

# Flexman 4.1

## Installation and Configuration Guide

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## Flexman 4.1 Installation and Configuration Guide

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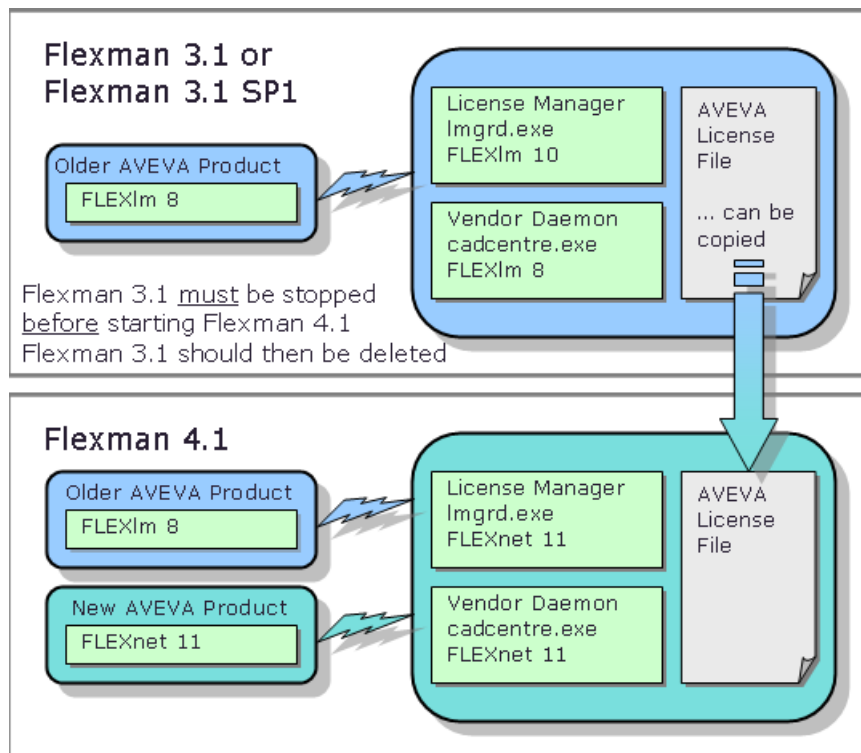
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## 1 Introduction

### 1.1 Flexman 4.1

Flexman is the AVEVA wrapping around the FLEXnet licensing system, previously called FLEXlm. AVEVA product releases from the end of 2008 require Flexman 4 so any existing Flexman 3 License Service must be upgraded. After upgrading to Flexman 4.1, AVEVA software that has been running with a Flexman 3.1 license service will still run:



### 1.2 Upgrading from Flexman 3.1 or Flexman 3.1 SP1

Flexman 4.1 installs in a different folder from Flexman 3.1:

- Flexman 3.1 by default installed in: **C:\Program Files\cadcentre\Flexman 3.1**
- Flexman 4.1 installs into the folder: **C:\aveva\Flexman4.1**

The steps are described in detail in [License Service Installation & Administration](#), but in brief:

- Install Flexman 4.1 while Flexman 3.1 is still running
- Copy the current license file into the Flexman 4.1 folder
- Create a new License Service with a new name
- Stop the Flexman 3.1 License Service
- Start the Flexman 4.1 License service
- Remove the Flexman 3.1 License Service and then un-install Flexman 3.1

## 1.3 Installing a Network License Service

Most companies set up a system of network or floating licenses that are shared by all users on the same network. A single license file then defines the available entitlement for all users running AVEVA products concurrently on that network.

A machine running Windows Server 2003 is most commonly used for the centralised License Service but any PC on the network running Windows XP or Vista can be used. The machine with the license file is known as the **License Server** and runs the **License Service**. The license file is anchored to a hardware ID on the License Server so that it will only work on that machine. AVEVA needs the details of the hardware ID to be sent before a license file can be issued.

Installation of Flexman involves two stages:

1. The Customer's License Administrator sets-up the FLEXnet License Service with the License File on the designated License Server machine. (Laptop users must do this for themselves. Refer to [Installing a License Service on Laptop](#)).
2. The machines on which AVEVA products are running must then be configured so that they can find the License Service to request a license (see [Configuring a PC to Run AVEVA Products](#)).

**Note:** The version of the FLEXnet licensing toolkit we are using is not supported on Windows Server 2008

## 1.4 Special Circumstances

Installation can be more complex in certain situations and the following are covered in [Special Situations](#):

- Installing a License Service on a laptop.
- Windows VISTA.
- Machines that are locked-down so that users have restricted access rights.
- Another product such as AutoCAD that also uses FLEXnet is already in use.
- Running AVEVA products via Citrix, Remote Desktop or Terminal Services
- Setting access to a License Service from within a DOS batch file.

## 1.5 Further Information and Guidance

Further information and guidance about licensing is available from the AVEVA website, [www.aveva.com](http://www.aveva.com).

Click the **Product Support** tab and select the **Licensing** section for information on:

- Where to request a new or updated license file
- How to get help with setting up a license service

- News of Flexman updates and new version downloads
- Dongle Driver download
- Advice about recently encountered licensing issues and workarounds.





## 2 License Service Installation & Administration

### 2.1 Flexman 4.1 Installer

The Flexman 4.1 installer is included on all AVEVA major product media and can also be downloaded from the **Licensing** section on the **Product Support** tab at the AVEVA website:

[www.aveva.com](http://www.aveva.com)

When the Flexman 4.1 installer is run three options are offered:

| Install Option | Components Installed                             | Description  |
|----------------|--|--|
| Server Install | lmgrd.exe 11.5                                   | The License Manager Daemon from Acresso Software                       |
|                | lmttools 11.5                                    | License service set-up utility from Acresso Software                   |
|                | cadcentre.exe 4.1                                | The Vendor Daemon from AVEVA Solutions                                 |
|                | FlexmanConfig 4.1                                | AVEVA's utility for configuring a PC and diagnosing Licensing problems |
| Client Install | FlexmanConfig 4.1                                | AVEVA's utility for configuring a PC and diagnosing Licensing problems |
| Documentation  | Flexman 4.1 Installation and Configuration Guide | This document from AVEVA   |
|                | License Administrators Guide 11.5                | FLEXnet documentation from Acresso Software                            |

