# CADfix Installation Guide for Linux

# CADfix 13.0

### (DX, CAE, PPS, VIZ, STL)

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# Contents

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# 1. Understanding your CADfix purchase

Your CADfix license will be one of the following types:

| |
|---|
| •    Evaluation |
| •    Single node-locked |
| •    Network (floating), or multiple node-locked |

*Other installation configurations are available, and CADfix support can provide more advice if needed.*

Within this document, each of these license types are colour-coded (as above) to help with identification of the relevant information.

## Evaluation

This installation uses a local license file that is time-limited. It does not require any licensing services, so only CADfix needs to be installed. Evaluation licenses do not normally allow remote access, but this license can be installed on multiple computers.

## Single node-locked

A node-locked installation is locked to a specific computer which is identified by its host-id (MAC address). Both the CADfix application and the license services are usually installed on the same computer.

Where a purchase includes multiple node-locked seats, the installation can follow the 'Network (floating), or multiple node-locked' procedure.  This allows all the CADfix installations to share a single license server.

## Network (floating), or multiple node-locked

A floating CADfix license will run only on a specifically defined range of computers. The allowable range should be discussed with the CADfix sales team before the purchase and will be categorised as LAN, WAN, RWAN, or WWAN depending on the locations of required users. Each allowable computer within this range will be identified using one of the following options (or combination):

```
  IP address range:  126.10.10.*
   IP address list:  126.10.10.5  126.10.10.6  126.10.10.7
  MAC address list:  48ad3f56ffcb a93b2f2dd9ab  e8ff3ba826c0
```

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# 2. Quick installation guide

## 2.1. Evaluation

### Preparation

a) ✉ **Request an 'Evaluation' license file.**
Usually supplied via your CADfix sales representative by email.
or:
Americas customers - email works_supp@iti-global.com
Non-Americas customers - email eukeys@iti-global.com

b) ⬇ **Download CADfix**
The latest download link is supplied in the license file email that was sent to you - Download the 'Installer' package for Linux.

### Installing CADfix and license

c) ▪❚ **Decompress and Install CADfix**
– See section Installing CADfix

d) 📍 **Source CADfix installation**
"source cadfix_setups" – See section Sourcing CADfix

e) 📥 **Copy your license file into "cadfix1300/lic"**
When received from ITI, copy the license file into the CADfix lic folder
(e.g. "../CADfix1300/lic/" – See section  Managing the license and services

f) 🖥 **Run CADfix**
Run the command "cadfix" at the command-line.

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## 2.2. Node-locked (single) installation

For this installation type the client workstation and license server are usually the same computer.

If the license is to be installed on another computer, or multiple node locked installations are to share a license server, then follow the instructions for a Network installation (below).

---

**Preparation**

a) ✉ **Request a 'Node-locked' license file.**
Americas customers - email works_supp@iti-global.com
Non Americas customers - email eukeys@iti-global.com
Or via your CADfix sales representative.

To create the license file, the ITI support team will need to know:
- CADfix license server's network name.
- CADfix license server Host id.

– See Managing the license and services

b) ⬇ **Download CADfix**
The latest download link is supplied in the license file email that was sent to you - Download the 'Installer' package for Linux.

---

**Installing CADfix and license**

c) ▪▮ **Decompress and Install CADfix**
– See section Installing CADfix

d) 📍 **Source CADfix installation**
"source cadfix_setups" – See section Sourcing CADfix

e) ⬅📁 **Copy your license file into "cadfix1300/lic"**
When received from ITI, copy the license file into the CADfix lic folder
e.g. "../CADfix1300/lic" – See section  Managing the license and services

f) ✳ **Install the licensing service**
See – Starting the licences server

g) 🔲 **Run CADfix**
Run the command "cadfix" at the command-line.

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## 2.3. Network installation – for floating, or multi-nodelocked

This installation allows the CADfix workstation(s) to fetch licenses from a shared license server.

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**Preparation**

a) ✉ **Request a 'Floating' license file.**

Americas customers - email works_supp@iti-global.com
Non Americas customers - email eukeys@iti-global.com
Or via your CADfix sales representative.

To create the license file, the ITI support team will need to know:
- CADfix license server's network name.
- CADfix license server Host id.
- CADfix workstation IP address list/range, or Host id list.
  (If for a multiple node-locked installation, then this must be Host id list).

