



Foundry Licensing Tools
Version 6.0v4

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FLT 6.0v4 User Guide

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QUICK START

In a hurry? No time to read the whole user guide? We understand. Read this section—it'll tell you how to use your activation key or install your full licence.

Activation Keys are used as an automated path to a **node locked** licence (also known as an uncounted licence), allowing you to use Foundry products on a single machine. See "Activation Keys" on page 18 for more information.

Activation keys look something like this:

```
mari-0101-77d3-99bd-a977-93e9-8035
```

The instructions for using activation keys can be found here:

- To use an activation key go to page 6.

Full Licences based on your System ID are sometimes necessary, and are available in two flavours:

- **Node Locked**—also known as uncounted licences, allow you to use Foundry products on a single machine.
See "About Node Locked Licences" on page 18 for more information.
- **Floating**—also known as counted licences, enable one of our products to work on any networked client machine. The floating licence should be put on the server and is locked to a unique number on that server.
See "About Floating Licences" on page 21 for more information.

The instructions for creating full licences depend on your operating system, so before you do anything else choose one of the following:

- To install a licence on Mac OS X go to page 7.
- To install a licence on Linux go to page 10.
- To install a licence on Windows XP go to page 12.
- To install a licence on Windows 7 go to page 14.

When you're ready to learn about the advanced features in licensing take a look at the next chapter, "Advanced Licensing" on page 17.

If you want to know what a licence looks like, have a look at "Appendix B" on page 57 for a description of the file syntax.

Activation Keys

This section tells you how to use an activation key with your Foundry product.

Have You Got an Activation Key?

If you've been supplied with something that looks similar to this:

```
mari-0101-3733-eeda-8376-df83-7235
```

you have a key and you can activate your Foundry product.

If don't have an activation key, you can purchase one by:

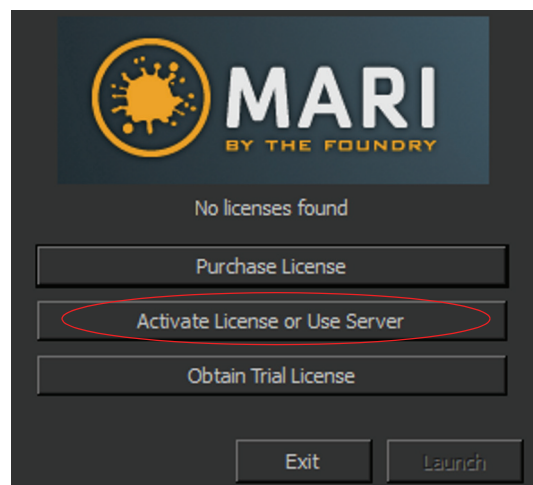
- Using the **Purchase Licence** button on the **Licensing** dialog when you first launch your product, or
- Going to our web site www.thefoundry.co.uk or phoning or emailing us at sales@thefoundry.co.uk.

How to Use Your Activation Key

If you currently have no licence, or are running a temporary licence, your Foundry product prompts you at startup to enter your activation key.

1. Launch your Foundry product.

The **Licensing** dialog displays.



2. Click **Activate Licence or Use Server**.
3. Enter your activation key and click **OK**.

Your Foundry product connects to our activation server, retrieves the correct licence key for your system, and installs it.

Your product launches when the download and installation are complete.

When you're ready to learn about the advanced features in licensing take a look at the next chapter, "Advanced Licensing" on page 17.

Full Licences

This section tells you how to obtain and install full licences for your Foundry product. If you only want to licence your product on a single machine and you have an activation key, you do not need to read this section.

System ID

The System ID (also referred to as rlmhostid) returns a unique number for your machine. We lock our licence keys to the System ID. You will need to give us this number when we generate a licence key for you.

There are a number of ways to display your System ID:

- Download and run the Foundry Licence Installer (FLI).

The System ID is displayed at the bottom of the window, as highlighted.

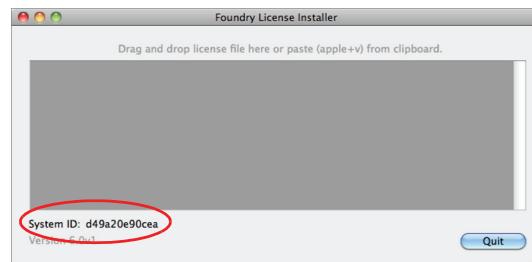


Figure 1. System ID in the Foundry Licence Installer.

