



*International TechneGroup*

# CADfix

**version 12**

## **Software Installation Guide**

(document version 12)

# Contents

Section	Page
1. Installations .....	1
1.1. Installation from Download Package .....	1
1.2. Licence Manager Setup .....	5
1.2.1. New Licence .....	7
1.2.2. Distributed Users .....	12
1.2.3. Existing Licence .....	12
1.2.4. Licence Check-in .....	14
1.2.5. FLEXNET <sup>TM</sup> .....	15
1.2.6. Troubleshooting .....	16
1.2.7. Windows - Troubleshooting .....	17
1.2.8. LINUX - Troubleshooting .....	19
1.2.9. LINUX - Install to start at boot .....	21
1.3. Executing CADfix .....	21
1.4. Test CADfix .....	23
1.5. Language Setup .....	24
1.7. Site Configurations .....	25
1.8. Windows - Platform Specific Notes .....	26
1.9. LINUX - Platform Specific Notes .....	28
2. Upward Compatibility .....	32
3. Support Information .....	33
4. Credits .....	34
A Supported Platform Configurations .....	35
B Translator Product Availability .....	37

The installation procedure for the CADfix software is contained in this section.

Machine	Operating System	Level	Hard disk space
Windows	Vista, 7, 8 and 10	Duo dual-core and above	4GB
LINUX	RED HAT	RHEL6 (64bit)	4GB

Please identify which of the three licence types outlined in section 1.2 you will be using. For an **evaluation/demo** licence there is no server required, so all instructions relating to the licence server may be ignored.

**Please ensure that any previous installation has been completely removed before you re-install CADfix.**

Before running through the installation procedure determine whether you want to install the Licence Manager **only** (not relevant **evaluation/demo** licence type) or **both** CADfix and the Licence Manager. CADfix licensing operates from a licence server machine that is designated to perform the administrative tasks of controlling the CADfix licence. The Licence Server machine could be a machine actually running CADfix or another machine on a network that communicates using TCP/IP as the network protocol. The choice of the Licence Server is critical because if this machine is unavailable for any reason no other installation of CADfix on the network will work.

Following the instructions in section 1.1 will install both the Licence Manager and the CADfix product. If you only wish to install the Licence Manager data on your server then you will need to obtain a separate installation from CADfix Support at ITI - International TechneGroup.

Having installed the software successfully on your system you should refer to the platform configuration notes detailed in section 1.8 and 1.9 as these include system specific details and requirements that affect the operation of CADfix.

## 1.1.

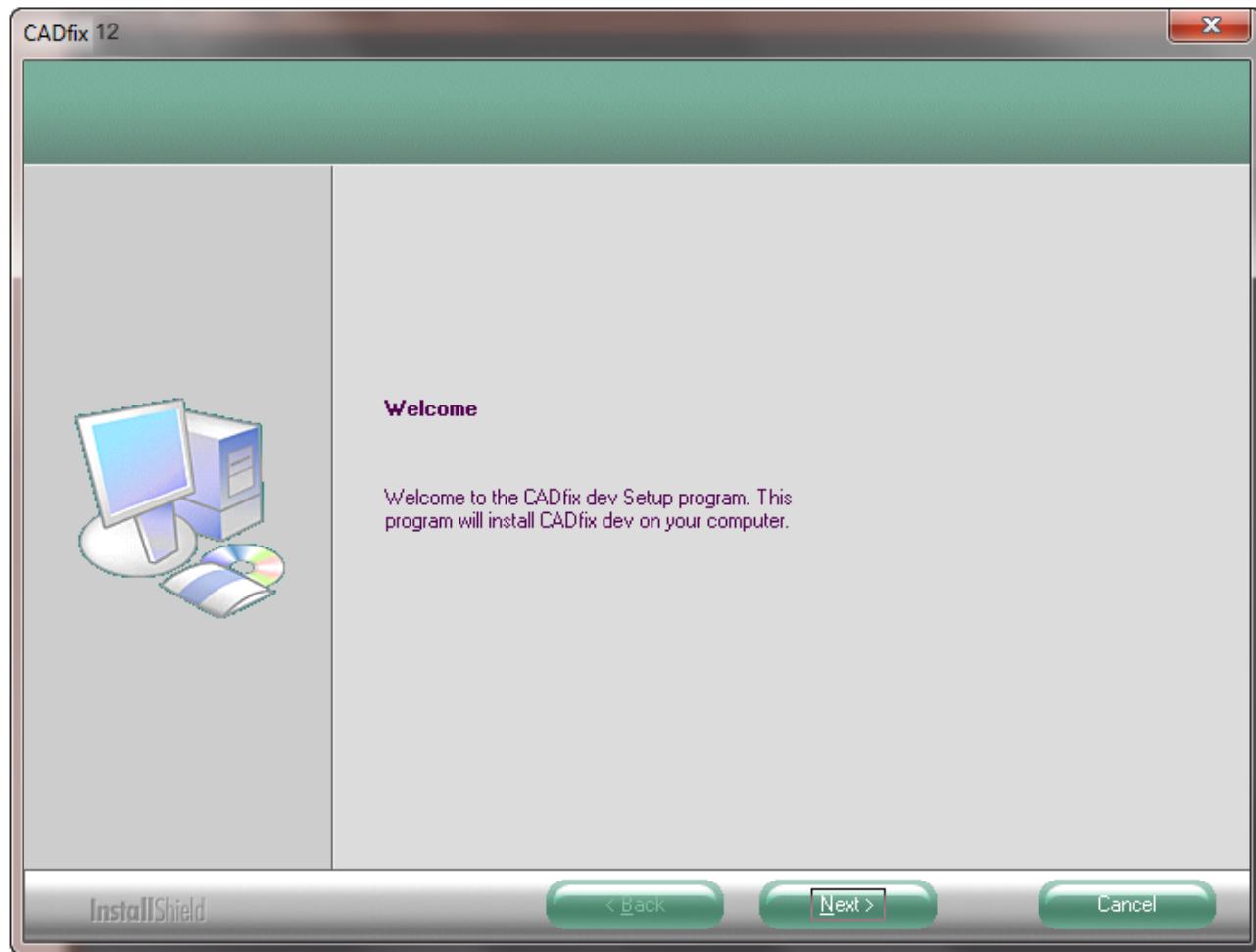
## Installation from Download Package

### Windows

You will need **Administrator** privileges to install CADfix so that configuration settings can be written to the machine registry. The installation process is as follows:

1. Download the EXE file from the link provided by ITI - International TechneGroup Support.
2. Open the `Explorer` tool and browse to the working directory.
3. Right-click on the EXE file and select `Run as Administrator`.

Install Shield will start. You should then see a Welcome window and upon reading the information contained here you should click on `Next`.



You will be prompted to review the installation location, which is by default C:\Program Files (x86)\CADfix 12

5. Click Change to browse to a different location if required, then click Next.

You will be prompted for a choice of language; English, Japanese or German.

6. Select the required language and click on Next.

The final window will summarise the settings you selected during the installation.

7. Click Next to install CADfix and complete the setup.

8. Before CADfix will run for a server type licence (not relevant for **evaluation/demo** licence types) the **FLEXNET™** Licence Manager must be set up. Please go to section 1.2 in this manual for instructions on installing the Licence Manager.

## Linux

To install from the TAR compressed file follow the steps given below. Please note that the **C-shell environment** should be used and that in the following text ‘%’ denotes the system prompt.

### **You must NOT install the program as ROOT.**

1. Download the TAR file from the link provided by ITI – International TechneGroup Support.
2. Make sure that the contents of the TAR file are extracted into your working directory as shown below:  
`tar xvf CADfix12_<product>_linuxx64.tar`
3. Within the working directory, move to the ‘linux’ subdirectory.

Example of Typical Installation Package contents

```
% /<working directory>/Linux > ls -l
total 822553
-r-xr-xr-x 1 opt      sys          0 Feb 18 16:51 _noCAE*
drwxr-xr-x 1 opt      sys          512 Feb 18 16:51 bin/
-r-xr-xr-x 1 opt      sys          27434727 Feb 18 16:51 cmn.tgz*
-r-xr-xr-x 1 opt      sys          58416 Feb 18 13:21 install.sh*
-r-xr-xr-x 1 opt      sys          52293229 Feb 18 16:55 linux.tgz*
```

4. Execute the installation script in the 'LINUX' sub directory, e.g.:

```
% ./install.sh
```

The install script will now run and ask a series of questions.

The LINUX versions of CADfix are listed and you should identify the one required:

CADfix 12 Installation - Which Platform

- 1. Linux
- x. Abort installation

Which platform do you want to install ()?

1

5. Next identify the target installation directory for the software. Ensure you have write privileges as an attempt will be made to create a directory if one does not exist:

CADfix 12 Installation - Install Where

CADfix will be installed into a new sub-directory called CADfix12

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

/opt/

6. Next identify the CADfix product you wish to install. If unsure, please contact your supplier. If you are installing the **Licence Manager** only select option 2 and skip Step 10 below.

CADfix 12 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

7. Select the language.

CADfix 12 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 install (1 - 2) [1] ?

1

8. After confirming the installation details the products are now extracted automatically into the directory location you requested headed by the 'cadfixver' directory (where *ver* is the CADfix version number, e.g. 'CADfix12').

CADfix 12 Installation - Installing Products

Platform: RHEL6 Linux  
Location: /opt/CADfix12  
Product: CADfix Data Exchange  
Language: English

Continue with installation (y/n)? y

Identifying files to install...

Extracting platform independent files...

Extracting platform dependent files...

Installation completed.

Press RETURN to continue:

9. At the end of the installation you are requested to run a `cadfix_setups` script to set up the product environment variables. It is suggested that this command be added to the system login or individual user login files.

CADfix 12 Installation - Installation Complete

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

`source /opt/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.

10. At the end of the **Licence Manager** installation you are requested to run a `cadfix_setups` script to set up the product environment variables. Where it is necessary to start the Licence Manager; run `cadfixadmin` and refer to section 2.3.

CADfix 12 Installation - Installation Complete

Before starting the licence manager you must source the `cadfix_setups` file, e.g.

`source /opt/cadfix_setups`

To start the licence manager type:

`cadfixadmin`

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

11. Before CADfix will run for a server type licence (not relevant for **evaluation/demo** licence types) the FLEXNET™ Licence Manager must be set up. Please go to section 1.2 in this manual for further information on the Licence Manager.

For a full listing of the files extracted inspect the files; `.tar_dep.log` and `.tar_cmn.log` found in the installed directory.

## 1.2.

## Licence Manager Setup

CADfix uses FLEXNET™ from FLEXERA Software Inc., as its licence management software. As part of every installation the licence management software will be installed in the `lic` directory e.g.

### Windows

`C:\Program Files (x86)\CADfix 12\lic\`

### LINUX

The CADfix installation procedure sets the `$FEGS_TOP` environment variable to point the installed directory.

`$FEGS_TOP/CADfix12/lic/`

A full explanation of the licence management system may be found in the PDF file ‘LicensingEndUserGuide.pdf’ delivered as part of the CADfix installation and found within the `lic` directory.

Users must obtain a licence file named `cadfix.dat`, from ITI - International TechneGroup, and place it in the above `lic` directory.