– See Managing the license and services

b) ⬇ **Download CADfix**

The latest download link is supplied in the license file email that was sent to you - Download the 'Installer' package for Linux.

---

**Install CADfix license server**

c) ▪❚ Decompress and install 'CADfix license service only' on to the license server.
– See section Installing CADfix

d) ➦ **Copy your license file into "cadfix1300/lic"**

When received from ITI, copy the license file into the CADfix lic folder (e.g. "../CADfix1300/lic/")

e) ✳ **Install the licensing service**

See – Starting the licences server

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**Install CADfix on client workstation(s)**

f) ▪❚ **Decompress and Install CADfix**
– See section Installing CADfix

g) 📍 **Source CADfix installation**

"source cadfix_setups" – See section Sourcing CADfix

h) 🖥 Link CADfix to license server – Linking CADfix to the license

i) 🔲 **Run CADfix**

Run the command "cadfix" at the command-line.

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# 3. Installing CADfix

- The **C-shell environment** should be used to install CADfix.
- **You must NOT install the program as ROOT**.
- The example images shown are generic.  Installing a specific CADfix product will use the same installation screens but will have different version numbers and installation locations.
- The following examples show images where the installing user is 'abc'. The actual paths used for your installation may vary.

1) Download and decompress installation files:

```
tar xvf CADfix1300_DX_linux64.tar
```

The 'ls' command will show the uncompressed files:

```
ls -l
total 3257504
-rw-r--r-- 1 abc abc 1666201600 May 25 10:57 CADfix1300_DX_linux64.tar
-rwxr--r-- 1 abc abc        536 Apr 19 12:12 README.txt*
-rw-r--r-- 1 abc abc          0 Apr 19 17:19 _noCAE
-rw-r--r-- 1 abc abc   62010906 Apr 19 17:14 cmn.tgz
-rwxr-xr-x 1 abc abc      63996 Apr 19 17:13 install.sh*
-rw-r--r-- 1 abc abc 1604118963 Apr 19 17:19 linux64.tgz
```

2) Start the installation process by running the install.sh script file.

```
./install.sh
```

3) Specify the CADfix installation path:

```
                      CADfix 13 Installation - Install Where


CADfix will be installed into a new sub-directory called cadfix1300.


Which directory do you want to create this in?
(Press RETURN to abort installation.)
.
```

- **Enter '.' To choose the current location.**
- Or enter a new installation path as a relative or absolute path (e.g. "/opt/").
- Press the 'Enter' key to abort the installation process.

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4) Choose whether to install full CADfix (including license manager tools), or just the license manager components:

```
                    CADfix 13 Installation - Which Product


1.    CADfix Data Exchange


2.    CADfix Licence Manager only


Note: The CADfix licence manager is included in all options.
      Option 2 should only be installed where a floating CADfix
      licence is to be managed by a machine not running CADfix.


x.    Abort installation


Which CADfix product do you want to install (1 - 2)[1] ?
↵
```

- **Press "1" (or just press the 'Enter' key) to install CADfix (including the license manager).**
- Press "2" to install the license manager only. – Jump go to stage 8
- Press "x" to abort the installation process.

5) Choose the language that CADfix will us by default:
*The installation process will continue in English only, and the installed CADfix installation will launch using your chosen language.*

```
                    CADfix 13 Installation - Which Language

Please select a language for the CADfix user interface and on-line
documentation.

1.    English
2.    Japanese
3.    German


x.    Abort installation


Which language do you want to use (1 - 3)[1] ?
↵
```

- **Press "1" (or just press the 'Enter' key) to install CADfix using English.**
- Press "2" to install CADfix using Japanese.
- Press "3" to install CADfix using German.
- Press "x" to abort the installation process.

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6) The options selected for the installation are then displayed:

```
                CADfix 13 Installation - Installing Products


Platform: Linux (64bit) (linux64)
Location: /home/abc/cadfix1300
Product:  CADfix Data Exchange
Language: English


Continue with installation (y/n)? y
↵
```

- **Press the 'Enter' key to begin installing the CADfix files.**
- Pressing 'n' will abort the installation process.