- You can also run the following from a command line:

```
<app path>/bin/systemid
```

Note *The <app path> refers to the file structure on various supported platforms. See "Application files" on page 31 for more details.*

- If you have already installed the Foundry Licencing Tools, you can display the rlmhostid using the command line tool **rlmutil** as follows:

```
<app path>/rlmutil rlmhostid
```

Mac OS X

This section tells you how to get your licence working on Mac OS X.

Have you got a licence key?

If you have a licence key, read on. If not, you need to get one from our web site www.thefoundry.co.uk or phone or email us at sales@thefoundry.co.uk.

How to install a licence key

We will email you a zip file containing the Foundry Licence Installer (FLI) and licence key¹. Just drop the licence key on the application to install it. This will check the licence key and copy it to the correct directory. If you installed a node locked licence key, you're done.

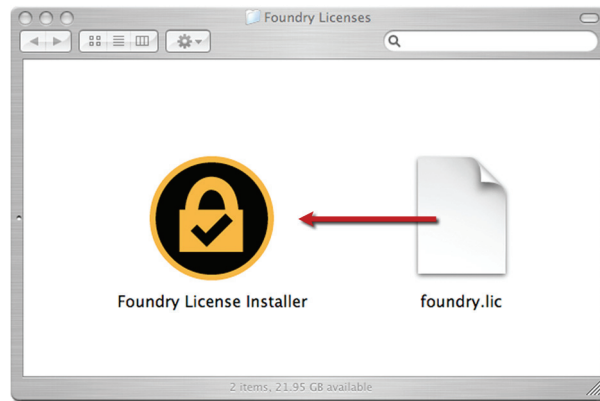


Figure 2. Drag the licence file onto Foundry Licence Installer.

When you install a floating licence key, the licence server address is displayed on screen:

<number>@<licence server name>

You should make a note of the address as you'll need it to activate the client machines.

Install Foundry Licensing Tools (FLT) on the Licence Server

Having installed a floating licence, you need to install some additional software (FLT) to manage the licences on your network. Then you need to tell the client machines where to find the licences.

Download FLT_6.0v3_mac-universal-release-32.dmg from our web site (www.thefoundry.co.uk/support/licensing/tools/r1m) and install it on the Mac that you want to use to serve these licences across the network.

The licence server starts automatically. You can check server status by

1. If your licence was downloaded from www.thefoundry.co.uk it may be necessary to download the correct FLI separately—a zipped bundle is not always provided.

directing a web browser to the `http://<server_name>:4102` server page.

Note *If you're installing the FLT on the Licence Server itself, you must add .local in the browser address: `http://<server_name>.local:4102`.*

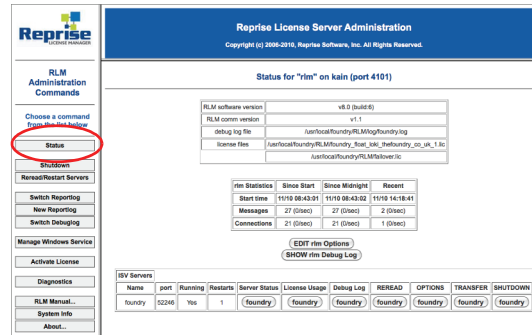


Figure 3. RLM Licence Server Interface.

Tell the client machines where to find the licences

To point your Foundry product at this licence server:

1. Launch your product.
2. Click **Activate Licence or Use Server**.
3. Type `<number>@<licence server name>` (for example `30001@red`) into your Foundry product and click **OK**.

Your client retrieves a licence from the Licence Server and launches.

Repeat these steps for each machine you wish to have access to licences on the server.

More Information

For a complete explanation of licences, licence syntax, alternative licence directories, useful server commands, and much more please read the next chapter "Advanced Licensing" on page 17.

Linux

This section tells you how to get your licence working on Linux.

Have you got a licence key?

If you have a licence key, read on. If not, you need to get one from our web site www.thefoundry.co.uk or phone or email us at sales@thefoundry.co.uk.