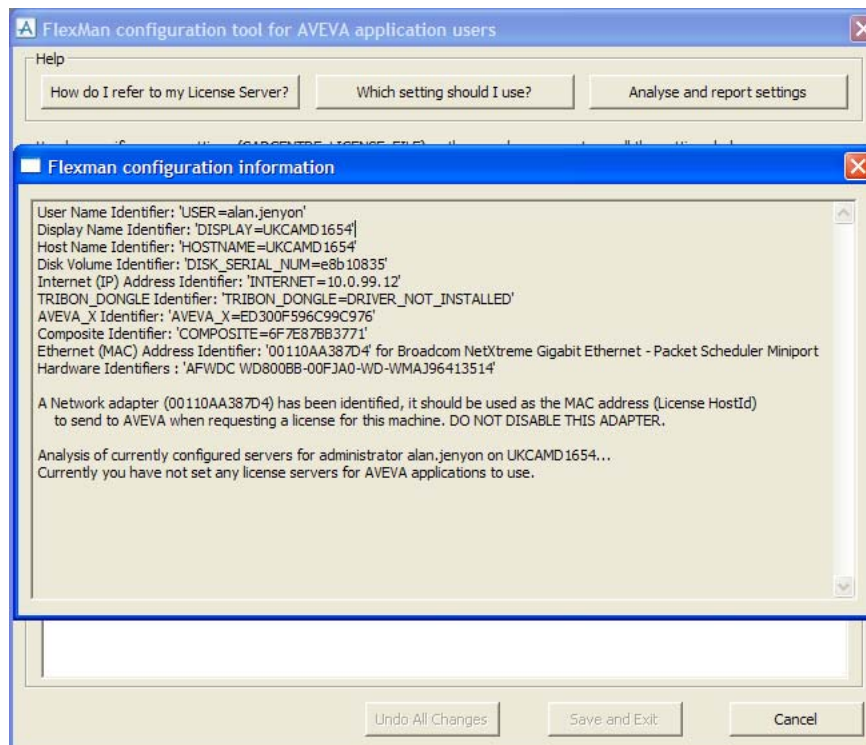
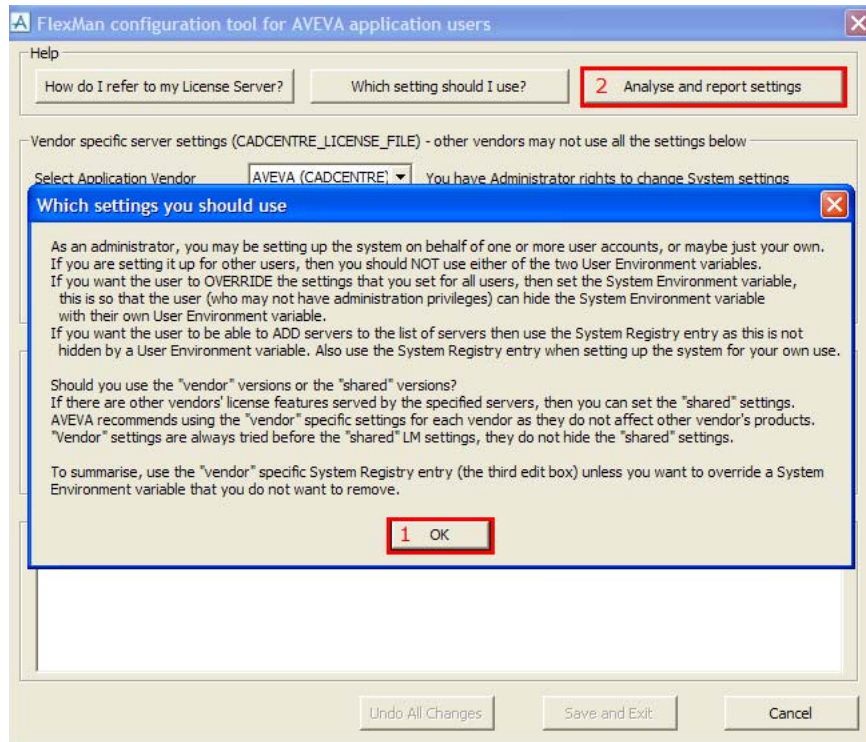
The user needs **Server** install to set up a license service - this will be a server machine on the network, a laptop or a free-standing desktop computer.

The **Client** install provides the **FlexmanConfig** tool for configuring the connection to the License Server and is needed wherever an AVEVA product is being installed.

### 2.2 How to Obtain a License from AVEVA

**Note:** If Flexman 3.1 or Flexman 3.1 SP1 is already installed, simply copy the existing license file from the Flexman 3.1 folder into the Flexman 4.1 folder.

The License Administrator is recommended to use the **FlexmanConfig** utility and click on the **Analyse and report settings** button:



Copy the highlighted text and send it in an e-mail with your request for a license.

Where there are two or more Ethernet adaptors on a PC, decide which Ethernet address should be used for the license file and inform AVEVA. This must be for a network adaptor that will never be disabled.

**Note:** The utility `lmttools` is used to obtain the required HostID information but does not handle the situation of two or more Ethernet addresses, and is not recommended. Another possibility is to use the DOS command **IPCONFIG -ALL**

Given the hostname and Ethernet address, the AVEVA License Administrator will send a license file specific to this machine.

- AVEVA products can not be used until a license service is started using this license file.
- The license file will not work on any other machine.

## 2.3 Installing the License File

AVEVA recommends the following approach for installing the license file:

- Copy the license into the Flexman 4.1 folder.
- Edit the Port Numbers on the SERVER and VENDOR lines if required. (Refer to [Editing the License File Header](#) and [Firewalls and Port Numbers](#)).
- Rename the new licence file to `license.lic`. Using this name makes it easier to update the license file in the future.

## 2.4 Editing the License File Header

To avoid issues with firewalls, AVEVA recommends the specifying of a Port Number for the Vendor Daemon as well as for the License Server. (Refer to [Firewalls and Port Numbers](#)).

Edit the license file to add a Port Number to the VENDOR line in the license file, as shown below. The default Port Number on the SERVER line can also be changed if necessary to comply with local policy on the use of Ports on the server machine.

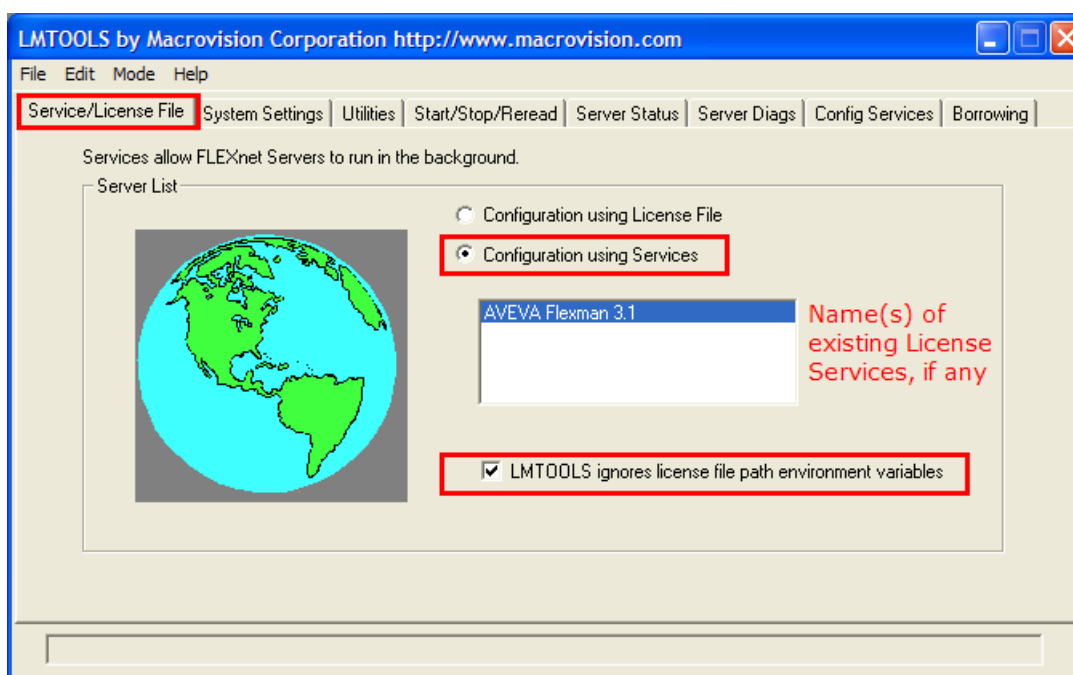
```
# BPM LG July 2007
# Customer Code ..... [UKCAMD1654]
# Customer Location Number .... [1]
# Issued On ..... [18-Aug-2008] [14:41]
#
# All lines beginning with a # character are comments and can be removed.
#
# This is a COMPLETE license file for this location
# Please replace the previous license.lic with this file
# and after renaming this file license.lic
#
#Server(s)
SERVER UKCAMD1654 00110aa387d4 744 — Port Number can be changed
#VENDOR Name
VENDOR cadcentre PORT=7153 ——— Port Number can be added
```

**Note:** **NOTEPAD** must be used, for the edit Using Word or Wordpad for the edit can introduce additional but unseen changes in the license file.