7) When the installation is complete, the following message will be displayed:

```
Identifying files to install...
Extracting platform independent files...
Extracting platform dependent files...
Installation completed.

Press RETURN to continue:
↵
```

- **Press the 'Enter' key to clear this message.**

8) The installation process will then remind you to run 'cadfix_setups' before running CADfix:

```
                CADfix 13 Installation - Installation Complete

Before starting cadfix you must source the cadfix_setups file, e.g.

    source /home/abc/cadfix_setups

You should also add the above line to the system login or each user login.


Before starting CADfix please ensure that the Licence Manager has
been setup according to the CADfix Installation Guide.
```

If at step 3 you selected option 2 ("CADfix Licence Manager only"), this final message will also instruct you how to start the CADfix administration tool.

```
To start the licence manager type:

    cadfixadmin

Please refer to the installation document for instructions on how to use the CADfix
licence manager.
```

For information on installing the license server, go to Managing the license and services.

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### 3.1. Sourcing CADfix

The 'cadfix_setups' file is a script that is generated by the installation process and is tailored to the installation values you have used.  This script will need to be run by the users each time the log in to that computer, and before CADfix is run.  This then configures the CADfix environment variables needed run.

To aid the user it is recommended that the command "`source /home/xxx/cadfix_setups`" is added to the system login, or each users' login scripts.

To run 'cadfix_setups' use the following command:

```
source cadfix_setups
```

If your organisation already has a CADfix license, you can link to this using the process in Linking CADfix to the license.

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# 4. Managing the license and services

CADfix utilises FlexNET license services for its license management. If it is needed, and where it is installed will depend on the configuration of your CADfix purchase. For all license types CADfix will need a license file generating. – Contact CADfix support to request a license and for any advice.

## Evaluation license

The license server is not needed for an evaluation license and CADfix support can send out an evaluation license without any further information.
To run an evaluation license:
1. Ensure the supplied license file is named 'cadfix.dat'.
2. Copy cadfix.dat to the CADfix "cadfix1300/lic" folder.

## Node-locked (single seat) license

When a license manager is required on the same computer as the CADfix application, the license manager can be run from within the CADfix installation. Alternatively, the license manager can be installed in a non-version specific location to avoid reconfiguration during subsequent upgrades of CADfix (see 'Floating and Multi-seat node-locked licenses' below).

CADfix support will need to know the workstation's host id. To identify this code, run the lmutil command from the CADfix lic folder:

```
cd cadfix1200/lic/lmutil lmhostid

lmutil - Copyright (c) 1989-2019 Flexera. All Rights Reserved.
The FlexNet host ID of this machine is ""1866da5518c7 1866da5518c8""
Only use ONE from the list of hostids.
```

## Floating and Multi-seat node-locked licenses

To install the license manager software as a server there are two options available:
- Install a "CADfix Licence Manager only" on the server.
- Or, if CADfix will be used on the license server, install a full "CADfix Data Exchange".
*See Installation - Which Product.*

It is good to install the CADfix license in a non-version specific location to avoid reconfiguration during subsequent upgrades of CADfix.

For this type of installation, CADfix support will need to identify a list of allowable computers for CADfix use. This is a list in one (or a combination) of the following formats:
- The IP address range.
- A list of host-ids for the specific computers.

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## 4.1. Starting the licences server

Before continuing, ensure you have a valid CADfix license file (cadfix.dat)

1) Ensure that the cadfix_setups script has been sourced during this session, or that it was called within your login script:

```
source cadfix_setups
```

2) Navigate to the CADfix licensing folder:

```
cd cadfix1300/lic
```

3) Check to ensure your licence file (cadfix.dat) has been copied into this folder:

```
ls -l
drwxr-xr-x 2 abc  90     4096 Jun 29  2022 3rd_party/
-rw-rw-r-- 1 abc abc    26480 Jun 29  2022 cadfix.dat
-rw-r--r-- 1 abc  90 3016471 Jul 26  2022 fnp_LicAdmin.pdf
-rwxr-xr-x 1 abc  90 1360024 Jul 26  2022 itiohio*
-rwxr-xr-x 1 abc  90 1170840 Jul 26  2022 lmgrd*
-rwxr-xr-x 1 abc  90 1138392 Jul 26  2022 lmutil*
```

4) Run lmgrd to install a licensing daemon:

```
lmgrd –c cadfix.dat –l cadfix.log
```

This command will:

- Create the license daemons 'lmgrd' and 'itiohio'.
- The daemons will reference the license file provided in this command. If the license file is in another location, then the license file should be qualified with a path.
- The lmgrd daemon will use a default port number or use the (optionally) defined in the license file.
- The itiohio daemon will use a random port number each time it starts or use the port number (optionally) defined in the license file.
- A log file will be generated using the name provided. A different name can be used if required. This log file will contain information about all the transitions carried out by the license daemons and is essential for support.