How to install a licence key

Note *You must have root or sudo permissions to install the FLI software.*

1. We will email you a `tgz` file containing the Foundry Licence Installer (FLI) and licence key¹. Gunzip or untar the file and save the FLI and your licence key to a folder of your choice, for example `/tmp`. Note that the licence file can be the original `.lic` file or the licence in a plain `.txt` file.
2. Navigate to the location of the `FLI_6.0v3_linux-x86-release-32.tgz` file.

Note *We also have a 64 bit Linux version. Use this if you are running Linux 64.*

3. Type the following commands to extract and install the FLI. Note that you need to replace **[my licence]** with the location of your licence key.

```
tar xvzf FLI_6.0v3_linux-x86-release-32.tgz
cd FLI_6.0v3_linux-x86-release-32
```

```
./Foundry\ License\ Installer --licenseFile [my licence]
```

For example, if you saved your licence key to `/tmp/Foundry.lic`, the last line should be:

```
./Foundry\ License\ Installer --licenseFile /tmp/
Foundry.lic
```

This will check the licence key and copy it to the correct directory.

4. If you installed a node locked licence key, you're done.

If you installed a floating licence, the licence server address is displayed on screen:

```
<number>@<licence server name>
```

You should make a note of the address as you'll need it to activate the client machines.

Install Foundry Licensing Tools (FLT) on the Licence Server

Having installed a floating licence key, you need to install some additional software (FLT) to manage the licences on your network. Then you need to tell the client machines where to find the licences.

Download `FLT_6.0v3_linux-x86-release-32.tgz` from our web site (www.thefoundry.co.uk/support/licensing/tools/rfm) and move it to `/tmp`.

1. If your licence was downloaded from www.thefoundry.co.uk it may be necessary to download the correct FLI separately—a zipped bundle is not always provided.

Open a Terminal and type these commands to extract and install the Foundry Licensing Tools 6.0.

Note *You must have root or sudo permissions to install the FLT software.*

```
cd /tmp
tar xvzf FLT_6.0v3_linux-x86-release-32.tgz
cd FLT_6.0v3_linux-x86-release-32
./install.sh
```

Note *We also have a 64 bit Linux version. Use this if you are running Linux 64.*

The licence server starts automatically. You can check server status by directing a web browser to the http://<server_name>:4102 server page.

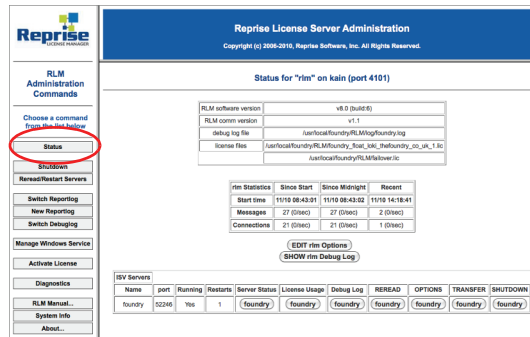


Figure 4. RLM Licence Server Interface.

If the licence server fails to start, using root or sudo permissions, type:

```
/etc/init.d/foundryrlmservice start
```

Check the server status by directing a web browser to the http://<server_name>:4102 server page.

Tell the client machines where to find the licences

1. Launch your product.
2. Click **Activate Licence or Use Server**.
3. Type <number>@<licence server name> (for example 30001@red) into your Foundry product and click **OK**.

Your client retrieves a licence from the Licence Server and launches.

Repeat these steps for each machine you wish to have access to licences on the server.

More Information

For a complete explanation of licences, licence syntax, alternative licence directories, useful server commands, and much more please read the next chapter "Advanced Licensing" on page 17.

Windows XP

This section tells you how to get your licence working on Windows XP. Use this section to install on XP 32/64-bit.

Have you got a licence key?

If you have a licence key, read on. If not, you need to get one from our web site www.thefoundry.co.uk or phone or email us at sales@thefoundry.co.uk.

How to install a licence key

We will email you a zip file containing the Foundry Licence Installer (FLI) and licence key¹. Just drop the licence key on the application to install it. This will check the licence key and copy it to the correct directory. If you installed a node locked licence key you're done.