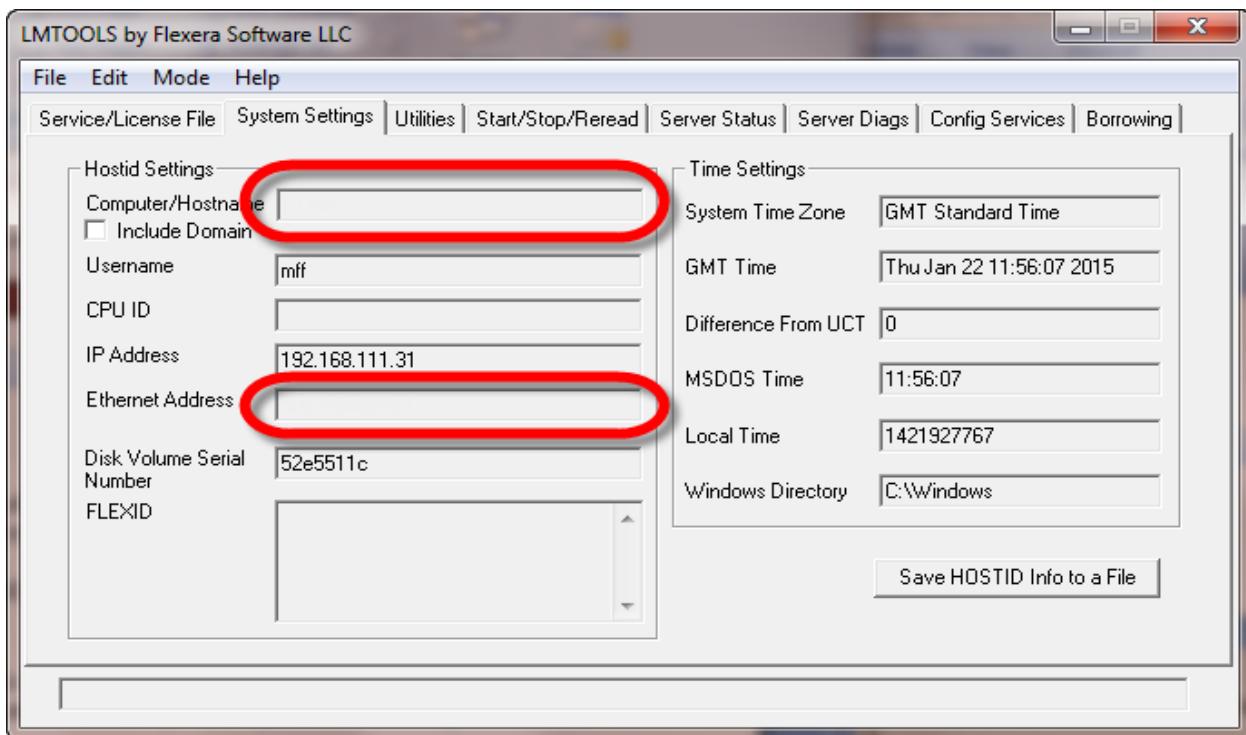
### Windows



The information necessary for the creation of a licence file may be obtained by selecting “`License tools`” from the CADfix 12 Start menu (not relevant for **evaluation/demo** licence type – see below).

Alternatively, the licensing information can be obtained from MSDOS command prompt commands found in the [Appendix A](#).

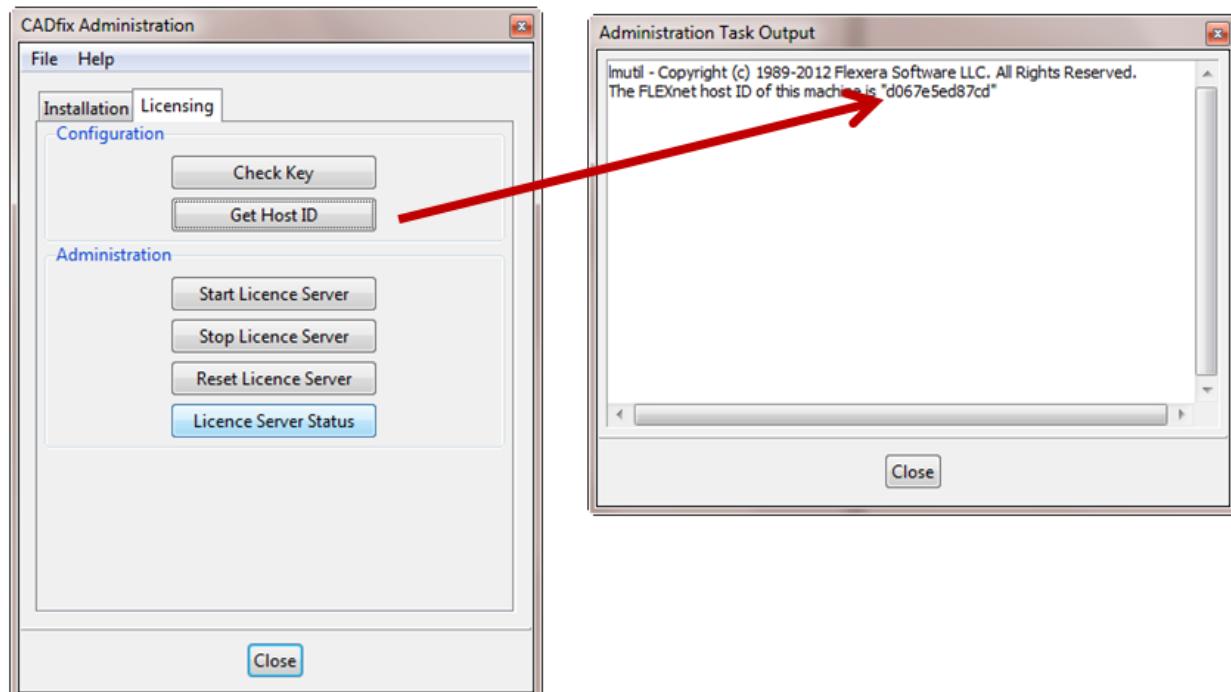
Select the “`System Settings`” tab and send the machine details indicated below to your supplier. The Ethernet Address will be used for a **node-locked** licence with the network system hostname also required to provide a **floating** Licence server file.



## LINUX

For generation of the licence file the user must be logged onto the proposed server or node locked machine (not relevant for **evaluation/demo** licence type – see below). Run the `cadfixadmin` GUI to obtain the system ID. Click `Get Host ID` and send the FLEXNET™ host ID given to ITI - International TechneGroup along with the machines network hostname (`uname -n`). For instance, “`d067e5ed87cd`” would be the system ID given by the example below.

```
% cadfixadmin
```



If for some reason the `cadfixadmin` tool is not available, then the licencing information can be obtained from keyboard commands found in the [Appendix A](#).

Before activation of the CADfix licence management system the user must clarify which of the two types of licence is being used i.e. a **floating (concurrent)** licence or a **node-locked** licence:

- **Floating (concurrent)** licence means anyone on the network can use the licensed software via TCP/IP, up to the limit specified in the licence file.
- **Node-locked** licence means the licensed software can only be used on one machine (node). Counted (one seat) Node-locked licence files require the licence server to be running on the host (or node) machine.
- **Evaluation/demo** licence is only time limited, it can run anywhere and be used any number of times, so there is no licence server required.

If you have or are about to install a floating licence server system, then you **must** supply the Host ID and Host Name of the server machine. The IP address of the clients or users network range must also be supplied for a Local Area Network (LAN) installation. The server machine will be used for the licence management daemon and should therefore be chosen with care. Please read the 'FLEXNET.htm' reference material for advice on the choice of server machine.

### 1.2.1.

### New Licence

Two daemons (or processes) are used to manage floating licenses:

- lmgrd, the license manager daemon
- vendor daemon in our case "itiohio"

The lmgrd daemon and the vendor daemon work together to manage the license keys. The lmgrd handles the initial contact with the client application programs, passing the connection on to the appropriate vendor daemon. It also starts and restarts vendor daemons.

The lmgrd daemon starts on TCP/IP port 32768 (default) when you start the server. The lmgrd daemon will assign a random vendor TCP/IP port number (unless you set up a firewall) to the vendor daemon and start the vendor daemon on that port.

#### Firewall Blocking Ports used for the licence server

If there is a firewall between the Licence Server and the CADfix software, then you may need to specifically allocate ports and update the firewall to allow access to both the SERVER and VENDOR ports. Since a firewall requires a fixed port number, FLEXNET™ allows the administrator the option of fixing the port numbers for both licence manager daemon and the vendor daemon.

Using a text editor<sup>1</sup> e.g. notepad, open up the license file cadfix.dat to append the unique port numbers:

The SERVER port can be altered by editing the SERVER line with the required port number as the fourth field (e.g. SERVER myserver 123456789abc 27000).

The line VENDOR itiohio can also be appended with the keyword port and the desired port number e.g.

- VENDOR itiohio port=xxxx

where xxxx is the desired port number.

Save the file and restart the FLEXNET™ license server.

Once the server is started, the log file (see item 6 below) should show that the vendor daemon is started at the specified port.

```
16:00:07 (lmgrd) lmgrd tcp-port 27000
16:00:07 (lmgrd) Starting vendor daemons ...
16:00:07 (lmgrd) Starting vendor daemon at port xxxx
```

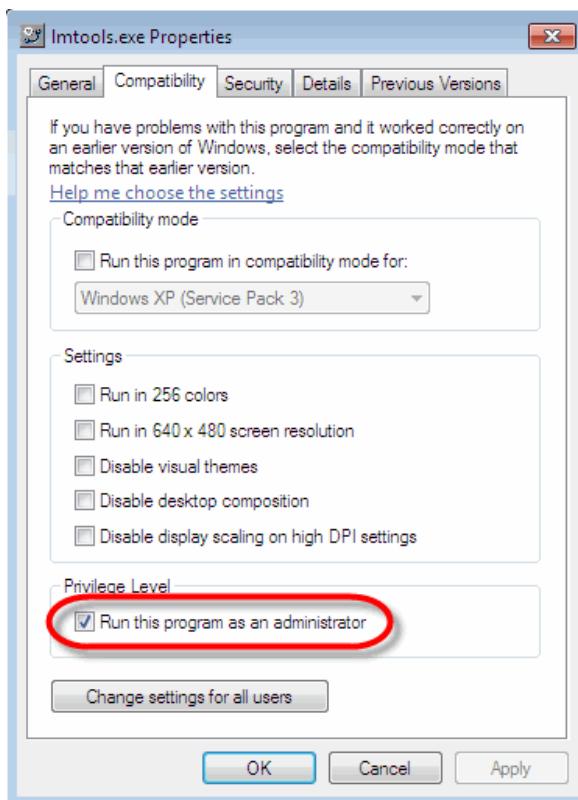
<sup>1</sup> The SERVER line **Port number** and **Machine name** can be edited in the cadfix.dat licence file. Plus, the VENDOR line **port number**. **NO** other change can be made to the licence file otherwise it will be invalidated.

```
16:00:07 (lmgrd) Using vendor daemon port xxxx specified in license file
16:00:07 (lmgrd) Started itiohio (pid 3560)
```

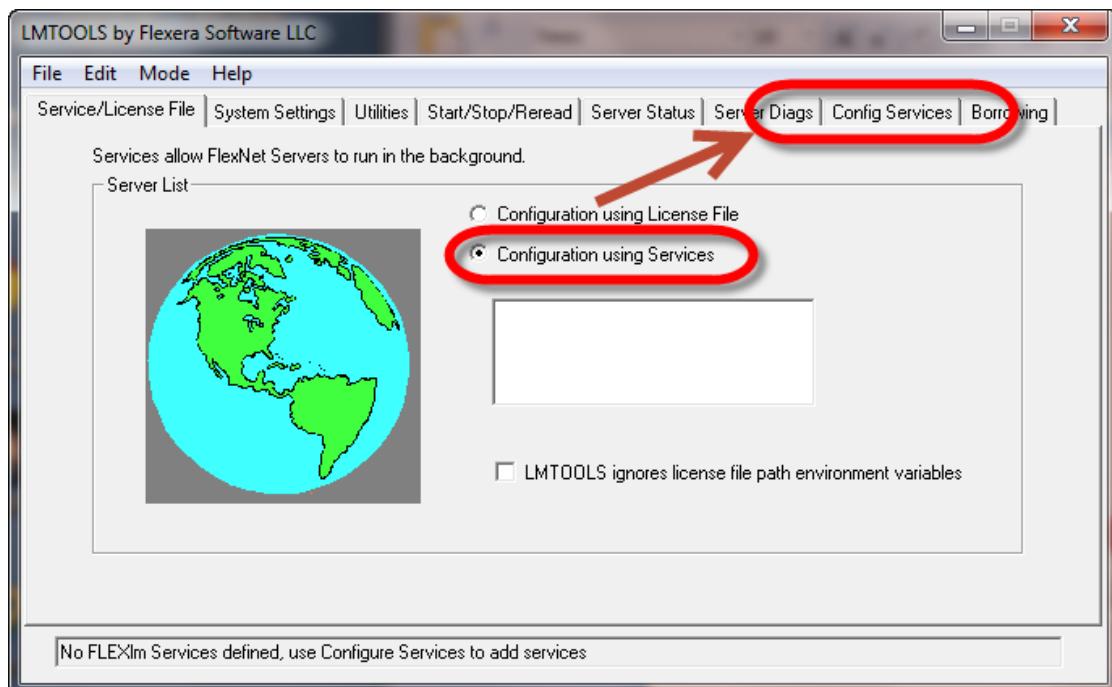
- After completing the installation process on **Linux** source the `cadfix_setups` file.
- The `cadfix.dat` licence file from ITI - International TechneGroup must be placed it in the `lic` directory.
- If you have an **evaluation/demo** licence you may start to run CADfix – see section 1.3. Please ignore the licence server installation instructions below for **evaluation/demo** types.

