 **FLEXlm 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 **FLEXlm 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 update and create the **license.dat** file that the license manager uses to allow access to TotalView.



*If your license server is already serving one or more TotalView licenses (that is, the file `${FLEXLM}/license.dat` already exists), go to "Revising Your license.dat File" on page 18.*

### 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 TotalView 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 TotalView Technologies license keys—this is the information that you received through email—into a file named **license.src** in the **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`
- > `${FLEXLM}/license.client`
- > `${FLEXLM}/license.log`
- > `${FLEXLM}/bin/toolworks_init`

Proceed to "Step 4: Starting and Stopping the License Server" on page 18.

## Step 4: Starting and Stopping the License Server

### Revising Your license.dat File

If you are currently using TotalView, 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` does not exist, you will need to follow the procedure described in "Adding a New license.dat File" at the beginning of this topic. Since TotalView Technologies 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 Backup 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 TotalView 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_lmread
```

## 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 TotalView to Use the License Server

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

If TotalView 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 [license@TotalView Technologies.com](mailto:license@TotalViewTechnologies.com). Please include the following:

- Your `license.dat` file.
- Your `license.src` file (if applicable).
- The license delivery email.
- The `license.log` file that was created when you attempted to start the license manager and TotalView.
- 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 TotalView.



# Installing TotalView Individual



This chapter contains a high-level overview of the how you go about installing TotalView Individual. Installing this product differs substantially from other TotalView Technology products. However, the installation process guides you through all the steps. Consequently, installing TotalView Individual is quite simple.

## Obtaining an Entitlement Code

Before you install TotalView Individual, you must obtain an *entitlement code*. An entitlement code is a string that we display in your browser and which we also we send you after you purchase the product from our storefront.

In addition, you will need to go to our download area (<http://www.totalview-tech.com/download.htm>) and download the version for the platform for which you registered TotalView. TotalView Individual supports the following platforms:

- Apple Mac OS X on Intel
- Apple Mac OS X on Power (G5)
- Linux x86
- Linux x86-64
- Solaris-Opteron

The file you download is an executable shell file. For example:

```
sh darwin-x86.sh
```

We recommend that you install TotalView Individual running as root.

After entering this command, the installer displays a window. Just follow the instructions. One of the screens asks that you enter your entitlement code.

## Obtaining an Entitlement Code



*The installer will attempt to contact the TotalView Technologies website to validate the entitlement code. If your computer is not connected to the internet, the installer will not install TotalView Individual.*

The installer sends your host ID to TotalView Technologies where we associate your entitlement code with this ID. In response, you are sent a license. After accepting the license, the installer installs TotalView Individual and a license manager.



*If you lose your entitlement code and you purchased TotalView Individual, log back into the storefront using the user name and password you used when you purchased TotalView. The storefront will redisplay your code.*

The only time you are required to have internet access is during installation as TotalView does not attempt to connect to the TotalView Technologies website again.

# Uninstalling TotalView



## The Three-Step Removal Process

If you need to remove or uninstall TotalView, the procedure is very straightforward:

- 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 TotalView, you can 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 TotalView users will have a `.totalview` subdirectory. Remove it.

If you're not interested in using TotalView after trying it, we'd really appreciate you sending email to [support@totalviewtech.com](mailto:support@totalviewtech.com) and letting us know why.

## The Three-Step Removal Process

# Index



## A

- accessing a remote license server 9
- adding new license keys 17
- automatically starting license server 11

## B

- bulk launcher, Cray 5

## C

- CATAMOUNT/AMD64 license 8
- changing license keys 15
- changing licenses 7
- checking if license manager is started 10
- choosing a license server 8
- common components, installing 3
- Configure\_Autostart script 11, 18
- Configure\_License script 10, 17
- configuring the license server 19
- configuring your environment 4
- Cray
  - bulk launcher 5
  - bulk launching system 5
  - installation 4
  - licenses 8
  - login nodes 8
  - ordering a license 8
  - rpm files 4
  - totalview-support product components 5
- creating FLEXlm user account 9

## D

- debugger server, tvdsvr\_rs 5
- default installation directory 2
- deleting older license keys 16
- demo license
  - installing 3

## E

- entitlement code 21
- environment variables
  - FLEXLM 16
  - LM\_LICENSE\_FILE 4
- evaluation license 3, 4

## F

- finding a license server host ID 8
- FLEXlm
  - host ID 9
  - information about 7
  - license management software 7
  - license manager, see also license manager
  - license manager, stand-alone 12
  - license server directory 15
  - user account 9
  - user ID 10
- FLEXLM environment variable 16
- flexlm-version directory 3
- flexlm-version/license.log log file 11

## H

- host ID, finding a license server 8
- host ID, sending 22

## I

- Install program 2, 2–3
  - help command 2
  - installation directory 2
  - running 2
  - symbolic link creation 3
  - testing 3
- Install program,
  - starting 12
- installation directory 2, 13
  - default 2
  - default directory 13
  - symbolic link to 3
- installation tar file 1

- installation, Cray 4
- installDir 2
- installing a demo license 3
- installing common components 3
- installing license keys 15
- installing licenses 7
- installing new versions 2
- installing the license server 8

## L

- license
  - changing 7
  - installing 7
  - planning for 7
- license file variable 4
- license keys
  - adding 17
  - changing 15
  - deleting older 16
  - email 16
  - installing 15
  - removing invalid 16
- license manager 2
  - activity, listing 11
  - limitations 8
  - starting manually 10
  - stopping 10
  - testing 11
  - user account 9
- license manager host 7
- license manager not found error message 3
- license manager, checking if started 10
- license server 7
  - accessing 9
  - automatically starting 11
  - choosing 8
  - configuring 19
  - directory 15
  - host ID 8
  - installing 8

## M

- starting 18
- stopping 18
- license.client file 10, 19
- license.dat file 8, 9, 10, 16, 17, 19
  - revising 18
- license.demo evaluation license 3, 4
- license.demo pathname 4
- license.log log file. 11
- license.src file 17
  - creating 17
- list license manager activity 11
- LM\_LICENSE\_FILE environment variable 3, 4, 19
- lmgrd license server 11
- lmstat command 11
- locating the license server 19
- login nodes, Cray 8

## M

- manually starting license manager 10
- mounting proc directory 4

## N

- new versions, installing 2
- nodes\_allowed command-line option 8
- nodes\_allowed server command-line option 5

## O

- obtaining an entitlement code 21
- ordering a Cray license 8

## P

- pathname for license.demo 4
- proc directory
  - checking if mounted 4
  - mounting 4
- programs
  - Configure\_Autostart 11
  - Install 2
  - toolworks\_hostid 8
  - toolworks\_init 10

## R

- reinstallations 3
- remove invalid license keys 16
- RS\_DBG\_CLIENTS\_PER\_SERVER environment variable 5
- running install program 2

## S

- sending host ID 22
- software version 3
- stand-alone license manager 12
- starting Install program 12
- starting license manager manually 10
- starting the license server 18
- starting TotalView 3
- stopping the license manager 10
- stopping the license server 18

- sudo, using on Mac 2
- symbolic link to installation directory 3

## T

- tar file 1
- tar file, unbundling 1
- TCP/IP port number 8
- test installation 3
- testing license manager 11
- toolworks directory 2
- toolworks\_hostid script 8, 16
- toolworks\_init script 10, 18
- toolworks\_init start command 10
- toolworks\_init stop command 11, 23
- TotalView
  - listing the version 3
  - starting 3
  - uncompressing 1
  - untar'ing 1
- TotalView Individual 21
  - connecting to internet 22
  - platforms supported 21
- totalview-support product components, Cray 5
- tvdsrv\_rs debugger server 5

## U

- unbundling tar file 1
- uncompressing download 1
- uninstalling TotalView 23
- untar'ing download 1
- user account for FLEXlm 9