5) To interact further with the license daemon (validating/stopping/etc), you must identify the computer name and port number use for the lmgrd daemon. This information can be found in the log file generated when the license daemon was started. - See section Recording License server information for gathering this information from your cadfix.log file.

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## 4.2. Recording License server information

During the configuration of the CADfix License (Starting the licences server) the license log file was specified (e.g."cadfix.log").  This log file contains the license server's configuration and license activities.

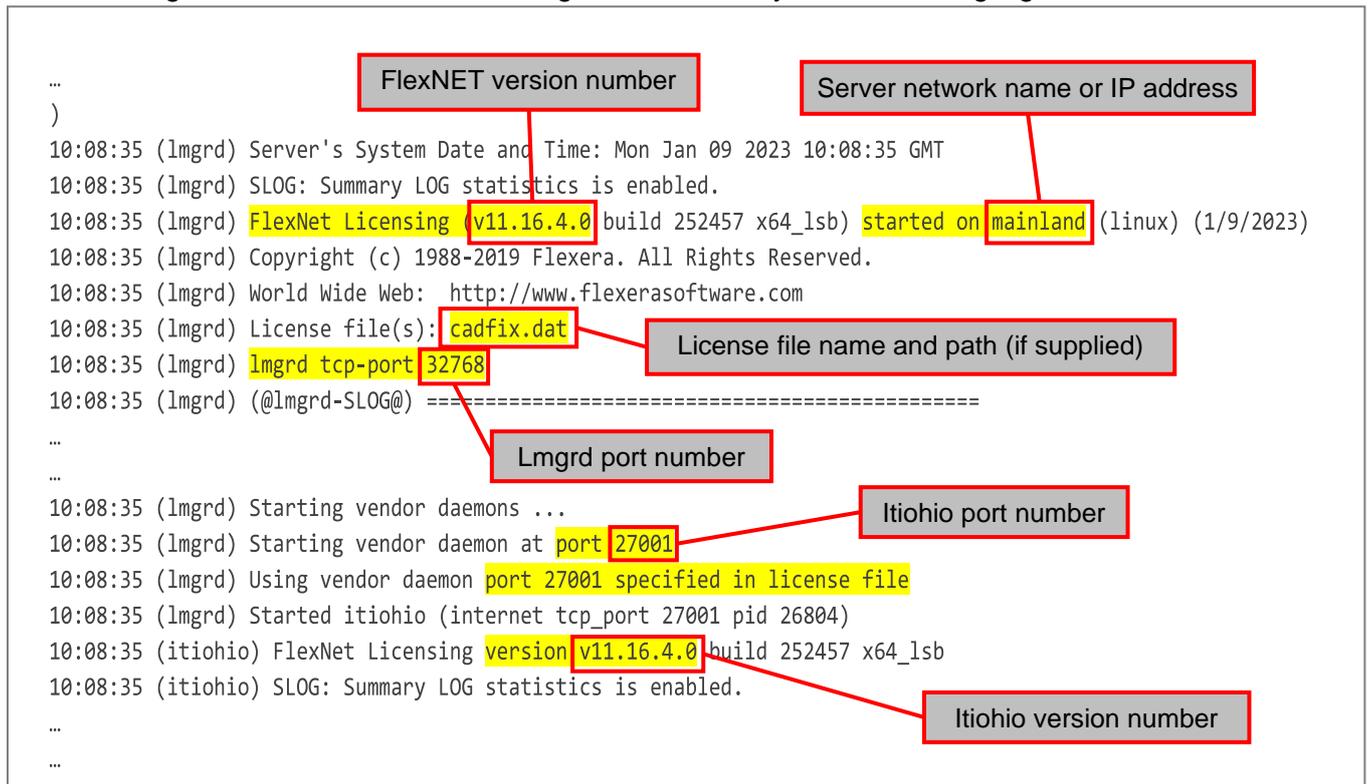Open the log file with a text editor then find and record the following information:

FLEXnet version number:  .......................................................................