- Other changes to the license file are not normally required and the License Service will reject any INCREMENT lines that have been changed.
- Check when finished that there is only one license file present in the folder and that it is called **license.lic** - especially if the file has been edited in-situ.
- Move any license file not being used into a sub-folder called Old License Files.

## 2.5 Creating a License Service as a Windows Service

Invoke the **lmtools.exe** utility:



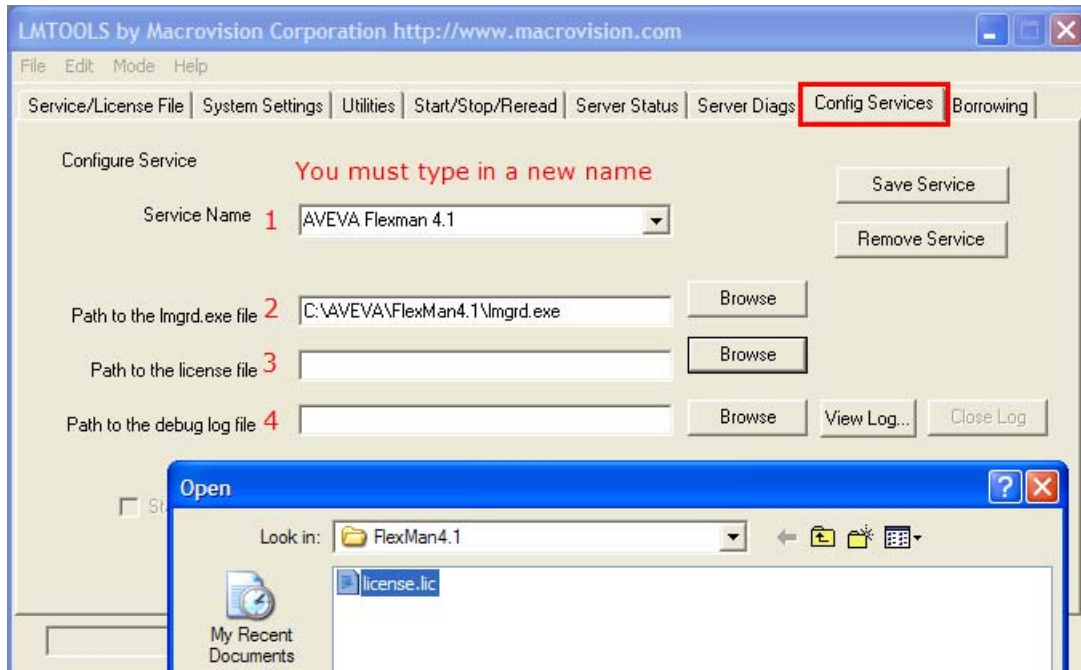
- On the **Service/License File** tab make sure that **Configuration using Services** option is selected.
- Always tick **LMTOOLS ignores license file path environment variables** when LMTOOLS is being used to configure a License Service.

**Note:** These screenshots are based on LMTOOLS 11.5 running on Windows XP SP2. Other versions may have a different appearance.

**Important:** Take Care When Upgrading From Flexman 3.1.

In the next step type in a new name so that a new License Service is created. Failure to do this will cause the existing License Service to be redefined. This will work but means that you will be unable to revert quickly back to the Flexman 3.1 License Service if you need to resolve any issues with the new Service.

Select the **Config Services** tab: There are 4 fields and 2 tick boxes to complete:



### Service Name [1]

Type in a new name for a License Service that will be meaningful among the list of other Windows Services later on, such as AVEVA Flexman 4.1 .

**Note:** Take special care at this point if a License Service, such as Flexman 3.1, already exists. You **MUST** type in a new name at this point to avoid making changes to an existing License Service.

### Path to the Imgrd.exe file [2]

Select the **Browse** button and navigate to the Flexman 4.1 folder. Select the **Imgrd.exe** file and click **Open** to confirm.

**Note:** It is possible to share the **Imgrd.exe** used for a product from another supplier. However, AVEVA recommends using a separate **Imgrd.exe** for each Vendor Daemon to avoid version incompatibilities.

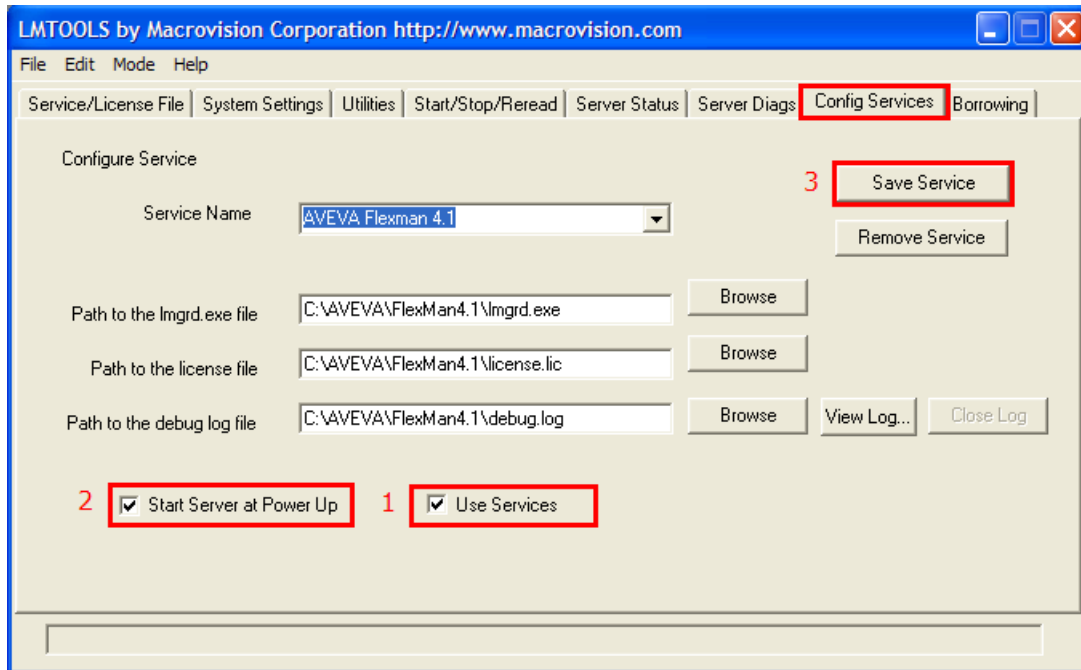
### Path to license file [3]

Repeat for the path to the license file using the **Browse** button.

### Path to the debug log file [4]

Select the **Browse** button and in the pop-up dialog box make sure you are in the Flexman 4.1 folder. Type **debug.log** in the **Filename** field and click **Open** to confirm.

**Note:** The **debug.log** file does not need to exist yet - the License Service will automatically create a log file with the name previously given when the License Service is started.