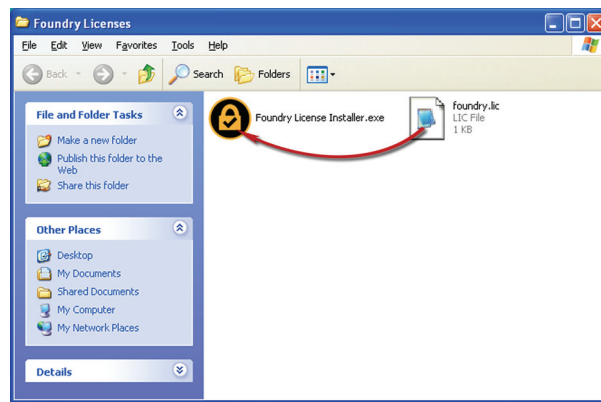


Figure 5. Drag the licence file onto Foundry Licence Installer.

When you install a floating licence key, the licence server address is displayed on screen:

<number>@<licence server name>

You should make a note of the address as you'll need it to activate the client machines.

Install Foundry Licensing Tools (FLT) on the Licence Server

Having installed a floating licence key, you need to install some additional software (FLT) to manage the licences on your network. Then you need to tell the client machines where to find the licences.

1. If your licence was downloaded from www.thefoundry.co.uk it may be necessary to download the correct FLI separately—a zipped bundle is not always provided.

Download FLT_6.0v3_win-x86-release-32.exe from our web site (www.thefoundry.co.uk/support/licensing/tools/rlm) and install it on the Windows computer that you want to serve these licences across the network.

The licence server should start automatically. You can check server status by directing a web browser to the http://<server_name>:4102 server page.

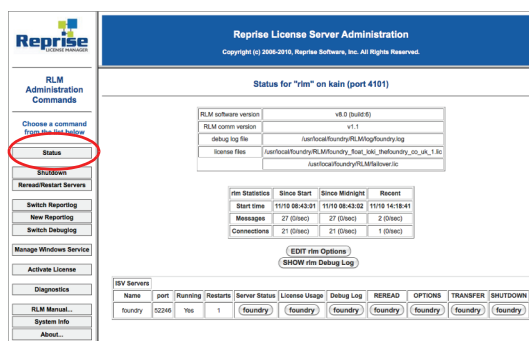


Figure 6. RLM Licence Server Interface.

If the licence server fails to start:

1. Navigate to **Control Panel > Administrative Tools > Services**.
2. Select **Foundry Licence Server** in the list of services and click **Start**.
3. Check the server status by directing a web browser to the http://<server_name>:4102 server page.

Tell the client machines where to find the licences

1. Launch your product.
2. Click **Activate Licence or Use Server**.
3. Type <number>@<licence server name> (for example, 30001@red) into your Foundry product and click **OK**.

Your client retrieves a licence from the Licence Server and launches.

Repeat these steps for each machine you wish to have access to licences on the server.

Firewalls

If you have a firewall on your licence server, this will block all requests for licences from your clients. So all that good work you've done in setting up your Foundry Licence Server will be for nothing unless you fix this. See "Firewalls" on page 48.

More information

For a complete explanation of licences, licence syntax, alternative licence directories, useful server commands, and much more please read the next chapter “Advanced Licensing” on page 17.

Windows 7

This section tells you how to get your licence working on Windows 7.

Have you got a licence key?

If you have a licence key, read on. If not, you need to get one from our web site www.thefoundry.co.uk or phone or email us at sales@thefoundry.co.uk.

How to install a licence key

We will email you a zip file containing the Foundry Licence Installer (FLI) and licence key¹. Double click on the Foundry Licence Installer application to install the licence key. This will check the licence key and copy it to the correct directory. If you installed a node locked licence key you’re done.

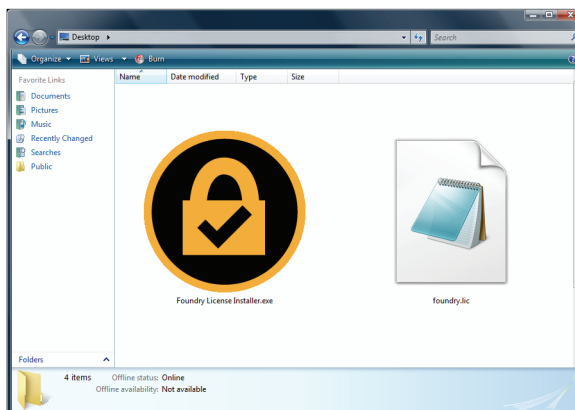


Figure 7. Double click on the Foundry Licence Installer.