## Windows

1. For **Windows 7, 8 and 10** users there is an extra level of security called the User Account Control (UAC). This is built-in security to reduce breaches in the Windows system. The UAC forces users that are part of the local administrators group to run like they were regular users with no administrative privileges. It may be possible to install CADfix but starting the licence manager maybe a problem because restrictions are placed on the `lmtools.exe` used in the process outlined below. To overcome any problems with starting a licence service navigate to the CADfix installation directory and the `./lic` folder. Right click on the `lmtools.exe` and select Properties. Now check the box marked “Run this program as an administrator” as shown in the image below. Hit Apply and exit the Properties:



2. Select “Configuration using Services” and then the select the “Configure Services” tab.



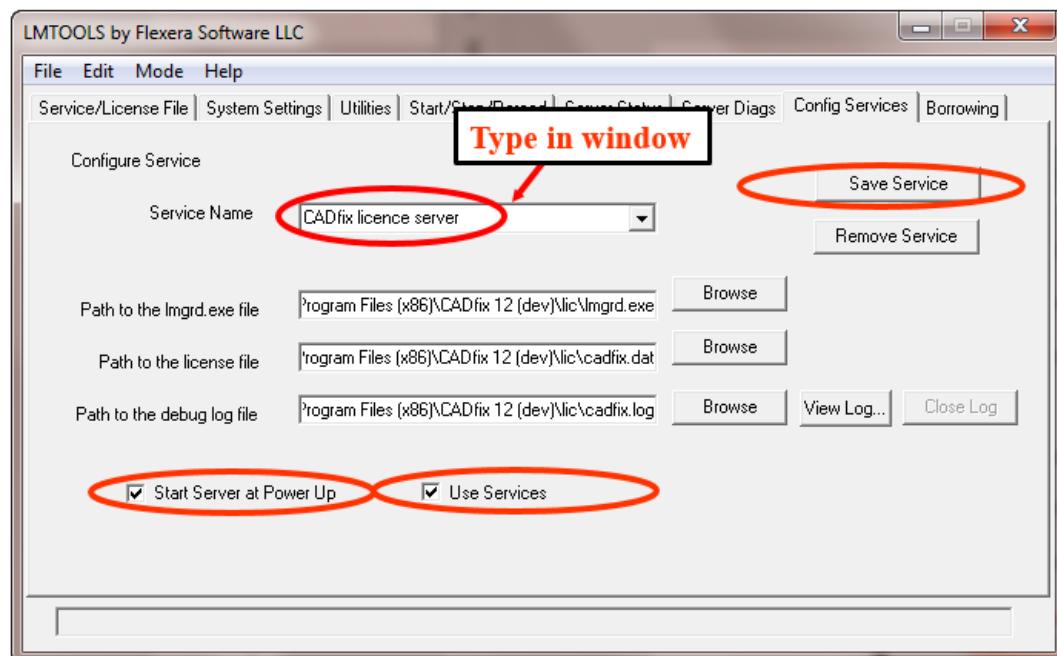
3. Type into the Service Name entry window to specify a name for the CADfix licence service; the recommended name is “CADfix Licence Server” – see over.

4. Select the “Browse” button to locate the licence server program from the CADfix installation. If you installed CADfix in the default location then you should find it in “C:\Program Files (x86)\CADfix 12\lic\lmgrd.exe”.

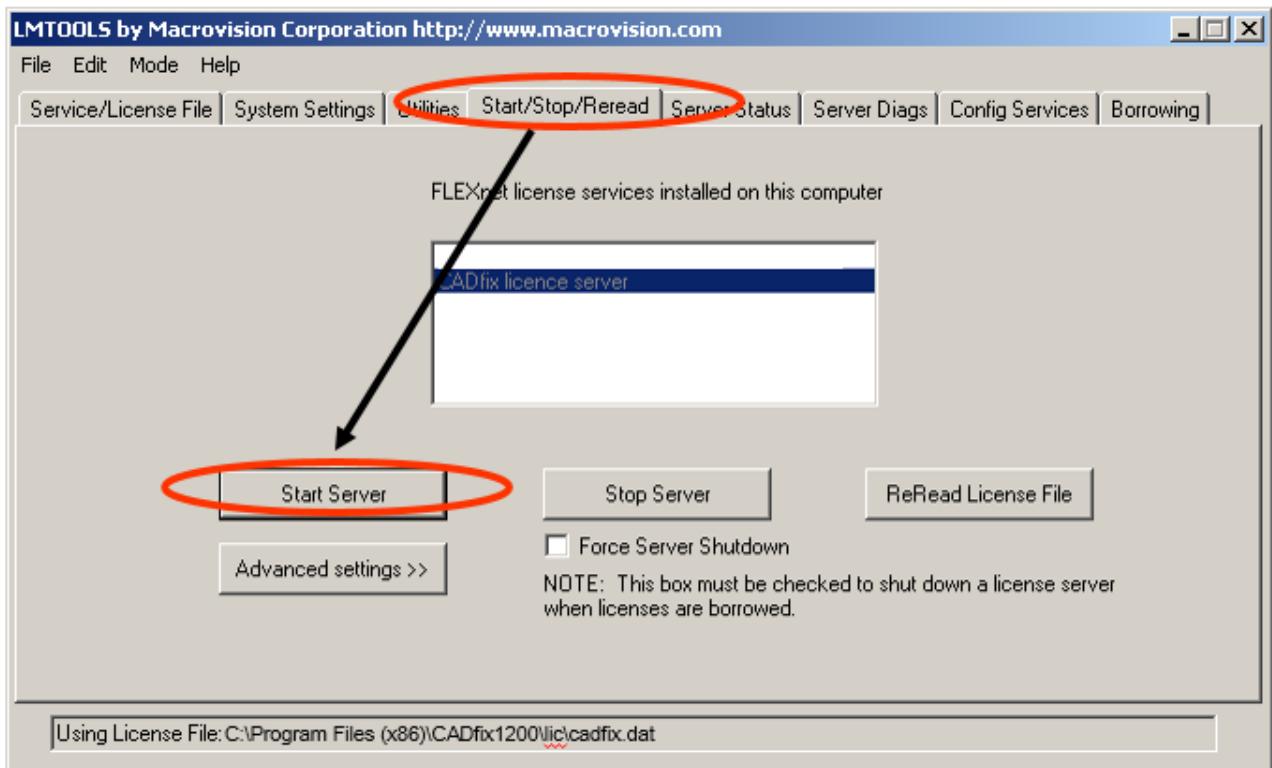
5. Select the “Browse” button to locate the licence file. The licence file should be installed in the “lic” directory of the CADfix installation. If you installed CADfix in the default location then you should find it in “C:\Program Files\CADfix 12 (x86)\lic\cadfix.dat”.

6. Select the “Browse” button to locate the file to be used for logging the licence server messages. It is recommended that this file be placed in the “lic” folder of the CADfix installation. If you installed CADfix in the default location then you should call it “C:\Program Files\CADfix 12 (x86)\lic\cadfix.log”.

7. Select the “Use Services” checkbox and the “Start Server at Power Up” checkbox then finally select “Save Service” to store the settings.



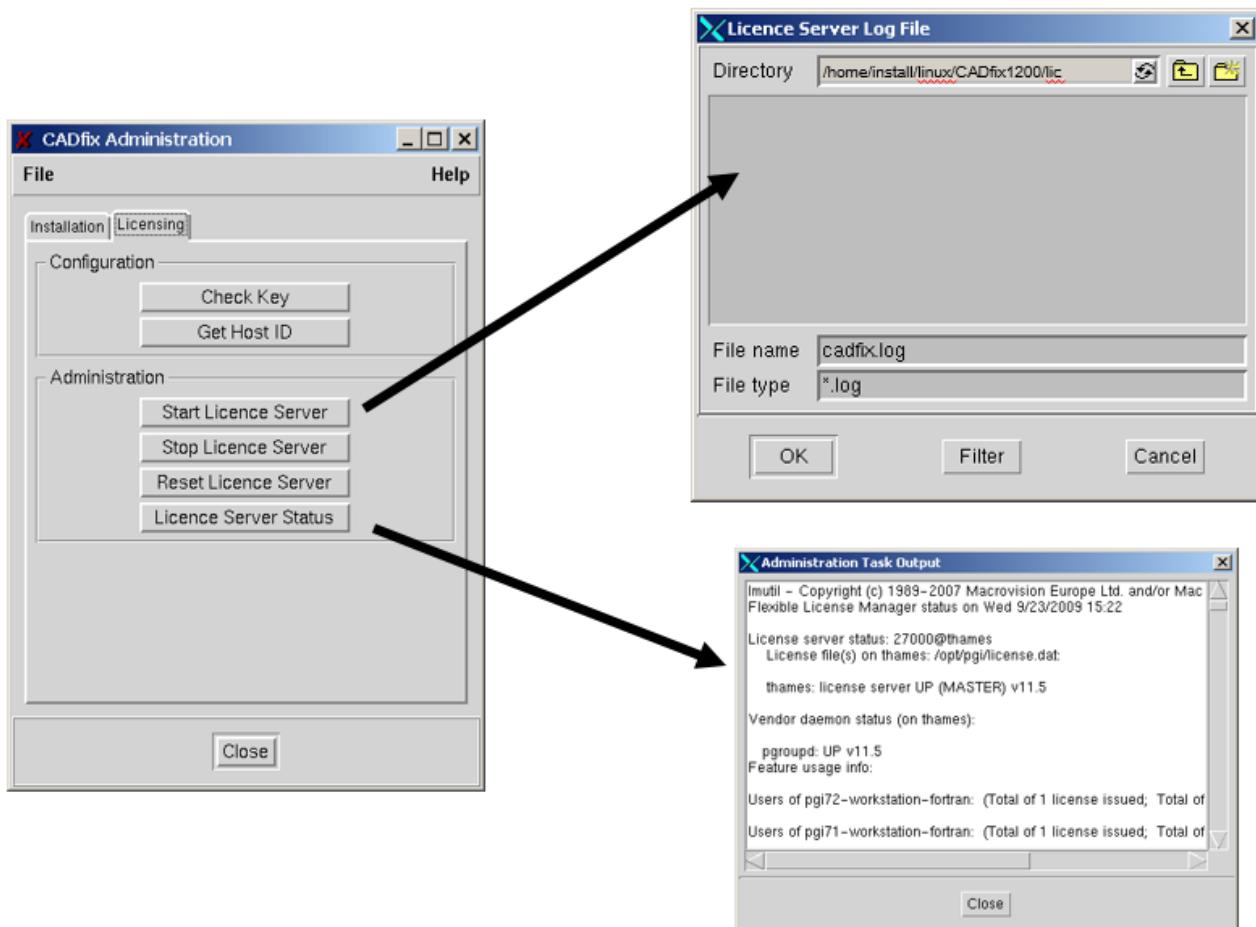
8. To start the server for the first time, select the “Start/Stop/Reread” tab, and then select the “Start Server” button. Wait about 30 seconds to allow server to start.



9. Once the server is up and running then you can exit from “Licence Tools”.

1. To Start/Stop/Reset and check the Licence Server Status use the cadfixadmin GUI.
2. On first selecting “Start Licence Server” you will be asked to identify a directory for the licence server log file cadfix.log. We recommend that the log file be placed in the lic directory.

```
% cadfixadmin
```



3. The equivalent keyboard option would be to “cd” to the ./lic folder on the server machine. After making sure the licence file is present type the following to start the licence server:

```
% lmgrd -c cadfix.dat -l cadfix.log
```

4. Once the licence management system has been started you may check the status at any time using the “Licence Server Status” button.

5. You must follow the procedure set out in [section 1.1](#) for installing the products purchased on each host platform. For each machine on which CADfix is installed a copy of the licence file **must** be placed in the lic directory, unless the procedure outlined in [section 1.2.2](#) below is followed.

For a **floating** licence installation system managers can overcome the requirement to place a copy of the `cadfix.dat` file into every installation `lic` directory as follows:

The licence file on each client need only contain a `SERVER` line and a `USE_SERVER` line, and CADfix will contact the specified server machine for full licensing information, e.g.

```
SERVER mainland ANY 32768
USE_SERVER
```

### Windows

Alternatively, you can set a `CADFIX_KEY` environment variable on each client machine. To create a new environment variable on Windows, open the Control Panel on the client machine. Then double click on the System icon. Select the Advanced system settings >> Advanced Tab and click the Environment Variables button. Create a new variable with variable name `CADFIX_KEY` and the required value.