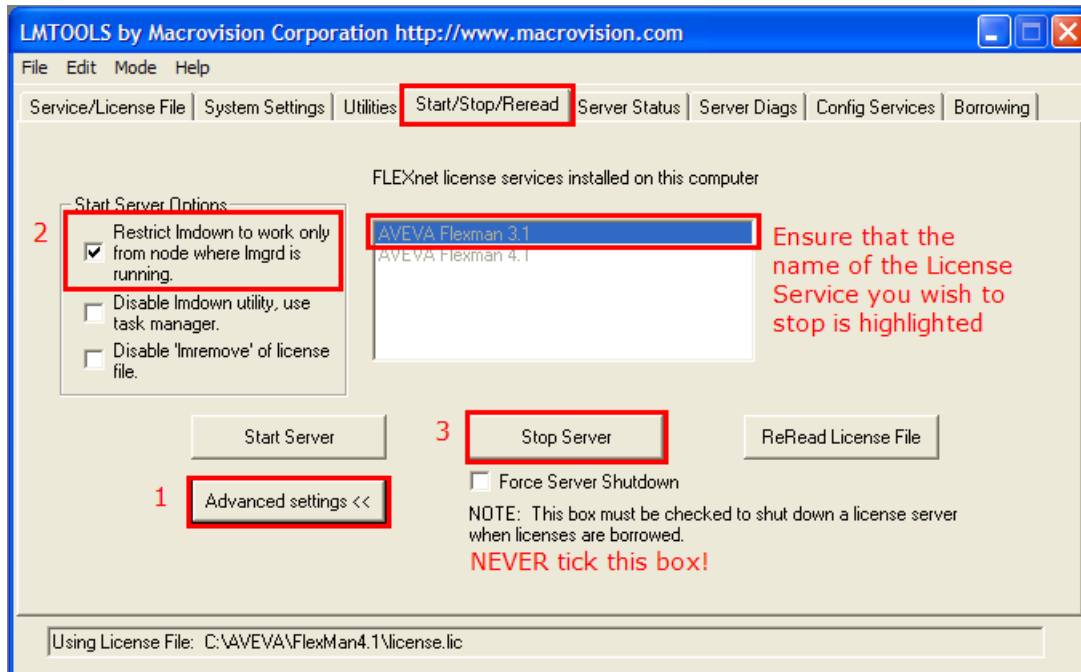


Tick the **Use Services** box [1] and then **Start Server at Power Up** box [2]. Click the **Save Service** button [3] and confirm **Yes** when prompted

## 2.6 Stopping an Existing Flexman 3.1 License Service

This section explains what to do next if upgrading an existing Flexman 3.1 License Server. Skip this section if installing Flexman for the first time.

Before leaving the **Config Services** tab, select the name of the License Service that is currently running and that is now to be stopped.



Select the **Start/Stop/Reread** tab.

Click the **Advanced Settings** button [1].

Tick **Restrict Imdown to work only from node where Imgrd is running** [2].

This makes sure that you cannot inadvertently shut-down another license service on the network.

**Note:** If logged into a different machine and need to shut down the license service, leave this box un-ticked.

Click the **Stop Server** button [3] to stop license service immediately.

**Note:** **NEVER** tick **Force Server Shutdown** - it can result in other License Services on the network being shut down unintentionally. AVEVA products do not currently support 'Borrowed' licenses so there will never be any need to use this option.

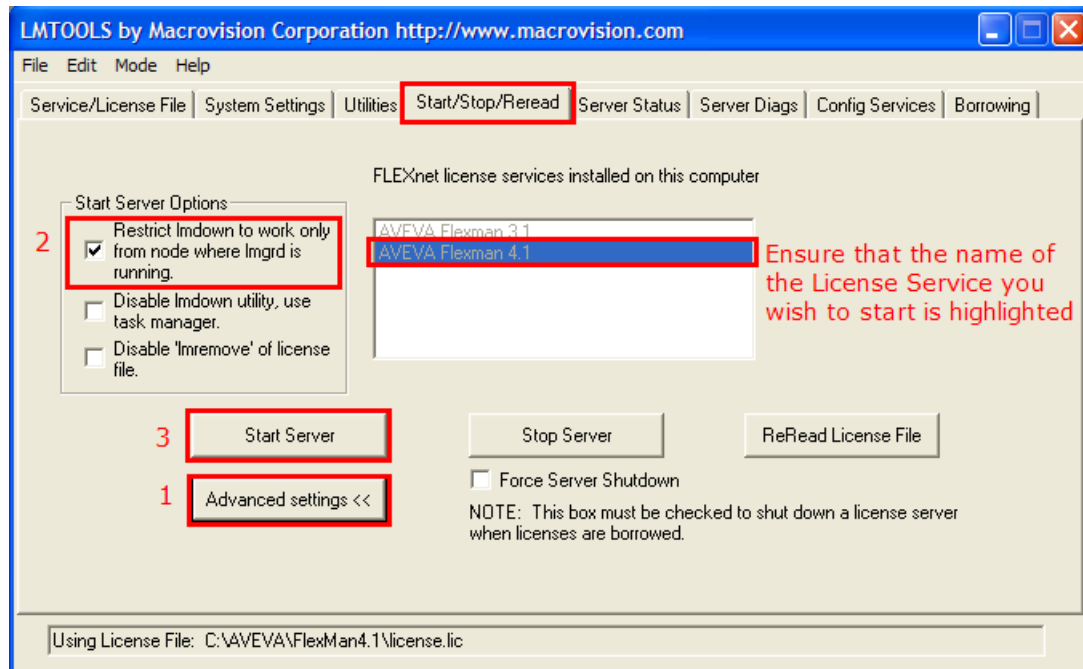
Do not rush to start the new License Service - allow sufficient time for the service that has just stopped to release the ports it was using.

If the existing License Service was modified, rather than naming a new License Service, apply the changes, stop and then start the existing License Service.



## 2.7 Starting the Flexman 4.1 License Service

Check the correct service name is displayed and select **Start/Stop/Reread**.



Click the **Advanced Settings** button [1].

Tick **Restrict lmdown to work only from node where lmgrd is running** [2]. This makes sure that the license service cannot be shut-down inadvertently from another machine on the network with lmttools or the command-line utility lmdown.

Click the **Start Server** button [3]. The license manager should now be active.

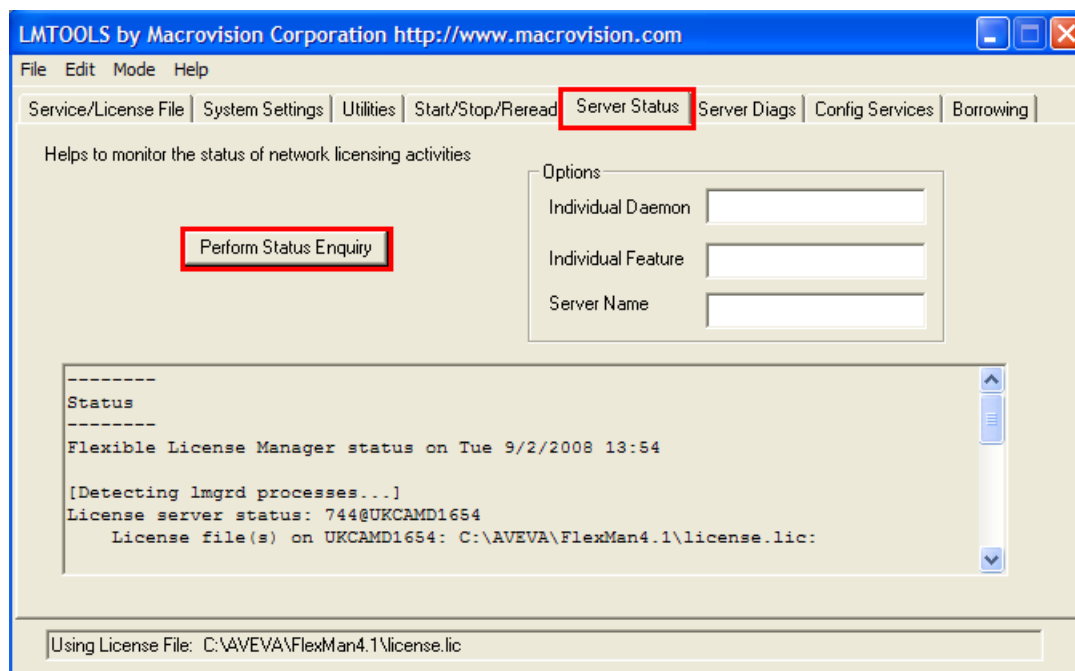
**Note: NEVER tick Force Server Shutdown** - it can result in other License Services on the network being shut down unintentionally. AVEVA products do not currently support 'Borrowed' licenses so there will never be any need to use this option.