When you install a floating licence key, the licence server address is displayed on screen:

<number>@<licence server name>

You should make a note of the address as you’ll need it to activate the client machines.

1. If your licence was downloaded from www.thefoundry.co.uk it may be necessary to download the correct FLI separately—a zipped bundle is not always provided.

Install Foundry Licensing Tools (FLT) on the Licence Server

Having installed a floating licence key, you need to install some additional software (FLT) to manage the licences on your network. Then you need to tell the client machines where to find the licences.

Download FLT_6.0v3_win-x86-release-32.exe from our web site (www.thefoundry.co.uk/support/licensing/tools/rlm) and install it on the Windows computer that you want to use to serve these licences across the network.

The licence server should start automatically. You can check server status by directing a web browser to the http://<server_name>:4102 server page.

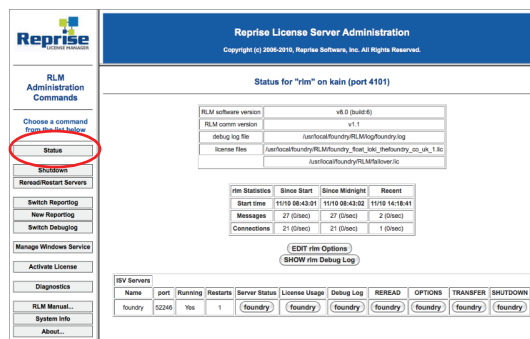


Figure 8. RLM Licence Server Interface.

If the licence server fails to start:

1. Navigate to **Control Panel > Administrative Tools > Services**.
2. Select **Foundry Licence Server** in the list of services and click **Start**.
3. Check the server status by directing a web browser to the http://<server_name>:4102 server page.

Tell the client machines where to find the licences

1. Launch your product.
2. Click **Activate Licence or Use Server**.
3. Type `<number>@<licence server name>` (for example, `30001@red`) into your Foundry product and click **OK**.

Your client retrieves a licence from the Licence Server and launches.

Repeat these steps for each machine you wish to have access to licences on the server.

Firewalls

If you have a firewall on your licence server, this will block all requests for licences from your clients. So all that good work you've done in setting up your Foundry Licence Server will be for nothing unless you fix this. See "Firewalls" on page 48.

More Information

For a complete explanation of licences, licence syntax, alternative licence directories, useful server commands, and much more please read the next chapter "Advanced Licensing" on page 17.

ADVANCED LICENSING

This chapter is for system administrators who wish to more fully understand Foundry RLM licensing to help them manage licences and diagnose problems.

FFT and FLT

All Foundry products built between October 2005 and October 2010 were licensed using FLEXlm. The Foundry is currently migrating its products to activation key based licensing and has chosen to use RLM for the back end licensing.

For now, Nuke and Nuke plug-ins will remain FLEXlm based. New products such as Mari, Storm, and Katana will switch to using RLM.

To summarise:

- Foundry FLEXlm Tools (FFT) should be used with all existing and future FLEXlm based products.
- Foundry Licensing Tools (FLT) should be used with all new RLM based products.

Further Information

This user guide should cover all the information you need to use RLM licences for Foundry products. However, it is not meant to be an exhaustive exploration of all the features available with RLM licensing.

Please be aware that advanced RLM features not discussed in the Foundry Licensing Tools User Guide are not supported with RLM licences from The Foundry.

For further information see the RLM Licensing End User Guide included in the Foundry Licensing Tools download or go to www.reprisesoftware.com.

Notation

Throughout this guide we refer to machines that serve RLM licences as servers and machines that ask for licences as clients.

Licensing Products on a single machine

You can purchase activation keys over the Internet by clicking **Purchase Licence** in the licensing dialog that displays when you launch a Foundry

product without a licence, or by contacting The Foundry Sales Department at sales@thefoundry.co.uk.

Obtain an Activation Key

You are prompted to enter your activation key when you start a Foundry product without a licence. This step is skipped if you've already activated the product.