### LINUX

Alternatively, you can set a `CADFIX_KEY` environment variable on each client machine. The `CADFIX_KEY` environment variable can point to; the full existing licence file in a central place somewhere on the network e.g. on the server, or a specified server machine, and optional port:

```
setenv CADFIX_KEY @mainland.fegs.co.uk      or
setenv CADFIX_KEY 32768@myserver.here.there.com
```

There are 3 ways you can use FLEXNET™ in CADfix with the `CADFIX_KEY` variable.

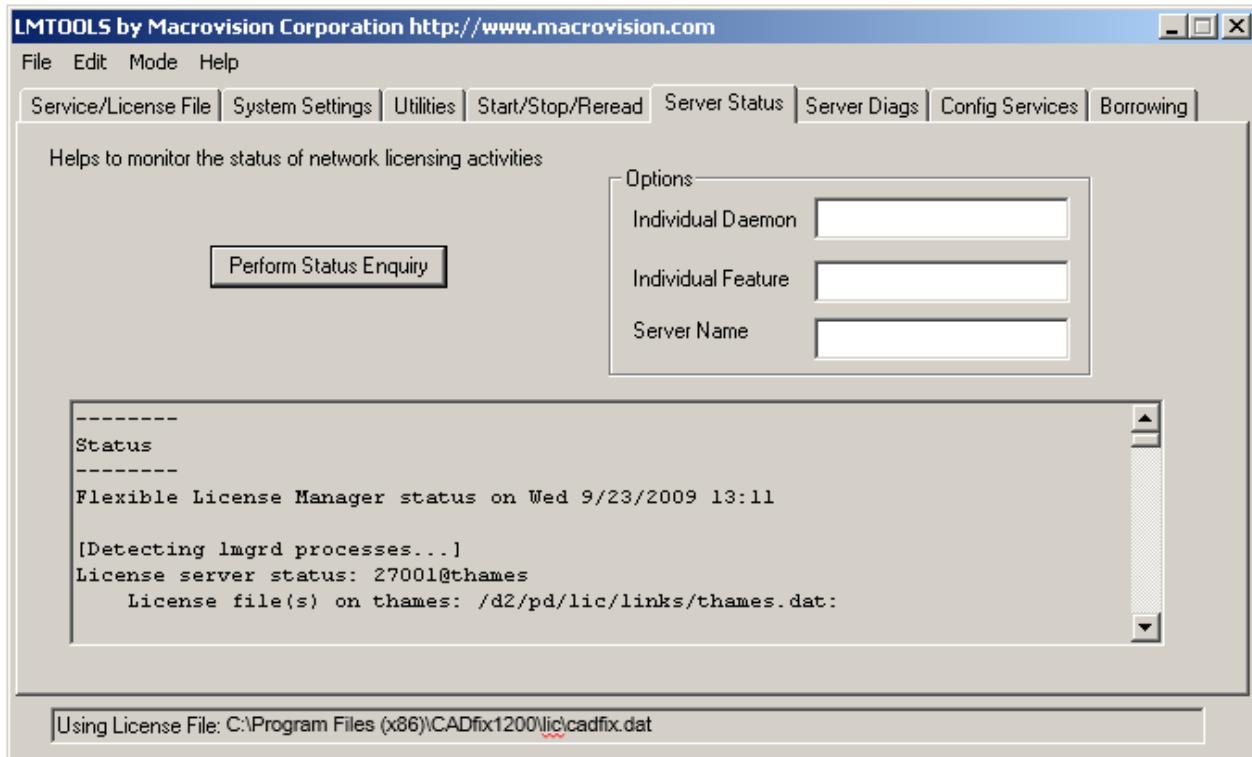
- If `CADFIX_KEY` points to a port number on a machine (e.g. `port@server`) then it will contact the licence server to get the key data, it needs.
- If `CADFIX_KEY` points to a file containing just the `SERVER` and the special `USE_SERVER` lines, then it reads the server details and contacts the server in the same way as above.
- If `CADFIX_KEY` points to a normal licence key it reads the contents and uses it.

The above will only work if the "lmutil.exe" executable is in the `lic` folder, which should be the case for a standard CADfix installation.

For **evaluation/demo** licence types place the `cadfix.dat` file in the `lic` directory and start using the program as no server is required for these licence types. Please ignore all instruction below, which relates to **floating** and **node locked** licence server installations.

### Windows

1. When CADfix has been installed on the new host platform within an existing floating licence system copy the licence file (`cadfix.dat`) to the `lic` directory of all machines that CADfix is installed on.
2. Select "Licence tools" from the CADfix 12 Start menu and confirm that the licence management system is running, enter the "Server Status" tab and then select "Perform Status Enquiry". After a short wait the server status should be reported in the text window.

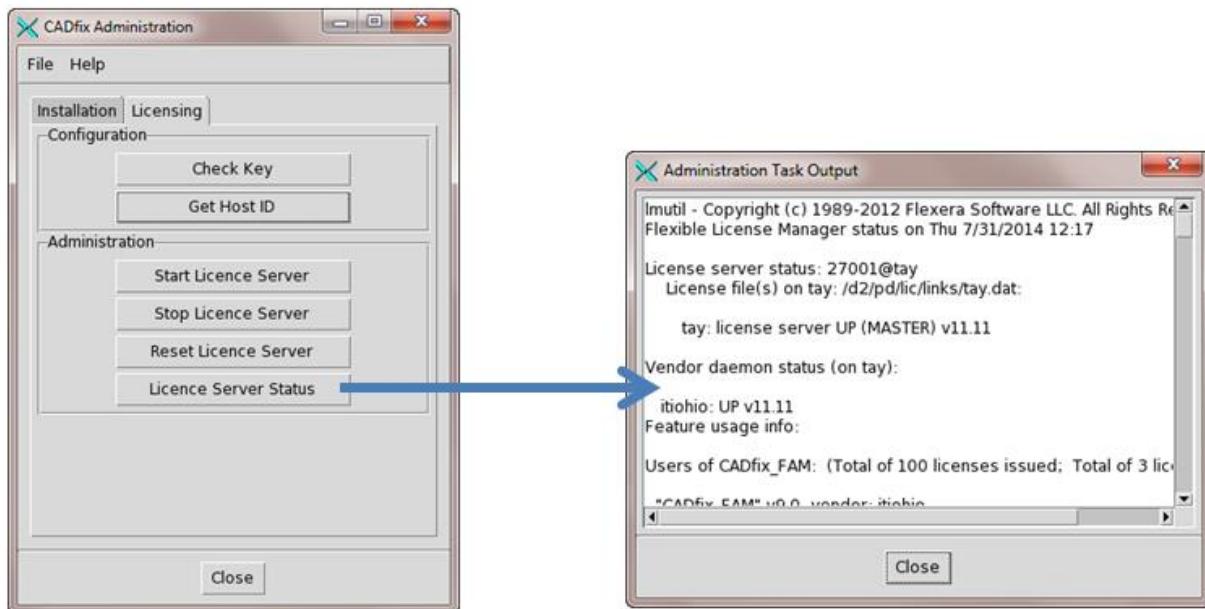


3. If you are changing or updating your licence file you need to ‘Reread’ the licence server. A copy of the new licence file must be placed on all host platforms including the licence server. You will need to select the ‘Start/Stop/Reread’ tab and click “Reread Licence File” button.

## LINUX

1. Once CADfix has been installed on the new host platform within an existing floating licence system obtain a copy of the licence file (cadfix.dat) from the licence server and place it in the lic directory.
2. Source the cadfix\_setups file.
3. Use the cadfixadmin GUI to confirm that the licence management system is running, enter the following and select the “Licence Server Status” option:

```
% cadfixadmin
```



4. If you are changing or updating your licence file you need to ‘Reset’ the licence server. A copy of the new licence file must be placed on all host platforms including the licence server. You will need to ‘reset’ the licence server using the `cadfixadmin` GUI.

#### 1.2.4.

#### Licence Check-in

To automatically return a licence for CADfix sessions that have been left idle for an extended period there is a licence check-in procedure.

If you create a file `anyname.config` in the top level CADfix directory containing this line:

```
*famgui.inactivityTimeouts: 1
```

Then it will enable CADfix to operate with the automatic licence check-in facility provided by FLEXNET™. If this is enabled, then the GUI will stop sending heartbeats after it detects that the user has stopped working. It detects this by looking for commands/output being sent to/from the core code, or the GUI being in a busy state. Once inactive then the licence will timeout after 2 hours by default but can be pushed down to 15 minutes by setting an option in the licence server options file.

This is the only configuration setting that you need to make in CADfix. The rest, such as timeout period etc, is handled by FLEXNET™ directly and your own systems configuration and implementation of FLEXNET™. You will have to check this part of it out with your systems admin and licensing people to see what level of configuration you have with your FLEXNET™ installation.

Typically, the systems admin will create a FLEXNET™ “options” file to control timeout. A text file called `cadfix.opt` would be created using a text editor or notepad (Windows). The files would be placed into the CADfix installation `./lic` folder. On the VENDER line create the ‘options’ as shown below with the address pointing to the ‘`cadfix.opt`’ file:

#### Windows

```
SERVER everest 001122334455 27000
VENDOR itiohio options="c:\Program Files (x86)\CADfix 12\lic\cadfix.opt"
```

#### LINUX

```
SERVER everest 001122334455 27000
VENDOR itiohio options="/../CADfix12/lic/cadfix.opt"
```

There are two FLEXNET™ options to consider for the options file. The first is TIMEOUT:

```
TIMEOUT featurename seconds
```

TIMEOUT checks in the licenses if the process has been 'idle' for a period longer than the specified time period, and someone else wants the license. The daemon declares a process idle when it has not heard from the process i.e. CADfix sending heartbeats.

Then there is TIMEOUTALL which is the same as TIMEOUT, but applies to all features:

```
TIMEOUTALL seconds
```

The lowest timeout you can set is 900 seconds (15 mins). Timeouts lower than this are ignored, and 900 secs is used. This is to prevent abuse of the licence system.

To be considered when you set up this process; for killing CADfix the **CADFix\_DX** is a feature that belongs to the GUI related executable `cadfixdbox.exe`. The **CADfix\_FAM** is a feature that belongs to core `cadfix.exe` executable. The exec `cadfix.exe` is a child process of `cadfixdbox.exe`. Therefore, to stop CADfix you kill `cadfixdbox.exe` then BOTH licence features should be checked back IN.

If a licence times out and then the user comes back to start working again the heartbeat will restart if the heartbeat can reacquire the licences that expired. However, if it can't reacquire the licences then it falls into a heart attack mode. The user has the choice to exit or quit CADfix or try to reconnect to server. A reconnect attempt takes 40 seconds. If unsuccessful then the heart attack continues and the user can try again. Three reconnects attempts are allowed before the user must either exit or quit.

## 1.2.5.

FLEXNET™

### Multiple or Redundant Server Floating licence

A "redundant server" key has up to 3 server lines specifying 3 different servers in priority order. When the first or primary server fails for whatever reason the licence will be transferred to the second server specified in the sequence. When using a "redundant server" key you must use a **port number** and **hostid** on each of the server lines.

The licence file for each installation would then just have four lines as shown below:

```
SERVER <machine1> <hostid1> <port>
SERVER <machine2> <hostid2> <port>
SERVER <machine3> <hostid3> <port>
USE_SERVER
```

### Windows

When using the environment variable `CADFIX_KEY` for the redundant server option **port@server\_name** (e.g. `27000@mainland`) is used three times separated by a semi-colon ";" on a Windows client and a colon ":" on a LINUX client. e.g. for Windows:

```
set CADFIX_KEY=<port>@<server1>;<port>@<server2>;<port>@<server3>
```

### LINUX

When using the environment variable `CADFIX_KEY` for the redundant server option **port@server\_name** (e.g. `27000@mainland`) is used three times separated by a colon ":" on a LINUX client. e.g. for LINUX:

```
set CADFIX_KEY=<port>@<server1>:<port>@<server2>:<port>@<server3>
```

The above functionality using the `CADFIX_KEY` environment variable could also be used on a multiple server system for the sharing of CADfix seats.