## 2.8 How to Check the License Service is Running

### Using LMTOOLS:

Select the **Server Status** tab and click on **Perform Status Enquiry**.



This shows what license features are now available from the License Server, by default for all License Servers running on the network, the list can be narrowed by specifying an individual server.

**Note:** Before re-running **Perform Status Enquiry** click on **Edit>Clear Window** to empty the window of any previous enquiry results.

### Using the Task Manager

Another way of confirming that the License Service is running is to use the Windows **Task Manager**. Select the **Processes** tab and look to see that there is one **cadcentre.exe** process and at least one **lmgrd.exe** process running. With some versions of FLEXnet, or if running a product from another vendor that is also licensed with FLEXnet, it is possible to see two or more **lmgrd** processes running, but this is normal.

**Note:** Tick **Show Processes from all users** in the Task Manager, to display correctly.

## 2.9 Removing the Flexman 3.1 License Service

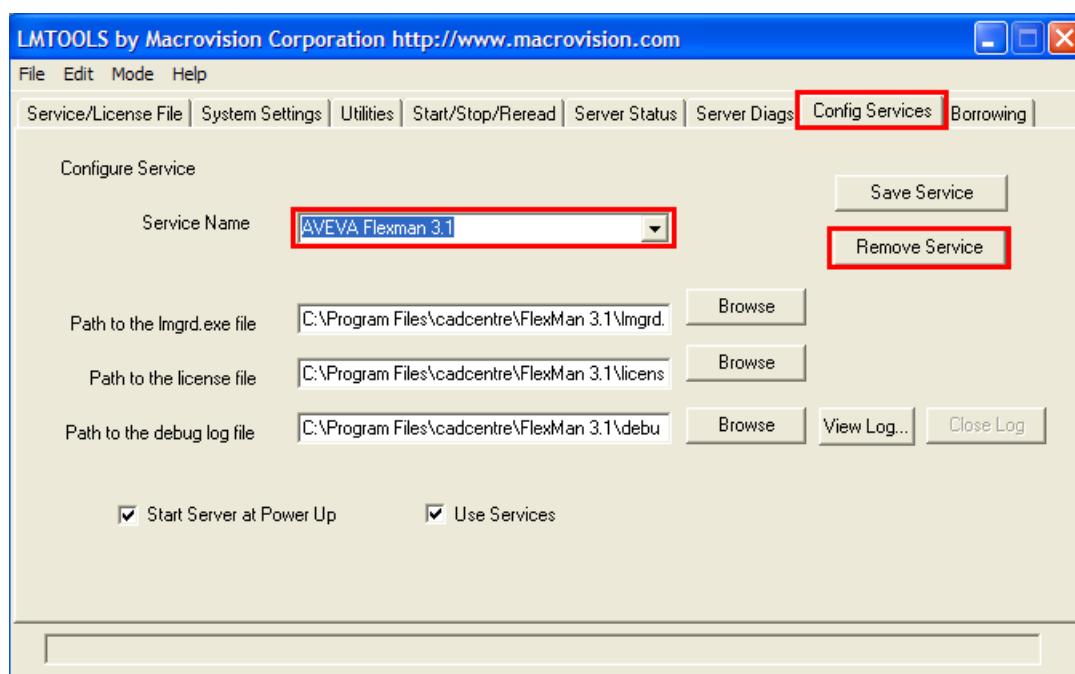
**Note:** If installing Flexman for the first time skip this section. However, if upgrading from Flexman 3.1 this step is important.

**Note:** If the existing License Service has been redefined rather than creating a License service with a new name, then do not perform this step.

When the Flexman 4.1 License Service is running correctly, you should remove the Flexman 3.1 Windows Service to prevent the computer from attempting to start both services at a reboot.

**Note:** If the user prefers not to uninstall the Flexman 3.1 just yet, the user must disable the Windows service using **Control Panel > Administrative Tools > Services**.

Use the LMTOOLS **ConfigServices** tab:



Make sure that the name of the Flexman 3.1 License Service is selected.

- Click on **Remove Service**.
- Un-install the Flexman 3.1 License Service using **Control Panel > Add/Remove Programs**.
- When Flexman 3.1 is uninstalled, delete this folder manually:  
**C:\Program Files\cadcentre\Flexman 3.1**.

## 3 Updating a License File

### Replacement License File

A license file be modified or renewed when requested, AVEVA will issue a new license file containing the new entitlement together with any previous entitlement that has not yet expired. The new license file is a complete replacement for the previous license.

**Note:** Nothing is achieved by cutting-and-pasting lines from an older license file.

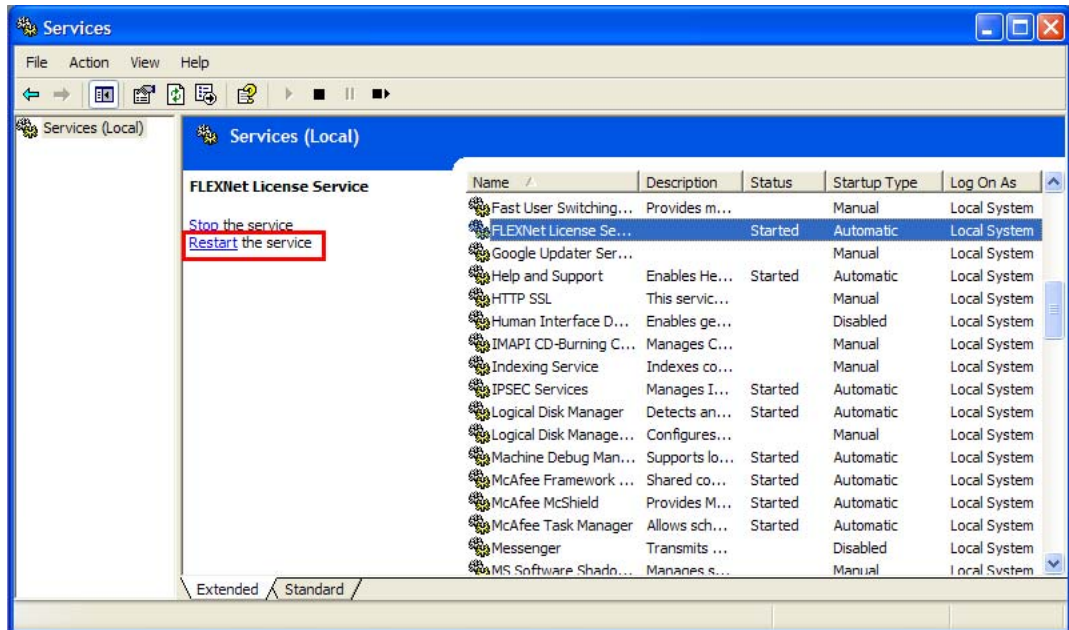
### Installing a Replacement License File in a Live Server

AVEVA suggests the following approach:

- If it does not already exist, create a sub-folder named Old License Files, and move the current license file down into it.
- Copy the new license into the Flexman 4.1 folder
- Rename the new licence file so that it has the same name as the old license file it is replacing (e.g. license.lic).
- Edit the license file header, if necessary, so that the Port Numbers match those in the previous license file; there is no need to make any other changes to the license file.
- Check that there is only one license file present in the folder - especially if a license file has been edited and saved with a different name in-situ.

