

# *Installation Procedure for UNIX*

**This chapter contains step-wise instructions for installing Telelogic Tau SDL suite and Telelogic Tau TTCN suite on UNIX systems, including the software licenses.**

**For instructions on installing the SDL and TTCN suites for Windows, see chapter 3, *Installation Procedure for Windows*.**

**In case you encounter problems, contact Telelogic Customer Support, see “How to Contact Customer Support” on page iv in the *Release Guide*.**

## Overview

This chapter's installation procedure will help you install the SDL suite and the TTCN suite on your UNIX system. You can do a full installation or customize it to meet your needs.

The process involves installing the actual software, as well as installing and activating your licenses.

### Before You Start

Before starting your installation, determine which UNIX system(s) your installation will run on (HP or Sun).

Have the license materials at hand before starting the installation. Your Telelogic Tau delivery should contain a hardcopy of your FLEXlm license key.

**If you have not yet received a FLEXlm license key, see the box marked Important! on page 17.**

For general information on licensing, see [chapter 6, \*A Primer on Licensing\*](#).

### Installation Options

When installing the software you will be asked what components to install. You can always add components afterwards by running the installation procedure again (see [“Adding Telelogic Tau Components to an Existing Installation”](#) on page 28).

The Telelogic Tau components are:

- The SDL suite application for the supported UNIX systems. See [“Operating System”](#) on page 3 in chapter 1, *Platforms and Products*.
- The SDL suite collection of example files. Using these files, you will be able to follow the SDL suite tutorials and other complete examples in the documentation
- The TTCN suite application and example files, for the supported UNIX systems. See [“Operating System”](#) on page 3 in chapter 1, *Platforms and Products*.

## Overview

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- The TTCN suite collection of example files. Using these files, you will be able to follow the TTCN suite tutorials and other complete examples in the documentation
- On-line help files in HTML format.

### **Note: PDF documentation**

The complete user documentation is also available in PDF format in the directory `pdf/files` on the Telelogic Tau CD-ROM.

## Installation Procedure

The flowchart below shows the basic steps of the installation procedure.

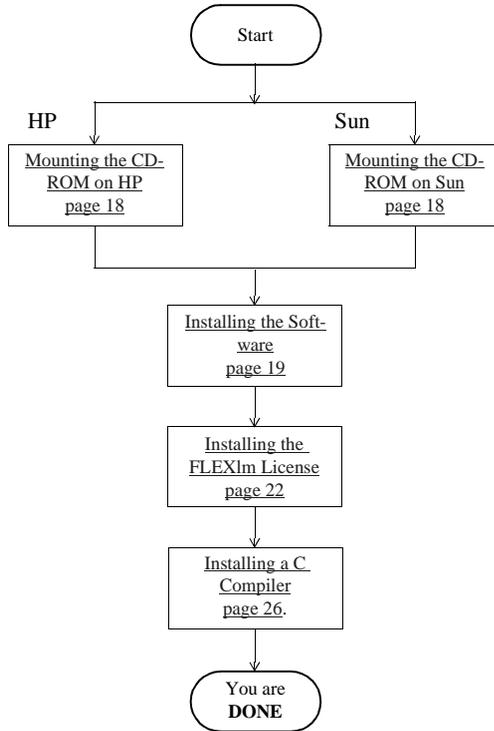


Figure 1: Flowchart for installation

# Installation Procedure

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## Important!

**If you have not received a FLEXlm license key, you will not be able to install Telelogic Tau.**

To obtain a license key you have to provide Telelogic Customer Support with the **hostname** and **hostID** of the machine on which the license server will run. To obtain this information:

1. Log in on the license server machine.
2. Insert the Telelogic Tau CD-ROM.
3. Mount the CD-ROM.
4. Change directory to the top level of the CD-ROM, and execute the script called `lmhostid.unx`. You will now get information about your hostname and hostID.
5. **EMAIL** or **FAX** this information, and if possible the name of the directory where Telelogic Tau will be installed, to Telelogic Customer Support (see [“How to Contact Customer Support”](#) on page *iv* in the *Release Guide*).

Alternatively, if you wish to first install the software from the CD-ROM, you can do the following:

1. Perform all steps in the installation procedure up until you reach [“Installing the FLEXlm License”](#) on page 22.
2. If you do not want the license server to be the same machine as the one you have used for installing, now log in on the license server machine.
3. Run the script `$telelogic/bin/gethostinfo` (where `$telelogic` is the installation directory).
4. **EMAIL** or **FAX** the information to Telelogic Customer Support (see [“How to Contact Customer Support”](#) on page *iv* in the *Release Guide*).

When you have obtained the license key, you can complete the entire installation and run Telelogic Tau.