If CADfix still does not start up due to a license problem, do the following:

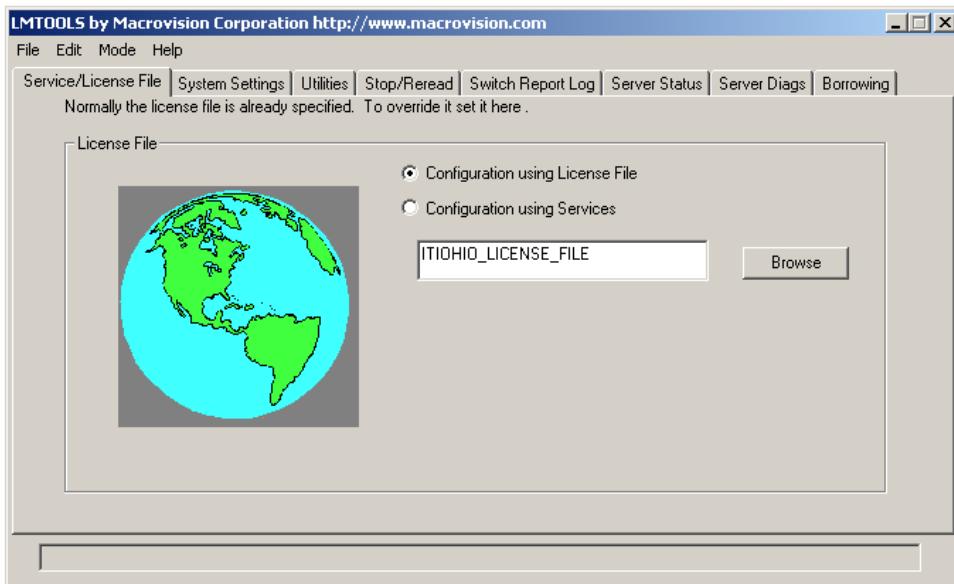
- 1) On Windows open a command prompt. Change to the CADfix installation \lic folder.
- 2) Type the following 3 commands:

```
lmutil lmstat -a -c cadfix.dat >stat.txt
lmutil lmcksum -c cadfix.dat >sum.txt
lmutil lmdiag -c cadfix.dat -n >diag.txt
```

Send these three files (stat.txt, sum.txt, diag.txt) to **ITI - International TechneGroup support – see [Section 3](#)**

If CADfix fails to start giving the message shown below even after a licence server has been found check the following:

- If the server was found by searching for a named computer, then this usually means that the server does not have the correct CADfix licence that you require.
- If the server was found by specifying a licence file, then this usually means that the server machine listed in the licence file is not running a FLEXNET™ server or is not reachable on your network.

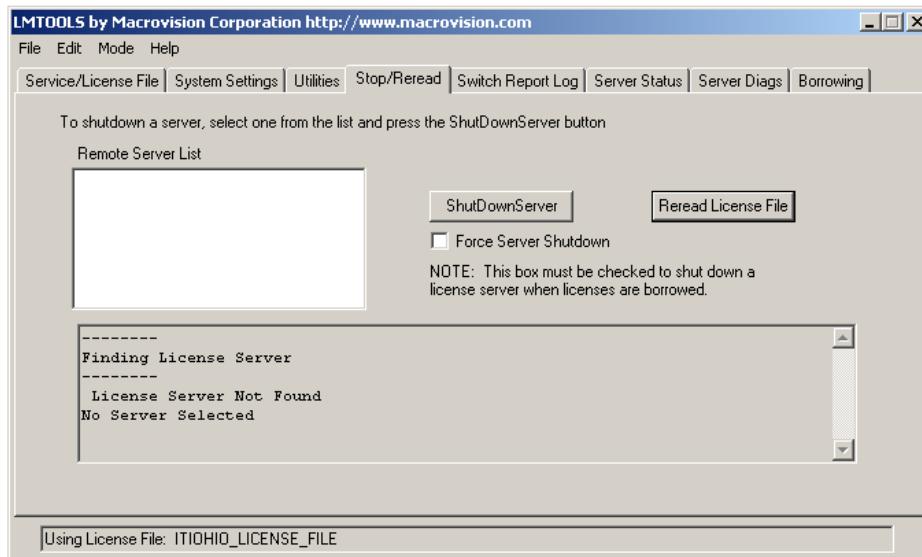


- Verify that the `ITIOHIO_LICENCE_FILE` environment variable has been set during the installation using the Service/Licence File tab on the lmtools utility.

If for example, due to version upgrade, you are issued with a new licence file you may need to copy the licence file to the `lic` directory on all machines CADfix is installed on (unless the arrangement described in [section 1.3.2](#) has been used) and Reread the licence server.

If you are getting a message that indicates the wrong product or key is installed.

- Verify that the CADfix licence file matches the main option installed otherwise you will have to uninstall and reinstall the program. For instance, the licence file must contain the feature `CADfix_DX` if the Data Exchange option has been installed.



If you get a CADfix error ‘**unable to determine correct starting mode**’ it may mean that you have installed option type 2 after installing option 1.

- Option 3 is ‘CADfix licence manager only’ and should NOT be installed on top off any of the other options. Option 1 also installs the licence manager. The solution to this problem is to stop the licence services, uninstall CADfix and reinstall only the option you require.

If you are installing the floating licence manager on a server system and it refuses to start this may be due to a ‘port’ conflict with other products also using **FLEXNET™**.

- A solution would be to give a specific port number in the server line of the CADfix licence file instead of relying on the default. You may use any standard editor to open the `cadfix.dat` file and insert onto the end of the SERVER line the number 32768 e.g.:
- Another good diagnostic is to check the **FLEXNET™** log file. Make sure the service has a log file defined, as that should contain a message explaining what is wrong. Try specifying a port number and if that still doesn't work, then check and see if this server has some kind of firewall protection, which may be blocking the ports **FLEXNET™** is trying to use. At this point you may need to make sure port 32768 was opened for the internal network to see.

In some situations, you may have some antivirus or firewall programmes running and although you make the tcp-ip port 270001 open, CADfix can't be launched at the client. You may be required to use a fixed port while checking out the license. The problem might be because **FLEXNET™** uses 2 TCP ports for licencing – [see section 1.2.1](#).

- They use one for `lmgrd` and another for the vendor daemon (`itiohio`). This can be seen in the **FLEXNET™** log as this:

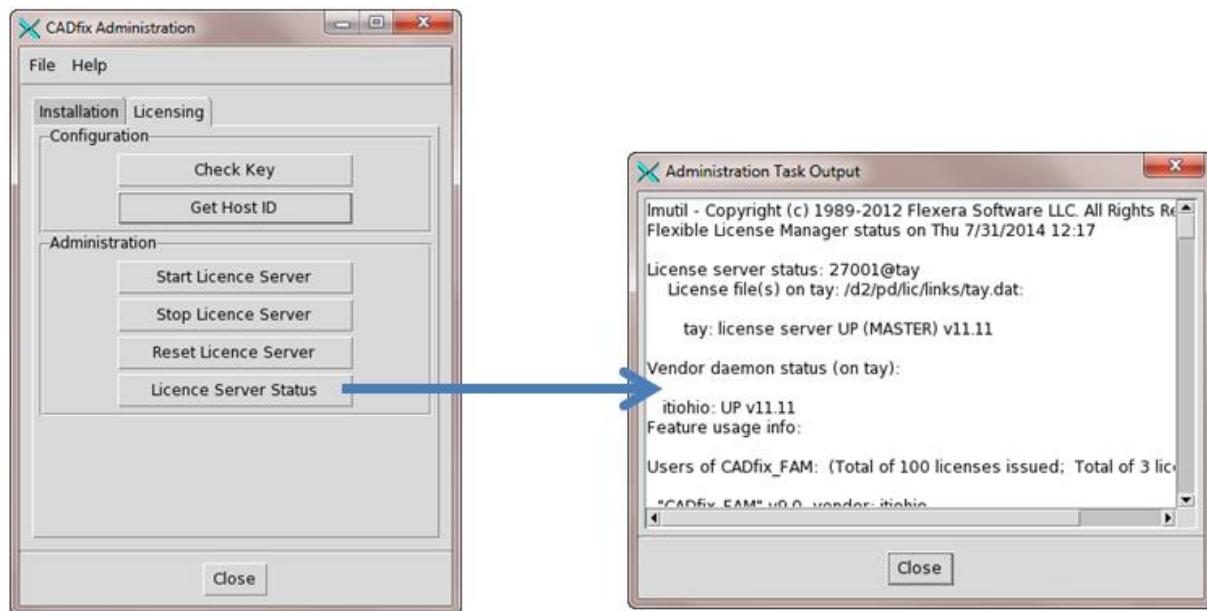
```
10:07:40 (lmgrd) License file(s): ../../CADfix 12/lic/cadfix.dat 10:07:40 (lmgrd) lmgrd tcp-port 27001
10:07:40 (lmgrd) Starting vendor daemons ...
10:07:40 (lmgrd) Started itiohio (internet tcp_port 32820 pid 4507)
```

- In the above case the machine is using 27001 for `lmgrd` and 32820 for `itiohio`. To have **FLEXNET™** work with the firewall you will need to open both ports. To do this you need to add a port argument to the `cadfix.dat` file in the `./lic` folder similar to the one used on the SERVER line e.g.:

`VENDOR itiohio PORT=12345`

- You can then open that TCP port in their firewall in addition to the one you have already opened for `lmgrd`.

If CADfix fails to start and gives the message below for “Licence Server Status” after the floating licence file has been placed in the `lic` directory check the following:



- Does the server have the correct CADfix licence that you require?
- Is the server machine listed in the licence file reachable on your network?

If the FLEXNET™ routines are unable to make a TCP/IP connection to the server and port specified in the licence file the possible reasons for this are:

1. The wrong licence file is being referenced by the application program;
2. The server machine specified in the licence file is unreachable;
3. The `itiohio` vendor daemon specified in the licence file is not running;
4. The hostname in the licence file is not recognized by the system;
5. The network between the client machine and the server machine is down;
6. TCP is not running on your machine.

- Try removing the file `.flexlmrc` from the users home directory and start again.
- Verify that the application is using the proper licence file. The environment variable `$CADFIX_KEY` (as defined in the `cadfix_setups` file) should point to the licence file.
- Verify that specified server machine is up and reachable by executing another command that uses TCP/IP, such as `ping`, from the client to the server.
- Verify that the `itiohio` vendor daemon is running (you can use “`ps -ef | grep itiohio`” on the server itself to look for it).
- Examine the licence log file `cadfix.log`, which should be located in the `lic` directory, to see if any problems are reported, particularly messages indicating that the vendor daemon has quit.
- Check “Licence Server Status” on the `cadfixadmin` GUI from the server machine to verify that the vendor daemon is alive.
- Check “Licence Server Status” on the `cadfixadmin` GUI from the client machine to verify the connection from client to vendor daemon across the network.

- Users should **NOT** modify the `cadfix.dat` licence file. Any attempt to do so may result in the following error message, generated by the licence manager, when CADfix is started:

```
bad code or inconsistent encryption code
```

If you are installing the floating licence manager on a server system and it refuses to start this may be due to a 'port' conflict with other products also using **FLEXNET™**.

- A solution would be to give a specific port number in the server line of the CADfix licence file instead of relying on the default. You may use any standard editor to open the `cadfix.dat` file and insert onto the end of the SERVER line the number 32768 e.g.:

```
#CADfix# note3:
SERVER <hostname> <machineID> 32768
VENDOR itiohio
```

- Another good diagnostic is to check the **FLEXNET™** log file. Make sure the service has a log file defined, as that should contain a message explaining what is wrong. Try specifying a port number and if that still doesn't work, then check and see if this server has some kind of firewall protection, which may be blocking the ports **FLEXNET™** is trying to use. At this point you may need to make sure port 32768 was opened for the internal network to see.

In some situations, you may have some antivirus or firewall programmes running and although you make the tcp-ip port 27001 open, CADfix can't be launched at the client. You may be required to use a fixed port while checking out the license. The problem might be because **FLEXNET™** uses 2 TCP ports for licencing.

- They use one for `lmgrd` and another for the vendor daemon (`itiohio`). This can be seen in the **FLEXNET™** log as this:

```
10:07:40 (lmgrd) License file(s): ../../CADfix12/lic/cadfix.dat 10:07:40 (lmgrd) lmgrd tcp-port 27001
10:07:40 (lmgrd) Starting vendor daemons ...
10:07:40 (lmgrd) Started itiohio (internet tcp_port 32820 pid 4507)
```

- In the above case the machine is using 27001 for `lmgrd` and 32820 for `itiohio`. To have **FLEXNET™** work with the firewall you will need to open both ports. To do this you need to add a port argument to the `cadfix.dat` file in the `./lic` folder similar to the one used on the SERVER line e.g.:

```
VENDOR itiohio PORT=12345
```

- You can then open that TCP port in their firewall in addition to the one you have already opened for `lmgrd`.