### Restarting the License Service

Go to **Control Panel > Administrative Tools > Services**.

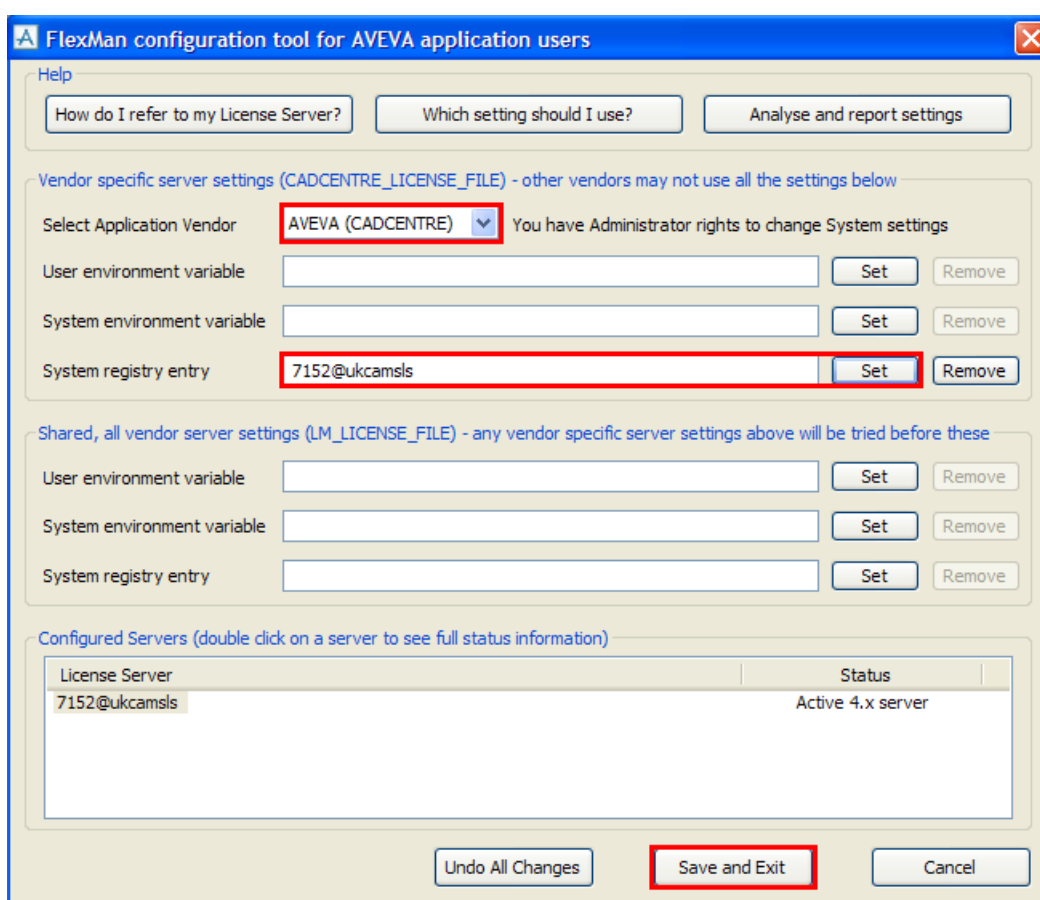


- Select the name of the Windows Service corresponding to your License Service.
- Click on **Restart the Service**
- Check the state of the license service using the Imtools utility or by inspecting the **debug.log** file.

**Note:** This is the preferred approach to using Imtools, as it is quicker and should avoid interrupting programs running during the update process. In particular be advised against using the Imtools ReREAD facility, which only partially updates the license service.

## 4 Configuring a PC to Run AVEVA Products

### 4.1 FlexmanConfig Tool



FlexMan configuration tool for AVEVA application users

Help

How do I refer to my License Server? Which setting should I use? Analyse and report settings

Vendor specific server settings (CADCENTRE\_LICENSE\_FILE) - other vendors may not use all the settings below

Select Application Vendor: AVEVA (CADCENTRE) You have Administrator rights to change System settings

User environment variable: [ ] Set Remove

System environment variable: [ ] Set Remove

System registry entry: 7152@ukcamsls Set Remove

Shared, all vendor server settings (LM\_LICENSE\_FILE) - any vendor specific server settings above will be tried before these

User environment variable: [ ] Set Remove

System environment variable: [ ] Set Remove

System registry entry: [ ] Set Remove

Configured Servers (double click on a server to see full status information)

| License Server | Status            |
|----------------|-------------------|
| 7152@ukcamsls  | Active 4.x server |

Undo All Changes Save and Exit Cancel

AVEVA products need to know where to find an active License Service running a license file from AVEVA. FLEXnet tries to be helpful by searching through all the locations it knows about. Unfortunately, there are rather too many possibilities and as a result the behaviour of FLEXnet can seem unpredictable.

AVEVA recommends the use of our configuration tool **FlexmanConfig** to get a full picture of the various settings involved and for making any required changes.

The simplest and most reliable approach is to set the vendor-specific Registry Entry, such as CADCENTRE\_LICENSE\_FILE, and remove all other settings, as shown here:

**Note:** Take care not to delete settings belonging to other vendors' software products also licensed with FLEXnet that use the LM\_LICENSE\_FILE setting.

Click **Set** for each change made and the new settings will only take effect after **Save and Exit** have been clicked.

AVEVA recommends using the **Port@Host** format to avoid problems with firewalls.

## 4.2 How an AVEVA Product Searches for a License

**Note:** The user can skip this section and use the **FlexmanConfig** tool by following the instructions in [FlexmanConfig Tool](#) without having to understand this level of detail.

An AVEVA product that uses the **cadcentre** Vendor Daemon for its licensing will look for an active License Service by searching these settings in this sequence:

- 1 Environment Variable:  
**CADCENTRE\_LICENSE\_FILE**      A USER Environment Variable setting overrides a SYSTEM Environment Variable setting
- 2 Registry Entry:  
**CADCENTRE\_LICENSE\_FILE**
- 3 Environment Variable:  
**LM\_LICENSE\_FILE**      A USER Environment Variable setting overrides a SYSTEM Environment Variable setting
- 4 Registry Entry:  
**LM\_LICENSE\_FILE**

A blank USER Environment Variable setting has the effect of disabling a SYSTEM setting of the same name.

Any one of these settings can be a list of three license servers separated by commas -This is how a **Three Redundant Server** configuration is defined (see [License Server List](#)).

Usually, any one of these settings can be a list of license servers separated by semi-colons. This is how a **License Server List** is defined. (See [Running the License Service in a Virtual Machine](#)).

AVEVA Products built to run with Flexman 3.1 (effectively all product releases prior to the end of 2008) have the following limitations that have since been resolved:

- **Three Redundant Server** provides resilience for only one server failure (see [License Server List](#)).
- A **License Server List** will provide resilience if the first server in the list fails completely. However, if the first server is active but all the licenses in use, any licenses available on other servers in the list will be ignored.
- Once an AVEVA product has successfully obtained a license it updates the Registry Entry CADCENTRE\_LICENSE\_FILE.
- If an AVEVA product can not find an active License Server it will display a pop-up dialog box requesting the location of a License Service. If successful, this would result in setting the Registry Entry CADCENTRE\_LICENSE\_FILE.
- If you set the Environment Variable LM\_LICENSE\_FILE then run an AVEVA product it will update Registry Entry CADCENTRE\_LICENSE\_FILE. Any subsequent changes to that Environment Variable would then be ignored because of the search order described above. This is why AVEVA recommends that you use the Registry Entry: CADCENTRE\_LICENSE\_FILE.