## Mounting the CD-ROM on HP

1. Insert the Telelogic Tau CD into the CD-ROM drive.
2. If necessary, create a directory to be the mount point for the CD. The examples below use the directory `/cdrom`.
3. To mount the CD-ROM on HP systems, type:

```
/etc/mount -F cdfs -o cdcase -r /dev/dsk/c0t2d0 /cdrom
```

If any of the device names are unknown on your system, consult your system manager.

4. To check if this worked, type `ls /cdrom`. You should see, among other things, `tarfiles/` and `tauinst.cd`.

## Mounting the CD-ROM on Sun

1. Insert the Telelogic Tau CD into the CD-ROM drive.
2. If necessary, create a directory to be the mount point for the CD. The examples below use the directory `/cdrom`.
3. To mount the CD-ROM on Sun systems, there are two possibilities:

- If you are using the Sun `vold` feature (Volume Management daemon), it will automatically mount the CD-ROM at the location `/cdrom/Tau45`
- Do manual mounting by typing:

```
mount -r -f hsfs /dev/sr0 /cdrom
```

If the device name is unknown on your system, consult your system manager.

4. To check if this worked, type `ls /cdrom`. You should see, among other things, `tarfiles/` and `tauinst.cd`.

## Installing the Software

Before starting the installation script, you should find a location in your file system where to store the installation. This directory is called the *installation directory*.

Therefore, if you already have the TTCN suite installed, you should use the same installation directory when installing the SDL suite, and vice versa. The installation procedure will create a subdirectory to this directory, called `sdt` or `itex`, depending on the chosen product.

`/appl/telelogic` will be used as an **example installation directory** for this installation.

The `$telelogic` variable is used to refer to the installation directory throughout this chapter. You may want to add this setting to your shell startup file.

### Note:

**Telelogic Tau 4.5 cannot be installed in the same directory as an older version of Telelogic Tau.**

When you receive the `license.dat` file for 4.5, this license file can be used to run both Telelogic Tau 4.5 and a prior version (from the 3.02 version).

## Installation Steps

Perform **all** the steps below:

1. Decide upon an installation directory. Also, check the amount of available disk space and verify it against the required space (see “UNIX Installation Prerequisites” on page 2 in chapter 1, *Platforms and Products*).
2. Set the environment variable `$telelogic` to your installation directory:

If you run	Type
C shell-compatible shell (e.g. <code>csh</code> or <code>tcsh</code> )	<code>setenv telelogic /appl/telelogic</code>
Bourne shell-compatible shell (e.g. <code>sh</code> , <code>ksh</code> , <code>zsh</code> or <code>bash</code> )	<code>telelogic=/appl/telelogic</code> <code>export telelogic</code>

3. Start the installation script, which will guide you through the installation. The script will also print some information during the installation procedure.

If you run	Type
SunOS with <code>vold</code> (Volume Management daemon)	<code>cd /cdrom/Tau45</code> <code>./tauinst.cd</code>
SunOS without <code>vold</code>	<code>cd /cdrom</code> <code>./tauinst.cd</code>
HP-UX	<code>cd /cdrom</code> <code>./tauinst.cd</code>

4. Specify the installation directory:

```

Specify the root-directory for your Telelogic products?
>> Enter path-name: [x]: /appl/telelogic

```

- If you want to add components to an existing installation, specify the same directory as you did the first time. See [“Adding Telelogic Tau Components to an Existing Installation” on page 28](#).

5. Specify which components you want to install:

```

>> What would you like to install ?
>> 1: SDL and TTCN Suite
>> 2: SDL Suite
>> 3: TTCN Suite
>> -----
>> Please enter your choice [1]:

```

- Enter the number of your selection. Continue the installation by pressing <Return>.

6. Choose the platform(s) to install:

```

>> For which platform(s) do you want to install ?
>> 1: SUN
>> 2: HP
>> 3: SUN and HP
>> -----
>> Please enter your choice [1]:

```

- Specify the selected architectures by entering the number of your selection and pressing <Return>.

## Installation Procedure

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7. Choose which components to install. The default answer for each component is *Yes* to install it. See [“Installation Options” on page 14](#) for more information.
8. A list of the currently selected components and the required amount of disk space is displayed:

```
>> The following components will be installed.
    SDL_SUNOS5  SDL_HP700  SDL_DEMO
    TTCN_SUNOS5 TTCN_HP700  HELP_HTML

!! This installation will require: xxx MB
!! of disk space at file system: /appl/telelogic

>> Are you satisfied with the following setup? (y/n) [y]:
```

- Enter **y** or press <Return> if the selection is correct.
  - To change the selection, enter **n** and you will be prompted again to answer the questions.
9. After the message “No further questions will be asked”, information is displayed regarding the progress of the installation procedure.
  10. The message “Completed...” is displayed when the installation script has finished executing.
  11. To check that the installation was successful, do a `ls $telelogic` (where `$telelogic` is your installation directory). You should at least see:

```
bin/ bitmaps/ flex/ fontinfo/ include/ lib/
license.dat X11/
```

There can be other files and directories visible, depending on the chosen installation (for example an `sdt/` or `itex/` directory).