Server network name or IP address:  .......................................................................

License file name and path:  .......................................................................

Lmgrd (license manager daemon) port number:  .......................................................................

Itiohio (vendor daemon) port number:  .......................................................................

Itiohio (vendor daemon) version number:  .......................................................................

Method of linking to license server:  ☐ Local license  ☐ Short license  ☐ Environment variable

The following is an extract from a cadfix.log file with this key information highlighted:

```
…
)
10:08:35 (lmgrd) Server's System Date and Time: Mon Jan 09 2023 10:08:35 GMT
10:08:35 (lmgrd) SLOG: Summary LOG statistics is enabled.
10:08:35 (lmgrd) FlexNet Licensing (v11.16.4.0 build 252457 x64_lsb) started on mainland (linux) (1/9/2023)
10:08:35 (lmgrd) Copyright (c) 1988-2019 Flexera. All Rights Reserved.
10:08:35 (lmgrd) World Wide Web:  http://www.flexerasoftware.com
10:08:35 (lmgrd) License file(s): cadfix.dat
10:08:35 (lmgrd) lmgrd tcp-port 32768
10:08:35 (lmgrd) (@lmgrd-SLOG@) ===============================================
…
…
10:08:35 (lmgrd) Starting vendor daemons ...
10:08:35 (lmgrd) Starting vendor daemon at port 27001
10:08:35 (lmgrd) Using vendor daemon port 27001 specified in license file
10:08:35 (lmgrd) Started itiohio (internet tcp_port 27001 pid 26804)
10:08:35 (itiohio) FlexNet Licensing version v11.16.4.0 build 252457 x64_lsb
10:08:35 (itiohio) SLOG: Summary LOG statistics is enabled.
…
…
```

Callout labels: FlexNET version number; Server network name or IP address; License file name and path (if supplied); Lmgrd port number; Itiohio port number; Itiohio version number

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## 4.3. Checking the license server status

Check the license daemon is running:

```
lmutil lmstat -c 32768@mainland

lmutil - Copyright (c) 1989-2019 Flexera. All Rights Reserved.
Flexible License Manager status on Mon 1/9/2023 10:47

License server status: 32768@mainland
    License file(s) on dee: /home/abc/cadfix1200sp2/lic/cadfix.dat:

        mainland: license server UP (MASTER) v11.16.4

Vendor daemon status (on mainland):

    itiohio: UP v11.16.4
```

## 4.4. Stopping the license server

The license daemon can be stopped with the following command:

```
lmutil lmdown -c 32768@mainland

lmutil - Copyright (c) 1989-2019 Flexera. All Rights Reserved.

    Port@Host            Vendors
1) 32768@mainland        itiohio
```

You will be asked to confirm you want this license stopping:

```
Are you sure (y/n)?  y
    1 FlexNet License Server shut down
```

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# 5. Linking CADfix to the license

To allow CADfix to start, it needs to link to a valid license, and there are three options for this:
*When you have configured your installation, record which method you used on the form in Recording License server information.*

**Evaluation license**

## 5.1. Local license file

Check the license file has been copied into the client's local "[CADfix installation]/lic" folder

**Node-locked (single seat) license**

**Floating and Multi-seat node-locked licenses**

## 5.2. Environmental variable

An environmental variable can be set up for each user, this tells CADfix how to contact the server:

        setenv CADFIX_KEY [lmgrd port]@[server name]

 e.g.

```
setenv CADFIX_KEY 32768@mainland
```

**The actual values used in this variable can be found in the license server log file.**
**The environment variable command will need to be added into the cadfix_setups.**

## 5.3. Local license file

Check the license file has been copied into the client's local "[CADfix installation]/lic" folder

## 5.4. License connection errors

If an error occurs when CADfix is trying to communicate with the license server, then an error message will be displayed. Record the details given on this message, or take a screenshot, so you can share these details with CADfix support.