Some Linux systems change the default naming of network devices, which prevents the **FLEXNET™** tools from operating correctly. The error when trying to start CADfix for the first time might exhibit itself as follows:

```
"Invalid host.
The hostid of this system does not match the hostid
specified in the license file.
Feature: CADfix_DX
Hostid: xxxxxxxxxxxx
License path: /xxxxxxxxxx:
FlexNet Licensing error:-9,57
For further information, refer to the FlexNet Licensing documentation,
available at "www.flexerasoftware.com"."
```

- From the command line enter the `./lic` folder and under these circumstances when you attempt to run `lmutil lmhostid` you will get "000000000000" back.
- You will need to revert back to using 'eth' names, and you have to add the kernel option `biosdevname=0` to the end of the kernel boot line in `/etc/grub/menu.lst`. In some cases, that alone does not fix the issue. You may also have to edit `/etc/udev/rules.d/70-persistent-net-rules` and restore the device name to `eth0` and reboot. Please contact your local Systems department to correct the problem.

The following information for ensuring that the licence is always started at re-boot was taken from the **FLEXNET™** reference material. If any further information is required, please contact ITI - International TechneGroup.

On LINUX, edit the appropriate boot script, which may be `/etc/rc.boot`, `/etc/rc.local`, `/etc/rc2.d/Sxxxx`, `/sbin/rc2.d/Sxxxx`, etc.

Remember that these scripts are run in `/bin/sh`, so do not use the `csh ">&"` redirection syntax. Each LINUX operating system can have some quirks in doing this. See the notes following for a full explanation.

```
/bin/su daniel -c 'echo starting lmgrd > \
    /home/install/linux/CADfix12/lic/boot.log'
/bin/nohup /bin/su daniel -c 'umask 022; \
    /home/install/linux/CADfix12/lic/lmgrd -c \
    /home/install/linux/CADfix12/lic/licence.dat >> \
    /home/install/linux/CADfix12/lic/boot.log'
/bin/su daniel -c 'echo sleep 5 >> \
    /home/install/Linux/CADfix12/lic/boot.log'
/bin/sleep 5

/bin/su daniel -c 'echo lmutil lmdiag >> \
    /home/install/linux/CADfix12/lic/boot.log'
/bin/su daniel -c '/home/install/Linux/CADfix12/lic /lmutil lmdiag -n -c \
    /home/install/linux/CADfix12/lic/licence.dat >> \
    /home/install/linux/CADfix12/lic/boot.log'
/bin/su daniel -c 'echo exiting >> \
    /home/install/linux/CADfix12/lic/boot.log'
```

Please note the following about how this script was written:

- All paths are specified in full, since no paths can be assumed at boot time.
- Since no paths are assumed, the `itiohio` vendor daemon must be in the same directory as `lmgrd`.
- The “`su`” command is used to run `lmgrd` as a non-root user, “`daniel`”. We recommend that `lmgrd` not be run as root, since it can be a security risk to run any program that does not require root permissions, and `lmgrd` does not require root permissions.
- Daniel has a `csh` login, so all commands executed as `daniel` must be in `csh` syntax. All commands not executed as `daniel` must be in `/bin/sh` syntax, since that’s what’s used by the boot scripts.
- The use of “`nohup`” and “`sleep`” are required on some operating systems, for obscure technical reasons. These are not needed on Solaris and some other operating systems, but are safe to use on all.
- `lmdiag` is used as a diagnostic tool to verify that the server is running and serving licences.

## Windows

If installed correctly as defined in this guide, the software can be run from the ‘Start’ button on the ‘Task’ bar.

Select the ‘Start’ button, followed by ‘Programs’ and ‘CADfix 12’ to run CADfix. In the CADfix installation root directory you will find the file “`startCADfix.bat`” which, when double clicked, can also be used to start CADfix.

File type association is now created during installation. The `.fbm` files will now show the CADfix icon and can be double-clicked to open in CADfix.

If a shortcut to C:\Program Files (x86)\CADfix 12\bin\runcadf.exe exists on your desktop any file that CADfix can read (.fbm, IGES, STEP, etc.) can be dragged-and-dropped onto the shortcut.

## LINUX

Having completed the installation process and sourced the cadfix\_setups file, CADfix can be run by simply typing the name of the program at the system prompt, for example:

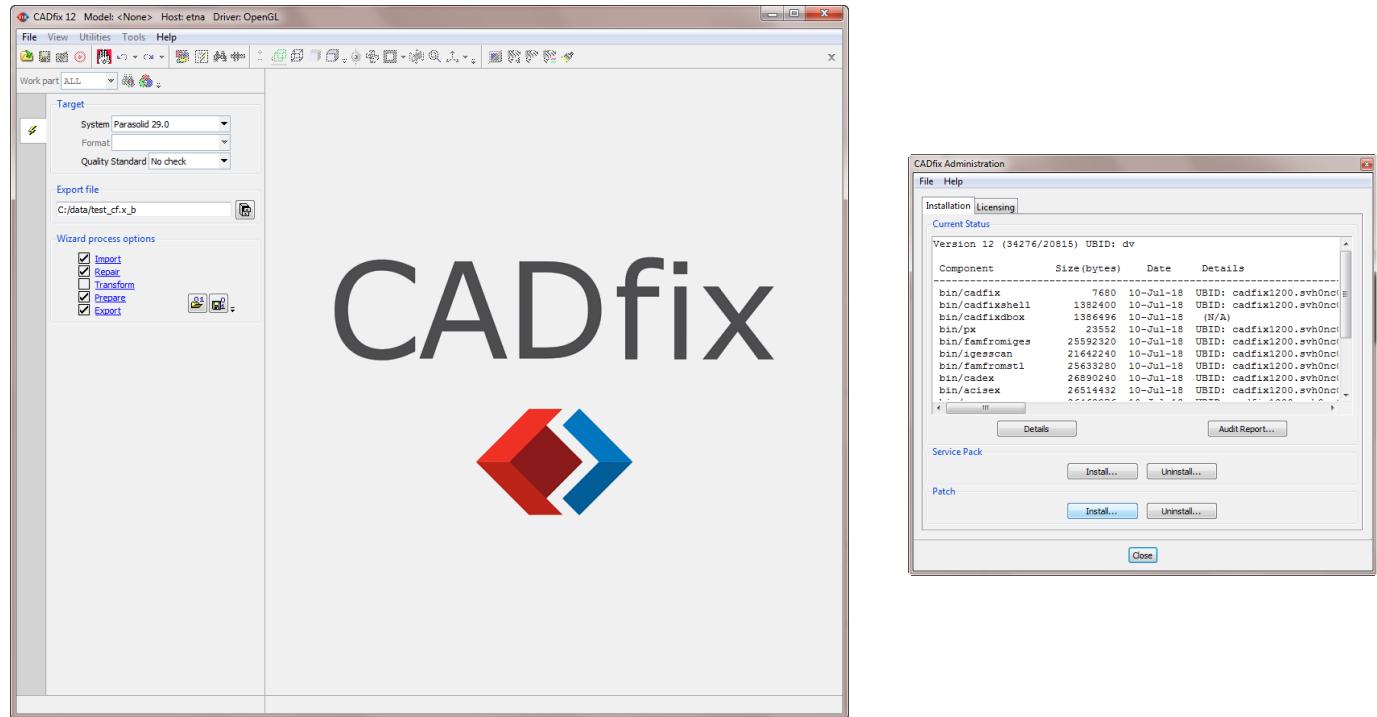
```
% cadfix
```

To access the CADfix on-line help documentation select **Help >> CADfix Help...** from the pull-down menu in the upper right hand corner of the main CADfix window.

The CADfix on-line HELP system is built using HTML files and when first activated the program will attempt to search for a web browser. If the program is unable to find a browser the user will be prompted to search for one. On failing to locate a HTML browser CADfix will revert to its own built-in browser.

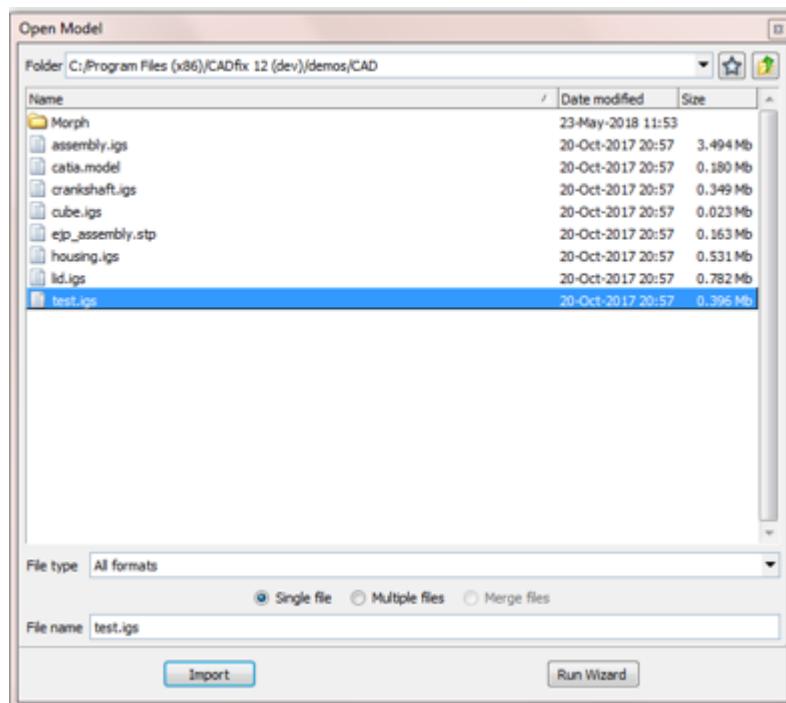
Now that you have CADfix licensing in place, you should test CADfix.

Start CADfix as described in **section 1.3** above. If the licence file is working correctly, you should be presented with CADfix as shown below.

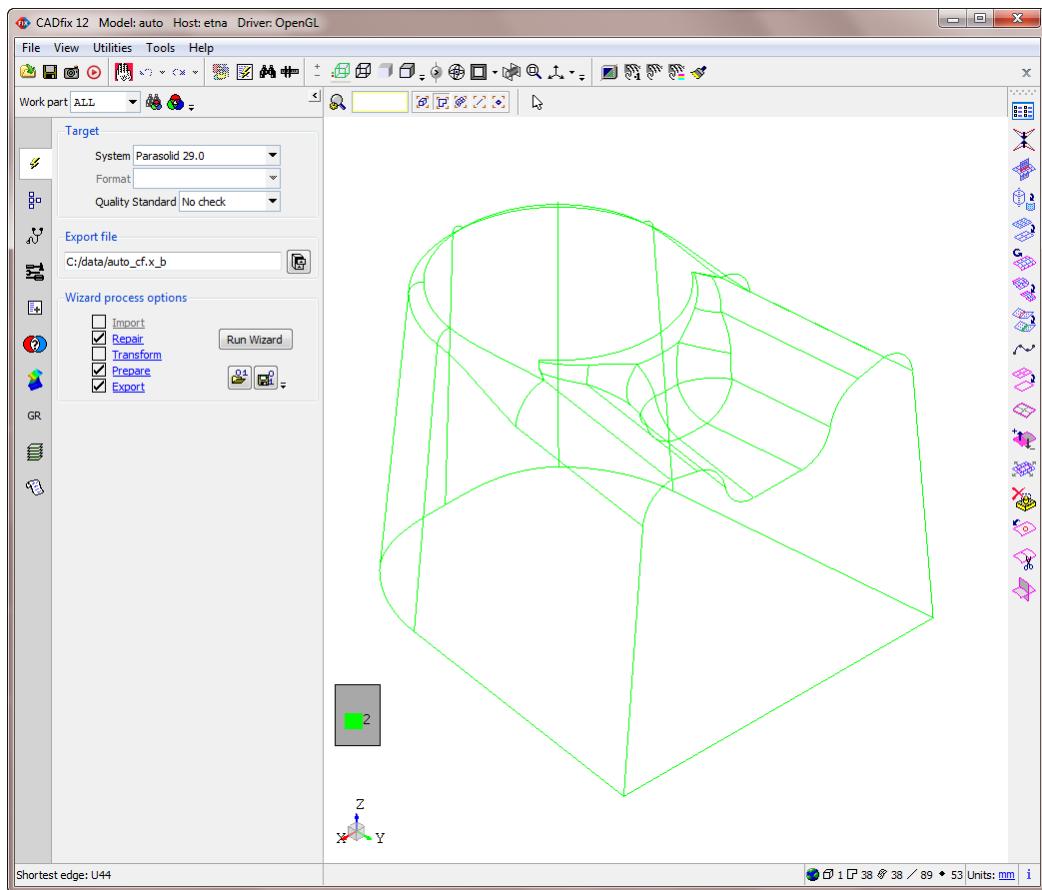


Under the 'Help' menu select 'CADfix Administration' and click on the 'Details' button to confirm all the products in the above right image are installed.