## 5 Resilience of the License Service

Servers are in general very reliable these days, but a hardware failure of the machine running the License Service can be very disruptive to your business. A contingency plan is advisable and some of the options are described in this section:

- Anchor the license file to a USB dongle that can be moved between servers
- Use a three-redundant server configuration for the License service
- Use a License Server List
- Use a virtual server, though AVEVA cannot endorse this approach.

### 5.1 Anchor the License File to a USB Dongle

AVEVA License files are normally anchored to the hardware ID of the machine on which the License Service is installed: i.e. the Ethernet address of a network card resident in the machine.

However, ask your AVEVA Account Manager for a USB Dongle and a License File that is 'anchored' to the ID of the Dongle. If the server machine should fail, both the Dongle and the current License File can be easily moved to another server and use them to start up new a License service.

Download and install a Dongle Driver from the AVEVA Support site. It is a good idea to pre-install a License Service and a Dongle Driver on the spare server, together with a copy of the latest License File, to save time in the event of a hardware failure.

### 5.2 Setting up a 3 Redundant Server Configuration

FLEXnet supports a special configuration of three separate license server machines. The three machines establish a quorum with one machine at time acting as the master that serves the licenses. If the master (primary) machine fails, the secondary machine takes over. The third machine never becomes the license server but is required to help maintain the quorum should one of the other machines fail.

The following points must be noted before setting up such a configuration:

- The three machines must have excellent communications as they need to communicate with each other frequently. In practice this means they must all be on the same LAN or a fast virtual LAN, but cannot be distributed across the world on a wide-area network.
- To achieve a meaningful level of resilience the three servers and the networking hardware must all be on an uninterruptible power supply.
- A special license file must be ordered that includes all three hardware IDs on three SERVER lines in the license file. The customer must specify the hardware ID's in the required sequence of Primary, Secondary, Tertiary.

- A copy of the same license file must be installed on each of the three machines.
- The license service is started on each machine in the usual way.
- Do not use three virtual machines on the same physical machine for a three redundant server configuration - the physical machine remains as a single point of failure.
- A machine on which an AVEVA product is running must be configured so that it is aware of the locations of all three License Servers. When using FlexmanConfig tool, the location of the License Server should be set to a list of server locations separated by commas.

**Note:** There is a bug in the version of FLEXlm used in AVEVA products released before the end of 2008 and that used Flexman 3.1. This bug limited the resilience of a three-server configuration to surviving the first hardware failure: resilience was not re-established without restarting all three of the License Services.

The solution for this problem is to set the location of the license services to a list of license files separated by **semi-colons**, using the full pathname of the license files. This requires mapped network drive letters. This is the only situation in which we recommend the use of a license file path rather than the Port@Host format.

## 5.3 License Server List

It is possible to set the location of the License Service to a list of License Server locations separated by **semi-colons**. If the first server in the list has failed then the next working License Service in the list will be used. In this arrangement the customer's entitlement must be split across the License Files on each License Server. (This is in contrast with a Three Redundant Server configuration described above in which each server has an identical copy of the same license file).

## 5.4 Running the License Service in a Virtual Machine

Virtual servers can be an attractive option for IT departments as a strategy for improving the resilience of their servers. However, Acresto do not support the use of virtual machines with the version of FLEXnet we are using, so AVEVA is unable to endorse this approach.



## 6 Special Situations

### 6.1 Installing a License Service on Laptop

When AVEVA products are installed on a laptop or any other free-standing computer, it is also necessary to install and configure a License Service. In this situation the laptop user usually performs the role of License Administrator.

A laptop will typically have more than one Ethernet Address so take particular care when ordering a License File and follow the instructions in [How to Obtain a License from AVEVA](#) to select an Ethernet Address for a network adaptor that is always on and will never be disabled.

It has never been possible with AVEVA license files to borrow an individual license from a network license service for use on a laptop, so a separate license file must be ordered for each laptop or free-standing computer.

**Note:** Some companies set up a pool of Dongles with matching license files so that a license service can easily be set up on a laptop when it is required to go off-site.

### 6.2 Windows Vista

**Note:** Only authorised AVEVA product releases can be run on a Vista machine.

A machine running **Vista Business** or **Vista Enterprise** can be used for the Flexman 4.1 license service. Vista is much more protective of its Registry Settings so care is needed when configuring a Vista PC to access the License Service.

**Note:** It is recommended that the user always uses the utility **FlexmanConfig** included as the **Client** Install with Flexman 4.1 to be sure of correctly configuring access to a License Service.

### 6.3 Locked-down PCs

Some companies operate a strict policy of 'locking-down' machines so that the user has write access only to specified folders. It may not be possible in this situation for FlexmanConfig to create Registry settings, in this case the User Environment Variable setting must be used instead.

### 6.4 Other Products that use FLEXlm/FLEXnet Licensing

Other software suppliers also use FLEXnet licensing. Some AVEVA customers have in the past reported problems after installing Flexman alongside AutoCAD. Take care when configuring a PC to access the license server that no damage to the settings needed by the

other supplier's software is made. Use **FlexmanConfig** and adjust the settings for the **cadcentre** Vendor Daemon only. Take special care not to damage the **Shared License Settings** needed by other products.

There is believed to be bug in the version of Imtools 10.5.0 distributed with AutoCAD. Before reporting a problem to AVEVA, try using version 11.5 Imtools that is included in the Server install of Flexman 4.1.

**Note:** When running products using FLEXnet licensing from different suppliers, it is possible to see many **Imgrd** License Manager Daemons running, but this is normal.

## 6.5 AVEVA's Legacy Product M3

This guide does not cover installation or configuring of the license service for M3.

The M3 product also uses FLEXnet but does not use the **cadcentre** Vendor Daemon that is used by the rest of our products. When using the M3 product suite the user will see the kcs vendor Daemon running.

**Note:** The M3 product requires its own license file.

## 6.6 Citrix, Remote Desktop and Terminal Services

The license file received from AVEVA may not support running AVEVA products on a remote machine via Citrix, Remote Desktop or Terminal Services. Contact the Account Manager if a license file is required that will enable remote running of AVEVA products.

## 6.7 License Settings within Batch Files

If an environment variable in a batch file needs to be set, include a line something like this:

```
set CADCENTRE_LICENSE_FILE=744@ComputerName
```

## 7 Troubleshooting

### 7.1 FLEXlm License Finder Dialog Box

When running AVEVA product releases designed to work with Flexman 3.1, the FLEXlm License-Finder dialog box like this:



This indicates that something has gone wrong either with the settings on the user's PC or with the License Service itself.

**Note:** AVEVA recommends to **Cancel** this dialog box. The following error box will be displayed and the exact wording will vary depending on the circumstances. Click **OK** to dismiss the error box and follow the Troubleshooting hints below.



**Recommended approach:**

- Run the Flexman Configuration tool FlexmanConfig and refer to the advice in [Updating a License File](#) of this document.
- The License Administrator should check the status of the License Service and look for any error messages in the debug.log file.
- If the fault cannot be identified locally, request help from AVEVA via e-mail. Include as evidence: the current license file; the debug log-file; a screen shot showing any error messages; and the analysis report from the Flexman Configuration tool.