Select an activation option from the product licensing dialog:

- **Purchase Licence**—click to open a web browser directly to The Foundry web site to purchase an activation key.
- **Activate Key or Use Server**—click to enter a previously obtained activation key. You only need to do this once.
- **Obtain Trial Licence**—click to automatically install a trial licence valid for 15 days. You can only do this once for each machine.

Note *If you access the Internet through a proxy server, you may be prompted to enter the server name, port number, username, and password before the product can obtain a licence.*

Activation Keys

An activation key is a string of characters that represents your entitlement to a product licence, but an activation key itself is not enough to run a product. You can use activation keys over the Internet to create automatically installed full licence keys, on a machine of your choice, using our activation server.

Activation is a more flexible approach to selling licences, requiring no System ID at the point of purchase, though activation can only occur once per activation key.

About Node Locked Licences

A node locked licence will enable one of our products to work on one particular machine. It is locked to a unique number on that machine. See "System ID" on page 7. This licence key will not work on a different machine and if you need it to, you'll have to transfer your licence. Node locked licences do not require additional licensing software to be installed. In particular you do not need an RLM daemon running. You just need the product and a plain text file containing the licence string. Node locked licences are the easiest to set up.

Node locked licences are sometimes called **uncounted** licences and look like this:

```
LICENSE foundry mari_i 2010.1231 permanent uncounted  
share=h start=3-oct-2010 issued=3-oct-2010 _ck=fa062a5e5a  
sig="60P0451P8JTKNGTUC2TR605Y300BQ63CKYJNYTG22GXS0AVA0DSFGS  
UJ8P8HJ1C5MX86UNS54M"
```

For further information about the structure of the licence key see
"Uncounted Licence Syntax" on page 57.

Installing Node Locked Licences

If you are using a node locked licence, you just need the licence key in a text file and a Foundry product. No other software is required. You do not need an RLM daemon running. You do not need to install the Foundry Licensing Tools (FLT).

Automated Method

We have an application called Foundry Licence Installer (FLI) to help you add licence keys. To check and install a licence key:

- Just drag the licence file onto the application;
- Or cut and paste the licence key text directly into the window in the application;
- Or if you double click on the Foundry Licence Installer it will install any file with a .lic file extension that it finds in the same directory as the application.

Note *On Linux, the FLI is a command line tool.*

We might have emailed it to you or you can download it from our web site www.thefoundry.co.uk/support/licensing/tools/rlm/. It is also included in the Foundry Licensing Tools (FLT) software if you have installed that.

Manual Method

If you wish, you can install a node locked licence key by hand. The licence key goes in any plain text file with a .lic file extension in a specific directory depending on the operating system you are using.

Note *There are other directories that are searched for licence files. See "Where are the RLM Files?" on page 31.*

On Mac OS X:

```
/Library/Application Support/TheFoundry/RLM/
```

On Linux:

```
/usr/local/foundry/RLM/
```

On Windows XP (32-bit):

C:\Program Files\The Foundry\RLM\

On Windows XP (64-bit):

C:\Program Files\The Foundry\RLM\

C:\Program Files (x86)\The Foundry\RLM\

Note *32-bit applications running on a 64-bit machine will be installed to, and look for licences in, the (x86) directory. 64-bit apps (like Nuke) running on a 64-bit computer will look for their licence keys in C:\Program Files\The Foundry\RLM\. So depending on the software you are using, you may want to copy your Foundry licence key to one or other of these directories or both to be sure.*

On Windows 7:

C:\ProgramData\The Foundry\RLM\

Note *The ProgramData folder is hidden on Windows 7. If you want to see it, then you have to make it visible using the **Folder Options** in the **Control Panel**. See "Windows 7 Hidden Files" on page 51.*

A Note on Text Editing

We recommend you use the text editor **vi** to create and add a licence key. You can use other text editing programs, such as **TextEdit**, but be aware of the following:

- Ensure the file created is plain text, not rich text (.rtf).
- On Windows, ensure that the licence file is not suffixed by the .txt file extension.
- Avoid word processing applications, such as Word, because they add invisible control characters that can cause problems.

Licensing a Product Over a Network

Alternatively, you can purchase a floating licence key from our web site. To generate you a licence key, we need to know your System ID. The System ID (sometimes called Host ID or rlmhostid) returns a unique number for your computer. We lock our licence keys to the System ID. See "Installing Floating Licences" on page 22.