Ensure that the File type filter is set to identify IGES file as shown below. Change the Directory to **C:\program files (x86)\CADfix 12\demo\CAD** for Windows or **<path>/CADfix12/demo/CAD** for Linux and you should now be presented with a list of IGES files as shown below (Windows example):



You may need to move these files to a folder where you have write access. Pick the file ‘test.igs’ so that its name is echoed in the ‘File name’ field as shown above. Click on ‘Import’ and after the data has been imported you should be presented with the graphics window shown below:



Using the ‘File’ drop down menu select ‘**Exit CADfix**’ and close the program down.

CADfix will have left a number of files in the directory. Users are recommended to use the ‘File’ >> ‘Preferences’ and ‘Directory’ tab to select their working directory if the default of Use model directory is not required ensuring “write” access before any further processing within CADfix.

## 1.5.

## Language Setup

CADfix supports both a Japanese and German language version of the user interface. If, for example, the Japanese language version is required then select this option during the installation process.

### Windows

On Windows the language setting should be specified in the registry. HKEY\_LOCAL\_MACHINE >> SOFTWARE >> CADfix 12 >> Language should be set to either Japanese or German. On Windows 7 the location is: HKEY\_LOCAL\_MACHINE >> SOFTWARE >> Wow6432Node >> CADfix 12 >> Language.

If you wish to set the language back to English, the environment variable should be set to: **English(UK)**.

### LINUX

The language setting can also be specified by defining an environment variable called **CADFIX\_LANGUAGE**. The value of this environment variable must be set to: **Japanese** (the case is important).

If you wish to set the language back to English the environment variable should be set to: **English(UK)**. Setting the environment variable at the command line on LINUX would require:

```
setenv CADFIX_LANGUAGE English\ (UK\)
```

The Japanese language setup is controlled by a configuration file that can be found in the CADfix installation.

They are stored in `<install path>/CADfix12/tcl/language`.

The configuration file is called **Japanese.lang**. This file allows the user to change the font used and also the system encoding. The default Japanese font is “MS UI Gothic”.

## LINUX

The Japanese font and the system encoding can be specified for all LINUX platforms or for each LINUX platform. The encoding can also be over-ridden by setting an environment variable called **CADFIX\_ENCODING**.

There is a quick method to change the language and this can be achieved by a switch on the user’s desktop shortcut on Windows or “alias” on Linux. In [section 1.3](#) above we introduce the idea of a shortcut or alias for starting CADfix. When you wish to change the language add to the end of this shortcut or alias command the ‘-language’ switch. For example if your installed language was Japanese use ‘-language English(UK)’ (without the quotes) to override the use of the Japanese Dictionary.

### 1.7.

### Site Configurations

CADfix Administrators may wish to organise a central resource for various configurations to service a site rather than having distributed settings amongst individual users. A site Administrator may also wish to lock certain user preferences.

When CADfix is started it will look for configuration settings in the users HOME directory and at the place identified by the environment variable CADFIXSITECONFIG. The CADFIXSITECONFIG location would contain the file CADfix1200 (**Note:** with no leading “.”) and a directory CADfix.config (**Note:** again with no leading “.”).

Generally available or site-wide CADfix configurations would be placed into the master CADfix1200 (with no leading “.”) file and in a directory on a server that all users point to via the CADFIXSITECONFIG environment variable. This file is accessed first followed by any users local .CADfix1200 file. Also site-wide functions would be available to the whole site under the directory CADfix.config (with no leading “.”). For example, a company-wide specific quality-testing standard could be placed in the CADfix.config/quality/ directory with the file name USER\_SITE.cqs. Also the site values could be regarded as the default initial values for all first-time users that would be eventually be over-ridden by their own preferences.

Some Administrators may consider locking down certain site-wide options so that users cannot change them locally and this is also possible. To lock down all configuration options you need to add the following line to your site-wide configuration file:

```
*famgui.siteonlyoptions: all
```

If you only wish to lock down just selected options then replace “**all**” with a space-separated list of option names, e.g.:

```
*famgui.siteonlyoptions: initfiletype lastExport defaultUnits recentreOnOpen
```

Locking down options only fixes their initial value when a CADfix session is started. A user is still able to change any option interactively during a CADfix session, but these changes will not be saved in their personal .CADfix12 configuration file.

The environment variable CADFIXSITECONFIG can be used to point to a named file as opposed to a directory where the configuration file CADfix12 may be found.

Alternatively, the user may have a configuration file called USER\_SITE.config as the target of the environment variable which you place in the top level CADfix directory of, say a **flat** installation for general distribution. This is effectively the same as the CADfix1200 file but avoids the need to set the CADFIXSITECONFIG environment variable. This can be a partial config file that contains those configuration values that you want to apply to all users, and that can be set to take precedence over any local .CADfix1200 settings.

You can also have a global cwc file to control the CADfix process options that all users load at start-up. Once this file is

created it can be referenced from the `USER_SITE.config` file for loading on start-up. A combination of a `USER_SITE.config` and `cwc` file gives the ability to control the default start-up and configuration for all users.

### CADDS5 Import setup

At the end of the CADfix 12 installation process the **NuTCRACKER**<sup>1</sup> emulator will be automatically launched. Follow the instructions and select the default options. You will need to have administrator access to complete this installation.

Exit CADfix and restart to complete the installation process.

To import CADDS5 assemblies the ODB daemon process must first be started. The ODB daemon is **NOT** needed if only parts are to be imported. An MSDOS .bat script to start this has been installed in the CADfix installation area and can be found here:

```
.../CADfix 12/bin/bin32/CADDS5/start_odb_daemon.bat
```

The daemon only needs to be started once, before the first assembly is imported. If you are using a firewall then the `ODB_DAEMON` and `ODB_SERVER` processes must be unblocked.

There are a couple limitations users should be aware off:

- CADDS import only is provided no export is possible
- CADDS will only import files on the same drive it is installed
- There must be no spaces in the filename or folder path.
- When running the ODB Daemon you must keep the empty DOS window open at all times.
- A new licence feature needs to be in the key for running CADDS5 imports on Windows. It's called **CADfix\_NuTCRACKER**.
- CADDS5 assemblies must have all the component folders in the CVPATH. To extend CVPATH with a couple of folders you would use the following:

```
set CVPATH=%CVPATH%;C:/myCADDS/assembly;C:/myCADDS/assembly/subassml
```

If CVPATH is not already defined, then just drop the "%CVPATH%;" from the above line. CADfix will respect the CVPATH environment variable if it is defined before starting CADfix, and if you have models on various network drives you will need to set this in your environment. On Windows it means going into the Control panel >> System >> Advanced tab >> and Environment Variable button.

### CADDS User Notes:

1. In the event of any trouble starting CADDS5 or the ODB daemon try installing a service called "ProPortmap Service". An MSDOS .bat script to start this is available in the CADfix installation area and can be found here:

```
.../CADfix 12/bin/bin32/CADDS5/portmap/port.bat
```

2. If when attempting to use or run the `start_odb_daemon` script you have any problems, then check "ProPortmap Service" is up and running correctly. The "ProPortmap Service" may have been left by a previous installation with the wrong path and may not start. If this is the case, you will need to remove the service and re-start it as shown above. To remove the service, open a CMD (or DOS) window in the ".../CADfix 12/bin/bin32/CADDS5/portmap" folder and use the following command:

```
srutil.exe remove "ProPortmap Service"
```

3. When installing CADfix 12 or any service pack onto a machine with an existing installation of CADfix ensure that the previous NuTCRACKER installation has been removed. Later versions of NuTCRACKER will not install if a previous version exists. Unfortunately CADDS V5 import if it is built on a later version of NuTCRACKER will fail. For example, in CADfix 8.0 NuTCRACKER was version 8.x but for CADfix 12 the version was upgraded to 9.x. When installing a later

---

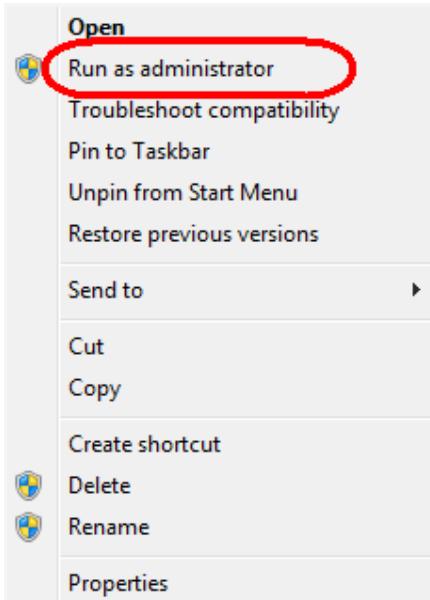
<sup>1</sup> **NuTCRACKER** is a registered trademark of MKS Inc

version of CADfix it is not possible to automatically uninstall previous installations of NuTCRACKER so this has to be done manually by the user.

## Installing service packs

For Windows users there is an extra level of security called the User Account Control (UAC). This is built-in security to reduce breaches in the Windows system. The UAC forces users that are part of the local administrators group to run like they were regular users with no administrative privileges. It may be possible to install CADfix but adding service packs could be an issue as these require administrative privileges to move and copy files around the installation directory.

To install the service pack you can start CADfix and run with administrator privileges. Go to the CADfix ./bin folder and locate the **runcadf.exe** executable. Highlight runcadf.exe and click the right mouse button to get the following window:



Select **Run as administrator** and when you are asked for permission to make changes to this computer click **Yes**.

Alternatively, to install service packs you can temporarily overcome the restriction by going to the **Control Panel >> User Account and Family Settings**. Click “Add or remove user account” and click on one of the user accounts, for example the Guest account. Under the user account click on the “Go to the main Account page” link. Under “Make changes to your account” click on the “Change security settings” link. In the “Turn on User Account Control (UAC) to make your computer more secure” click to unselect the “Use User Account Control (UAC) to help protect your computer”. Click on the **OK** button. You will be prompted to reboot your computer.

## On-line HELP

To access the CADfix on-line help documentation select **Help >> CADfix Help...** from the pull-down menu of the main CADfix window.

The CADfix on-line HELP system is built using HTML files and when first activated the program will use the Microsoft Internet Explorer® browser. If the user wishes to use a different browser this may be changed under the File menu using the Preferences option.

## Home Directory Setting

CADfix makes use of the users HOME directory and needs this environment variable to be set for it to start up correctly. Normally the users CADfix configuration file (.CADfixver, where *ver* = version of CADfix e.g. .CADfix12) is placed in the home directory. If you encounter problems you should check, and set if necessary, the home directory for the users by selecting ‘Control Panel’ - ‘System Properties’ - ‘Advanced’ - ‘Environment Variables’. When HOME is not set CADfix will use the Windows environment variables HOMEDRIVE and HOMEPATH to identify the users home directory. HOMEDRIVE and HOMEPATH cannot be changed by the user.

When using the CADfix GUI to browse folders the user may make reference to their HOME directory by use of the ‘tilda’ (~) character. For instance, under the File > Preferences > Process tab of the GUI there is a browser that can be used to locate a

default Wizard configuration file (see **Site Configurations** section below). If the users HOME directory is “c:\Documents and Settings\user” instead of using the full address reference:

c:/Documents and Settings/user/.CADfix.config/prepare/wizard.cwc

the user may substitute instead:

~/.CADfix.config/prepare/wizard.cwc

### Writing of temporary files

The location of temporary files differs between LINUX and Windows. In both cases it will move onto the next location if it finds it can't write to the previous one(s):

Windows:

- 1st: environment variable TEMP
- 2nd: environment variable HOME
- 3rd: C :\TEMP
- 4th: present working directory

So you can control the location of the current temp files by changing the 1st environment variable setting.

### Filenames and Directory path

Users may experience problems opening files with spaces or dots in the filename.

### Memory usage

The CADfix **Menu >> Preferences >> Hardware tab** has a **Database buffer** field. The amount of RAM (in Mb) available to CADfix can be set using the pull-down menu or by typing into the box. There is a minimum memory and a maximum memory requirement. The maximum size should be set to at least 500Mb. Set the minimum size to about 128Mb. This should then allow the memory buffer to grow up to 500Mb on the odd occasion that a very large model is processed, but in most cases it would stay at the lower minimum value.