## Installing the FLEXlm License

Follow the directions below to install your textual FLEXlm license file. The license file contains the license key you have received from Telelogic Customer Support.

**If you have not yet received** a FLEXlm license key, contact Telelogic Customer Support (see [“How to Contact Customer Support”](#) on [page iv](#) in the *Release Guide*).

### Caution!

All information in the `license.dat` file is **case significant**, so be careful not to accidentally invalidate any of the encryption codes. Otherwise you will not be able to start the Telelogic Tau tools.

You have two options in installing your FLEXlm license:

- In a **shared license file**, which is shared with other FLEXlm licensed software, see [“Using a Shared License File”](#) on [page 22](#). You may consider this option if you have other software products that make use of FLEXlm licensing.
- As a **Telelogic specific license**, which only handles licenses for Telelogic Tau, see [“Using a Telelogic Specific License File”](#) on [page 24](#). This is the default option if you only will use FLEXlm for the Telelogic Tau licenses.

### Using a Shared License File

If you have other products that make use of FLEXlm you may wish to install your Telelogic Tau license features into the existing FLEXlm `license.dat` file. To install the license key:

1. Copy the following lines from the license key you received from Telelogic Customer Support into the existing `license.dat` file:
  - the **VENDOR** line; **make sure to change the path** to the `/flex/{arch}flex` subdirectory in your Telelogic Tau installation directory (where `{arch}` is the architecture of your server, i.e. “sunos5” or “hppa”)
  - the **FEATURE** line(s)

## Installation Procedure

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You must do this since your existing license server's "lmgrd" daemon is not in the same directory as the "telelogic" daemon (for information, see ["FLEXlm Licensing Pitfalls to Avoid" on page 68 in chapter 6, A Primer on Licensing](#)).

2. Set the environment variable `LM_LICENSE_FILE` to point to the location of the existing `license.dat` file.

It can also be a `<port>@<hostname>` setting, where `<port>` and `<hostname>` are the port number and hostname from the `SERVER` line in the license file, e.g. `7598@server`.

If you run	Type
C shell-compatible shell (e.g. csh or tcsh)	<pre>setenv LM_LICENSE_FILE /your/directory/license.dat OR setenv LM_LICENSE_FILE &lt;port&gt;@&lt;hostname&gt;</pre>
Bourne shell-compatible shell (e.g. sh, ksh, zsh or bash)	<pre>LM_LICENSE_FILE=/your/directory/license.dat export LM_LICENSE_FILE OR LM_LICENSE_FILE=&lt;port&gt;@&lt;hostname&gt; export LM_LICENSE_FILE</pre>

3. There must not be a `license.dat` file in the top level of the Telelogic Tau installation. If there is, remove or rename the file `$telelogic/license.dat`
4. When you have changed any information in the `license.dat` file, you **must** update the license server to let it know about the changes. To do this, run the following script:

```
$telelogic/bin/updatelicd
```

The license installation is finished. Continue with ["Installing a C Compiler" on page 26](#).

### Using a Telelogic Specific License File

If you will only use FLEXlm for Telelogic Tau licenses, or wish to run a separate FLEXlm license server for Telelogic Tau, do the following:

1. Log in on the computer where the license server is to run.
2. Save or copy the FLEXlm license key you received from Telelogic Customer Support into a text file called `license.dat`, and store the file in the default location, which is the Telelogic Tau installation directory (`$telelogic/license.dat`).
3. If you wish to place this file in another location, you must set the environment variable `LM_LICENSE_FILE` to point to this location.

It can also be a `<port>@<hostname>` setting, where `<port>` and `<hostname>` are the port number and hostname from the `SERVER` line in the license file, e.g. `7598@server`.

If you run	Type
C shell-compatible shell (e.g. <code>csh</code> or <code>tcsh</code> )	<code>setenv LM_LICENSE_FILE /your/directory/license.dat</code> or <code>setenv LM_LICENSE_FILE &lt;port&gt;@&lt;hostname&gt;</code>
Bourne shell-compatible shell (e.g. <code>sh</code> , <code>ksh</code> , <code>zsh</code> or <code>bash</code> )	<code>LM_LICENSE_FILE=/your/directory/license.dat</code> <code>export LM_LICENSE_FILE</code> or <code>LM_LICENSE_FILE=&lt;port&gt;@&lt;hostname&gt;</code> <code>export LM_LICENSE_FILE</code>

After the file has been placed in the new directory, make sure to remove or rename the file `$telelogic/license.dat`.