## 7.2 Firewalls and Port Numbers

Here is the header of a typical AVEVA license file:

```
# ABC LG Feb 2007
# Customer Code ..... [UK-C1234]
# Customer Location Number .... [1]
# Issued On ..... [24-Apr-2007] [11:44]
#
# All lines beginning with a # character are comments and can
# be removed.
#
# This is a COMPLETE license file for this location
# Please replace the previous license.lic with this file
# and after renaming this file license.lic
#
#Server(s)
SERVER LGSERV01 001422E5F0A7 744
#VENDOR Name
VENDOR cadcentre
```

As supplied, the line in the license file beginning **SERVER** ends with **744** (in older license files it appears as TCP:744). This is the default port number for communicating with the License Server process **lmgrd.exe**.

With a SERVER line set as in the example license file shown, using **FlexmanConfig** set the Vendor Specific Registry Entry to:

```
744@LGSERV01
```

Because FLEXnet is used by so many software suppliers, port 744 is widely recognised as the standard port for FLEXnet and is often reserved for this application. However, firewalls are becoming increasingly diligent at shutting down ports and it may be necessary for this port to be opened manually by a System Administrator before the license manager can function.

The **VENDOR** line in the License File does not, as supplied, specify a port number.

To overcome problems with firewalls AVEVA recommends also adding a port number to the **VENDOR** line in the license file. For example:

```
VENDOR cadcentre PORT=7123
```

The System Administrator must make sure the port numbers being used are open on the License Server machine.

**Note:** AVEVA does not recommend the approach of setting the Environment variable to a license file path as this will result in problems with firewalls.

To edit the License File to add a port number to the VENDOR line use NOTEPAD. Do not use WORD or WORDPAD which can result in invisible changes to the license file that can prevent it from working.

Make sure that only one license file is in the Flexman 4.1 folder and that it has the same name as any previous license file e.g. license.lic.

## 7.3 License Error -8

There are two circumstances likely to give this error:

1. Attempt to Install or Run an AVEVA Product via Remote Desktop or Citrix  
The license file received from AVEVA may not support working via Citrix or Remote Desktop using Terminal Services. License error -8 referring to the **CADCID** license feature is characteristic of this problem.  
Contact the account manager if experiencing this problem, the user may require a license to enable remote running of AVEVA products.
2. CLOCKING the Machine on which the License Service is Running  
Setting the system clock back is a trick sometime used to attempt to extend the life of a license file. The License Service recognises that this has happened and refuses to serve licenses.  
AVEVA advice is that it is necessary to completely re-install the operating system to clear this fault. Other than moving between time-zones, changing the system clock on your machine is not recommended.

## 7.4 C:\flexlm Folder

The version of FLEXlm used in Flexman 3.1 created lock files in the folder C:\FLEXlm on the license server machine.

After upgrading to Flexman 4.1 the C:\FLEXlm folder is no longer required because a different mechanism is used. However, if you are running the Tribon M3 product at SP5 or

earlier or any products based on FLEXlm licensing from other vendors, this folder may still be used.

If the C:\flexlm folder is still needed, a problem can arise if access permissions to the C: drive are too restrictive. The License Service can fail to start if files cannot be created in the folder or this folder cannot be created in the first place.

## 7.5 License Server Filling-up with Licensing Daemons

This is a problem seen as a result of firewalls and permissions preventing the license server from starting-up correctly.

When dealing with suspected firewall problems follow these guidelines:

- Make sure that port numbers are specified in the license file on both the SERVER and VENDOR lines.
- Make sure both of the port numbers specified are open.
- In the **FlexmanConfig** tool, specify the Vendor Specific Registry Setting using the Port@Host format.

## 7.6 Port Number Already in Use Error

If you see an error such as this in the debug.log file:

```
The TCP port number in the license, 744, is already in use.
```

it is possible to have started a new license service while the previous license service was still running, or started it too quickly.

Look in the Task Manager, a possible symptom is to see three or four lmgrd processes running but just one cadcentre process.

- Using LMTOOLS, select each License Service in turn and STOP the service.
- Start the new License Service again.

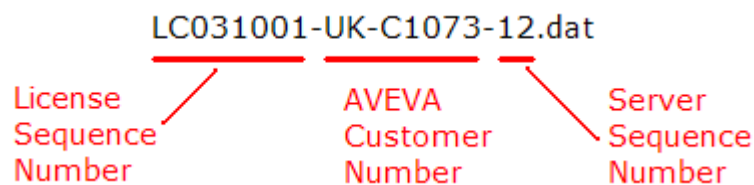
## 7.7 License Server List Not Working

This mechanism is designed for load-balancing the use of license seats over several License Servers. If all the licenses on the first working License Server in use then the intention is that the list will be searched in sequence for a working License Service with an available license.

However, there was a bug in AVEVA products designed to run with Flexman 3.1 that prevents this mechanism from working. These products always use the first working License Service in the list. Other working License Servers in the list will be ignored even if they have seats available. This problem has been resolved in Vista compatible AVEVA products.

## 8 Structure of a License File

The name of the license file supplied by AVEVA is in the format:



The License Sequence Number changes each time the license file is renewed or updated.

### Header:

```
# BPM LG July 2007
# Customer Code ..... [UKCAMD1654]
# Customer Location Number .... [1]
# Issued On ..... [18-Aug-2008] [14:41]
#
# All lines beginning with a # character are comments and can be removed.
#
# This is a COMPLETE license file for this location
# Please replace the previous license.lic with this file
# and after renaming this file license.lic
#
#Server(s)
SERVER UKCAMD1654 00110aa387d4 744 — Port Number can be changed
#VENDOR Name
VENDOR cadcentre PORT=7153 — Port Number can be added
```

### Increment Lines:

```

Package Name      Version
PACKAGE PACK-VPD_PDMS cadcentre 1.00 6E8F2AF148DB4321 \
COMPONENTS=DESIGN-PLATFORM ISODRAW PDMS user_info=UKCAMD1654 \
ISSUED=18-aug-2008 \
NOTICE="CREATED_BY=licencemanager,\
UKCAMSNATION,UKCAMSNation_Licence_Generator,fx3.1,81a \
CHKSUM=1I0UJDB" ck=121 SIGN2="1E7F 546E C6F4 5D5D 5B22 79FA \
5F04 102D BC35 538A C332 0DF4 C7A5 89E8 EE51 114D E0AC 8E98 \
8FD7 08B4 129F 536E B486 B704 B728 23F7 5311 2739 A0C7 24F0"
Increment Name    Expiry Date
INCREMENT PACK-VPD_PDMS cadcentre 1.00 01-dec-2008 150 \
A688EEC3372EE8B2 \
VENDOR_STRING=V01FN240-Alan.Jenyon@aveva.com-\
UKCAMD1654-TBL-NO-TSOK-UHD-Seat- \
SUPERSEDE DUP_GROUP=UHD user_info=UKCAMD1654-1 \
ISSUER=aveva_group ISSUED=18-aug-2008 \
NOTICE="CREATED_BY=licencemanager,UKCAMSNATION, \
UKCAMSNation_Licence_Generator,fx3.1,81a \
CHKSUM=1MN9OOK" ck=99 SN=1149828 \
START=18-Aug-2008 \
SIGN2="1187 54CA 76DB 6262 ED30 9ADD A675 AC98 5D62 \
E879 7C62 5C1B 7974 CE94 272A 124B 4FFF AE10 E250 DFD2 \
6974 D6B2 D1BC F1FB 066C 061A 8623 5E7D 724B BC58"

```

A **Package** line does not define any entitlement on its own - it just gives a name to a collection of component Features. The entitlement is defined in an Increment line which follows.

The **Increment** line defines how many concurrent uses (seats) of a feature the customer is entitled to use and when the entitlement will expire.

If the Increment refers to the name of a Package, the count applies to each of the component features of the Package.