Following an installation, the biggest cause of license errors is because a firewall has blocked communications on ports that are being used by the license server. These ports are shown in the license log file (see 'lmgrd port number' and 'itiohio port number' in Recording License server information).

1. The CADfix license server needs firewall exceptions to allow inbound communications on the 'lmgrd' and 'itiohio' ports.
2. CADfix client machine (running CADfix) should not need any exceptions to its firewall.

For further support on licensing problems, please contact CADfix support.

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# 6. Updating CADfix

## 6.1. Updating your CADfix installation

As part of the Maintenance, Enhancements, and Support (ME&S) package, you will be offered an upgrade for your CADfix.

For most CADfix releases, the license manager will remain unchanged, and will therefore not need upgrading. If the license manager does need upgrading, then this will be highlighted in the "What's new…" release document.

Service packs are supplied with their own installation instructions.

### Evaluation license

If you are using an evaluation license of CADfix, then you will just need to uninstall your current CADfix installation and then install the newer version. – See Installing CADfix

### Node-locked (single seat) license

If you are using a node-locked license where the license server is part of the CADfix installation you are using, then:

Recommended

1) Stop the license service – See Stopping the license server

2) (Optionally) uninstall your existing CADfix installation (this will also uninstall the license server files)

3) Install the new version of CADfix – See Installing CADfix

4) Configure the license services using this new installation – See Starting the licences server

Alternatively follow the procedure for 'Floating and Multi-seat node-locked licenses' to reconfigure CADfix to get its license from the license server in the older installation. If the FlexNET licensing service has been updated in the new release, then this license server will also need updating - Contact CADfix support for more information.

### Floating and Multi-seat node-locked licenses

1) (Optionally) delete your existing CADfix installation.

2) Install the new CADfix installation – See Installing CADfix

3) Link CADfix to license server if needed. If the variable 'CADFIX_KEY' has been used here, then this step is not needed – See Linking CADfix to the license

4) If the license manager needs updating, then see Upgrading license service files

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## 6.2. Updating your license file

Periodically the license file you have been provided with will expire. If this happens and you have not yet received an updated file, then contact your CADfix supplier.

### 6.2.1. Evaluation license

If you are using an evaluation licence, then:

a) Make sure CADfix is not running.

b) Copy the new license file into cadfix1300\lic. - Any existing license file can be overwritten.

c) Restarting CADfix, and it will automatically read this new license file.

d) Once started, go to the pull-down menu 'Help' → 'About CADfix'. This dialogue will show the modules that are licences, and the license expiration date.

### 6.2.2. Node-locked (single seat) license

If you are using a node-locked license and running through a license file that is part of your CADfix installation, then:

a) Make sure CADfix is not running.

b) Stop the license service – See Stopping the license server

c) Copy the new license file into cadfix1300/lic. - Any existing license file can be overwritten.

d) Start the license service – See Starting the licences server

e) Restarting CADfix and it will automatically connect to this new license file.

f) Once started, go to the pull-down menu 'Help' → 'About CADfix'. This dialogue will show the modules that are licences, and the license expiration date.

### 6.2.3. Floating and Multi-seat node-locked licenses

If you are using a floating license as part of your CADfix installation, then:

a) Make sure CADfix is not running.

b) Stop the license service – See Stopping the license server

c) Copy the new license file into cadfix1300/lic. - Any existing license file can be overwritten.

d) Start the license service – See Starting the licences server

e) If you have linked your CADfix installation to the license service using a full license file, then copy the new license file into the cadfix1300/lic folder on the local CADfix client machine. (Any computers using the CADFIX_KEY environment variable will automatically connect to the new license).

g) Restarting CADfix and it will automatically read this new license file.

h) Once started, go to the pull-down menu 'Help' → 'About CADfix'. This dialogue will show the modules that are licences, and the license expiration date.

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## 6.3. Upgrading license service files

1) Stop the license service – See [Stopping the license server](#)

2) Copy new FlexNET license service files into the lic folder to replace the existing ones.
   The list of files include: lmutil.exe, lmgrd.exe, and itiohio.exe

3) Check you have the latest license file in the "cadfix1300/lic" folder.  This should have an expiration date after today, and be valid to operate with this version of CADfix. – Speak to CADfix support to verify this.

4) Start the license service – See [Starting the licences server](#)

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