4. Make sure that the information in the `license.dat` file is correct according to your server and installation:
  - The `SERVER` line must have the correct hostname and hostID.
  - The `VENDOR` line must have the correct path to the “telelogic” daemon. This daemon is located in the `/flex/{arch}flex` subdirectory in your Telelogic Tau installation directory (where `{arch}` is the architecture of your server, i.e. “sunos5” or “hppa”)

# Installation Procedure

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## Starting the License Server

You will now start the FLEXIm license server:

### Note:

If you are using an evaluation license, or if the word “DEMO” ends each FEATURE line in your `license.dat` file, **you do not need to start the license server.**

1. Make sure no license servers for the Telelogic Tau tools are currently running. Search for the license daemons `lmgrd` and `telelogic` in the current process list, for instance by using the command `ps -ae | egrep '(lmgrd|telelog)'`. If you have any license daemons running, terminate them using the `kill` command and the PID number(s).

2. Change to your installation directory:

```
cd $telelogic
```

3. Start the license server:

```
./bin/startlicd
```

4. Check that the license server has been started correctly with the following command:

```
./bin/stat -a
```

The license server statistics is displayed containing the server, the vendor daemon `telelogic` and the features available in your `license.dat` file.

5. If the startup has failed, check the `license.dat` file for errors and omissions; see [“FLEXIm Licensing Pitfalls to Avoid” on page 68 in chapter 6, \*A Primer on Licensing\*](#). Double-check your file with the original sent from Telelogic Customer Support. Especially check the “company name” information in the quote-field of the first FEATURE line in the file.

There is also a `license.log` file in the Telelogic Tau installation directory, where all actions concerning the license server are logged. The events to be logged includes:

- Startup and shutdown of the license server
- Checking licenses in and out
- Denying licenses

Each event involving a license also specifies:

- The Telelogic Tau tool (license controlled tools only)
- The user
- The node
- The date and time
- The usage time (for check-in log entries)

**Note:**

The log file will grow as users run Telelogic Tau. You may consider deleting the head of the file from time to time to save disk space.

6. The license server has to be restarted every time the server computer is rebooted. To do this automatically, see [“Automatic Server Startup \(UNIX\)”](#) on page 54 in chapter 5, *Licensing Management*.

The license installation is now finished.

## Installing a C Compiler

You must also install a C compiler to be able to use certain features of the Telelogic Tau tools, such as Simulation and code generation. How to install a C compiler is described in the compiler documentation.

For information on which C compiler you need, see [“The SDL Suite Compiler Environment”](#) on page 6 and [“The TTCN Suite Compiler Environment”](#) on page 11 in chapter 1, *Platforms and Products*.

# Starting Up the Telelogic Tau Tools

We recommend you to add the Telelogic Tau binary directory to your existing `PATH` variable.

### Note:

The X Windows System and Motif Window Manger have to be started before you start Telelogic Tau.

In the case the computers on which you run the X Windows server and the client (the Telelogic Tau tools) coincide, make sure the environment variable `DISPLAY` is set to `unix:0.0` before starting Telelogic Tau. **Do not** use the notation `hostname:0.0`

- Below the Telelogic Tau installation directory, you will find a sub-directory called `bin`. This directory should be added to the user's path, e.g.

```
set path = ( $path $telelogic/bin )
```

- Start the SDL suite, the TTCN suite and Telelogic Tau with the respective command:

```
tau
```

- You can also start the SDL suite, the TTCN suite and Telelogic Tau with:

```
$telelogic/bin/tau
```

## Adding Telelogic Tau Components to an Existing Installation

If you want to add components to your installation, follow the instructions below. For more information on available components, see [“Installation Options”](#) on page 14.

1. Insert and mount the CD-ROM, as described in [“Installation Procedure”](#) on page 16.
2. Follow all steps described in [“Installing the Telelogic Tau Software”](#) on page 35.

- Enter the same installation directory as you did when you installed Telelogic Tau for the first time.
- You will be asked the following question:

```
      This directory already contains a sub-directory:
sdt/(itex/)
>> Do you wish to update your existing SDL Suite (TTCN
Suite) installation? [y]:
```

Answer **y** or press <Return>.

- If you answer “No”, the script will back up your old directory by renaming it to `sdt.old` (or `itex.old`) and then install the product. If you install a component that is already installed, the existing component will be overwritten.
3. If you have received a new Telelogic Tau Product License Key, perform the actions described in [“Installing the FLEXlm License”](#) on page 22.