If any model-processing task requires more memory than has been allocated, then CADfix will start to store data in temporary files. This has an impact on the model processing speed and that is why we recommend that the database buffer size be set to a reasonable value for your workstation. For a rough guide to operate efficiently the maximum database buffer size should be at least twice the size of any large IGES or CADfix model database being processed.

There is a Windows system limit where 32bit executables, such as CADfix, can only have a 2GB memory allocation. Therefore, allocating too much memory can cause problems with CADfix. It is recommended that you restrict the maximum memory allocation to between 256Mb and 512Mb. Memory allocations approaching 1GB may cause problem with some models.

## 1.9.

## LINUX - Platform Specific Notes

This section gives important information regarding the running of CADfix on the supported LINUX platforms.

### Home Directory reference

When using the CADfix GUI to browse folders the user may make reference to their \$HOME directory by use of the ‘tilda’ (~) character. For instance, under the File > Preferences > Process tab of the GUI there is a browser that can be used to locate a default Wizard configuration file (see **Site Configurations** section below). If the users \$HOME directory is “\disk2\production\user” instead of using the full address reference:

/disk2/production/user/.CADfix.config/prepare/wizard.cwc

the user may substitute instead:

~/.CADfix.config/prepare/wizard.cwc

## Writing of temporary files

CADfix uses an environment variable CADFIX\_TMPDIR to identify the directory for temporary files. If the environment variable is set to PWD then the working directory will be used. Otherwise the user must ensure that a directory without limiting quotas is available for temporary files. If CADfix runs out of temporary file space the program will fail to continue.

If the environment variable CADFIX\_TMPDIR is not set then the location of temporary files differs between LINUX and Windows. In both cases it will move onto the next location if it finds it can't write to the previous one(s):

LINUX:

- 1st: environment variable TMPDIR
- 2nd: /tmp
- 3rd: /var/tmp
- 4th: present working directory

So you can control the location of the current temp files by changing the 1st environment variable setting.

## Graphics Driver

Graphics problems such as a failure to automatically refresh will occur under Linux unless the following options are enabled:

Logon as Root and into the "screen" section in the X config file (usually /etc/X11/XF86Config or xorg.conf) add:

```
Option "backing_store"  
Option "save_unders"
```

## Fonts

Some Linux variations do not automatically install all the fonts required by CADfix. In this situation the GUI may start but the core CADfix executable will fail with "Unable to start CADfix" or something similar. You will need to ensure that all font packages beginning with "xorg-x11-fonts" are installed.

## VirtualGL Driver

Users may experience problems running CADfix under Linux through "thin clients". Performance problems with the GUI/graphics such as highlighting, trouble picking lines on the screen and even the graphics sometimes freezing may be experienced

"Thin Client" is a generic term given to client machines on networks that deliver applications and data via a centralised computing model with the vast majority of processing carried out by the server(s). This is also known as server-based computing. "VirtualGL" is an open source package that gives any LINUX or Linux remote display software the ability to run OpenGL applications with full 3D hardware acceleration.

Experience running CADfix under Linux locally and remotely through a "thin client" has shown that problems can be caused by the VirtualGL driver, which maybe default from some installations. Using VirtualGL the graphics performance when rotating the model is improved slightly but you could experience trouble as mentioned above with screen picking and highlighting.

Under these circumstances the recommendation is that users run CADfix remotely using an OpenGL graphics driver.

## GLX Blocked on Remote Display on Modern X Servers

Additional security has been added to modern Linux OS (e.g. Ubuntu16.04LTS and later) that must be bypassed to make CADfix work if it's being displayed from a remote machine (either with \$DISPLAY set, or ssh -X or similar.)

One has had to add "-listen tcp" to the X server args when it starts up. Previously one had to remove the OSes configuration of starting with -nolisten tcp. However, that now only works for 2D windows. Anything that tries to allocate a 3D/GLX context may fail. The problem can be overcome by putting the following into the end of your /etc/X11/xorg.conf:

```
# Added for remote displays  
Section "ServerFlags"  
    Option "AllowIndirectGLX" "on"  
    Option "IndirectGLX" "on"  
EndSection
```

## CADfix close down

There is a known problem with CADfix on LINUX when a session is exited or closed down. Sometimes when CADfix is exited the process hangs and has to be killed manually from the command line. The problem is even more apparent when you suspend a CADfix session and then bring it back to the foreground. We recommend that you background the initial startup command. That is start CADfix as follows:

```
% cadfix &
```

## Invalid or inconsistent licence key error

The inconsistent license key error occurs when either of these situations is true: (a) `/etc/hosts` and the local DNS server do not have an entry for your hostname, or (b) `/etc/hosts` reports the hostname as having IP address 127.0.0.1. The error occurs when trying to run CADfix on installations of Red Hat Linux 10.0 and higher. To fix this problem, you will need to modify the `/etc/hosts` file. The license server computer may also have this problem, and it should also be fixed.

First, su to root (you will need the root password). Run `hostname` to obtain the hostname of your workstation. If "localhost" is reported, you will need to choose another name, and update the name by typing "`hostname my-hostname`", where `my-hostname` is the name you've chosen.

You also need to find out the complete DNS name of your computer; for example, if the hostname is `rh71`, the complete DNS name could be `rh71.lan.scalable-networks.com`. If you don't know what DNS domain your host resides on, make one up, or just use `".localdomain"`.

Next, run `/sbin/ifconfig -a` to obtain the IP address of your workstation.

Open the `/etc/hosts` file. Update this file so that it looks like the following:

```
127.0.0.1      localhost.localdomain localhost
ip-address      my-full-DNS-name my-hostname
```

Replace `ip-address`, `my-full-DNS-name`, and `my-hostname`; with the IP address, full DNS name, and hostname for your machine, respectively.

It is very important that your hostname does not have 127.0.0.1 on the same line only `localhost.localdomain` and `localhost` should be on the same line as 127.0.0.1.

Finally, the inconsistent license key error also occurs when your organization has been licensed for more than three subnets, and your subnet is not one of the first three subnets listed in the server license file. This is a bug in the **FLEXNET™** licensing software.

## Running FLEXNET 'lmutil' gives "command not found"

To allow for greater compatibility between Linux operating systems you need to have the LSB (Linux Standard Base) packages installed on the client operating system. By default, Ubuntu (and probably others) install only:

```
lsb-base, and
lsb-release
```

For the **FLEXNET™** licensing binaries to work you also need:

```
lsb-core
```

On Ubuntu, for instance, you can check which LSB packages are currently installed with the following command:

```
dpkg --get-selections | grep lsb
```

## Inter-Process Communication (IPC) Limits

There is an inter-process communication value on Linux machines which if not set correctly can result in resource allocation errors. The present configuration can be displayed as part of the "`ipcs -l`" command:

----- Messages Limits -----

max queues system wide = <relative limit for Linux system>

Changing the setting maybe distribution dependent but it might be sufficient to add the line:

kernel.msgmni = 15851

to the file /etc/sysctl.conf and then run 'sysctl -p' to make the setting active. Adding the setting to the file also causes it to be restored at boot.

1. Model and result databases are upwardly compatible, that is, they can be read into more recent versions of the software than they were created with.
2. Session log files and command files are generally upwards compatible, although small changes in command syntax are necessary from time to time and users will be advised accordingly.
3. Any existing interface program developed by the user using CADfix user routines should continue to work with CADfix once it has been re-linked using the supplied object library. Customers linking their own interface will need to contact Support at ITI - International TechneGroup for further advice.

Should you require a licence file or experience any problems installing or running the software supplied, then please do not hesitate to contact us on the standard ITI - International TechneGroup Limited number.

- **Americas**  
[works\\_supp@iti-global.com](mailto:works_supp@iti-global.com)

Phone: 1-888-783-9199  
Fax: 1-513-576-3994

- **All other regions**  
[eusupport@iti-global.com](mailto:eusupport@iti-global.com)

Phone: +44 (0) 1954 234300  
Fax: +44 (0) 1954 234349

**Reseller** customers should contact their local reseller for support.

Further information on CADfix including; FAQ's, supported platforms, service packs and an on-line copy of the Installation Guide can be found at:

<http://www.iti-global.com/support/cadfix/>

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The 'CADfix Licence Terms and Conditions', a copy of which is included with the delivery and is accessible under the CADfix Help menu, bind use of the CADfix software.

data

---

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```
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*
*****
```

**A.1. Windows 64bit core 2 duo or newer**

System	Configuration
Hard Disk Drive	Min. 8GB recommended 250GB
System memory	4GB or higher
Swap space	2GB or higher
Graphics Card	3D with support for OpenGL

Software	Required
Windows 7, 8 and 10	
TCP/IP	Installed with valid IP address
OpenGL	

Optional Development Software	Required
FORTRAN	intel compiler v16.0.2
C	visual studio 2013 Update 5
C++	visual studio 2013 Update 5

Licence Locking Information Required	Extracting Information
Ethernet Address, e.g. 00-60-97-8E-F2-71 Converts to 0060978EF271	From the DOS prompt use: ipconfig /all Send the Ethernet adapters 'Physical Address'

## A.2. LINUX RHEL6 64bit

System	Configuration	Extracting Information
Hard Disk Drive	8GB recommended 250GB	df
System memory	4GB or higher	
Swap File Size	2GB or higher	
Graphics	3D Graphics card with OpenGL	

Software	Required	Extracting Information
Operating system	Red Hat RHEL6	
OpenGL		

Optional Development Software	Required	Extracting Information
FORTRAN	intel 16.0.2	ifort -V
C and C++	gcc 4.4.7	gcc --version

Licence Locking Information Required	Extracting Information
Workstation Ethernet address e.g. 0002b340fc75 Remove the colons from the HWaddr	/sbin/ifconfig eth0
Network name for floating licence	uname -n

CADfix 12 Product	Windows 7, 8, 10 64bit	LINUX RHEL6 64bit
Base ( <b>IGES</b> imp version: any, exp version: 5.3)	YES	YES
<b>3D Studio Max OBJ</b> imp/exp of facets	YES	YES
<b>ABAQUS</b> exp (.aba mesh data)	YES	YES
<b>ACIS</b> imp/exp up to v28 (2018)	YES	YES
<b>AGPS</b> imp/exp (ASCII .dat file)	YES	YES
<b>ANSYS</b> imp <sup>1</sup> /exp versions: 5.3 to 6.1	YES	YES
<b>CADD\$</b> imp version: 5.0 R16.0	YES <sup>2</sup>	N/A
<b>CATIA V4</b> import versions: 4.1.x/4.2.x	YES	YES
<b>CATIA V4</b> export version: 4.1.9	YES	YES <sup>3</sup>
<b>CATIA V5</b> imp/exp version: R8 to 5-6R2018	YES	N/A
<b>CENTAUR</b> imp/exp (.dat geometry file)	YES	YES
<b>CREO<sup>4</sup></b> imp/exp WF3-5	YES	YES <sup>5</sup> import only
<b>DXF/DWG</b> imp/exp AutoCAD <sup>6</sup> versions: up to 2.5 to 2018	YES	YES
<b>FBX</b> export	YES	YES
<b>Inventor</b> import versions: v11 to 2018	YES	YES
<b>JTOpen</b> imp/exp toolkit v10.0	YES	YES
<b>NASTRAN</b> imp/exp (.nas mesh data)	YES	YES
<b>NX</b> import versions: NX 4 to 12	YES	YES
<b>OpenCascade</b> exp	YES	N/A
<b>Parasolid</b> imp/exp versions: 13 to 30	YES	YES
<b>PLM XML</b> imp/exp v7.0.4	YES	YES
<b>SC03</b> imp/exp (ASCII .pm file)	YES	YES
<b>Solar</b> imp/exp (.dat geometry file)	YES	YES
<b>SolidWorks</b> import versions: 98 to 2018	YES	N/A
<b>STEP</b> imp/exp version: AP203, AP214 & AP242	YES	YES
<b>STL</b> imp/exp Binary, ASCII	YES	YES
<b>Tecnomatix MPL</b> export	YES	YES
<b>VDAFS</b> import version: any exp version: 2.0	YES	YES
<b>XGL/ZGL</b> export	YES	YES

<sup>1</sup> ANSYS import reads the ANSYS Neutral File (.anf) format

<sup>2</sup> CADD\$ import on Windows is only 32bit and on the drive installed

<sup>3</sup> Will only export to a local disk – this is a known Spatial bug

<sup>4</sup> Includes CREO Imp versions: WF 3 to 5. Exp version: Wildfire + neutral file + native (parts only and CREO 3+ only)

<sup>5</sup> Cannot import Granite (.g) files on Linux

<sup>6</sup> Some MDT objects not supported