To display your System ID, do any of the following:

- Download the platform specific Foundry Licence Installer (FLI) utility from <http://www.thefoundry.co.uk/support/licensing/tools/rlm/> and install and run it. Your System ID is displayed at the bottom of the dialog box.
- Download the Foundry Licensing Tools (FLT) free of charge from our web site, install them, and then:

- On Mac OS X, navigate to:
/Applications/TheFoundry/LicensingTools6.0/ and double-click
Foundry License Installer.app
- On Linux, run the following command in a terminal shell:
/usr/local/foundry/LicensingTools6.0/bin/systemid
- On Windows, navigate to:
C:/Program Files/TheFoundry/LicensingTools6.0/ and double-click
Foundry License Installer.exe

Just so you know what a System ID number looks like, here's an example:
000ea641d7a1.

Once you have provided us with your System ID number and a licence key has been generated for you, you will receive the licence key in an e-mail or Internet download. The licence key is contained in a text file called foundry.lic. For information on what to do with the foundry.lic file, see "Installing Floating Licences" on page 22.

About Floating Licences

A floating licence running on a server will enable one of our products to work on any networked client machine.

The floating licence should be put on the server and is locked to a unique number on that server (See "System ID" on page 7.). Floating licences on a server require additional software to be installed. This software manages those licences on the server, giving licences out to client stations that want them. The software you need to manage these licences is called the Foundry Licensing Tools (FLT) which can be freely downloaded from our web site. Floating licences often declare a port number on the server line and a port number on the vendor line. This is required if you have an Internet firewall on your licence server so that you can permit licence communication while blocking others. See "Firewalls" on page 48.

Floating licences are sometimes called **counted** licences and look like this:

```
HOST <server_name> d49a20b9be26 4101
ISV foundry
LICENSE foundry mari_i 2010.1231 permanent 20 share=h
start=4 oct-2010 issued=4-oct-2010 _ck=fa072c6a5a
sig="60P0453JHKQBGTB1HH7E3HNW843UJ627TSF4CXR22H7KNMYHG1B99W
BSNHS1UE7FCN2W3AY8KV"
```

For information on installing licences see "Installing Floating Licences" on page 22. For further information about the structure of the licence key see "Counted Licence Syntax" on page 58.

Installing Floating Licences

The Foundry Licensing Tools are supplied for Mac OS X, Linux, Windows XP, and Windows 7. To manage floating licences across a network, you have to install the Foundry Licensing Tools on a licence server together with your floating licence key(s). Then you have to tell your client machines where to look for their licence. See "Licensing Clients" on page 28.

Floating Licence Behaviour

Floating licences are taken from the server when your product on the client is first used. By default, the licence is given back to the server only if your product is deleted/unloaded from the compositing application or when the application is quit. If you want to change this behaviour, see "Disabling the Heartbeat" on page 34.

When you install a floating licence on a licence server, a `<port>@<server_name>` string is displayed for you to note down and enter into your client machines at product start up.

You can easily create client licences by entering `<port>@<server_name>` directly into your Foundry product when prompted.

Which Port?

Although the default port used by RLM is 5053, The Foundry has opted to use port 4101 for all its licences to ensure there are no conflicts with any other RLM licence servers that may be running on the server.

If, however, no port is specified on the HOST line of a licence, or in the `foundry_LICENSE` environment variable, the port defaults to 5053. For example, the following entry:

```
HOST red 000EA641D7A1
```

behaves in the same way as:

```
HOST red 000EA641D7A1 5053
```

Licences sent to you by The Foundry appear as follows:

```
HOST red 000EA641D7A1 4101
```

If you wish to change this port number, ensure that you modify all your client licences in the same way.

Mac OS X

Follow these instructions to install floating licence software for a Mac OS X computer. For node locked licences, see “About Node Locked Licences” on page 18.

Download Foundry Licensing Tools (FLT)

Download *FLT_6.0v3_mac-universal-release-32.dmg* from our web site onto the machine you wish to use as a licence server.

Install FLT

Double click on the dmg file, then double click on the pkg installer, and follow the on-screen instructions.



Figure 9. Double click on the pkg file.

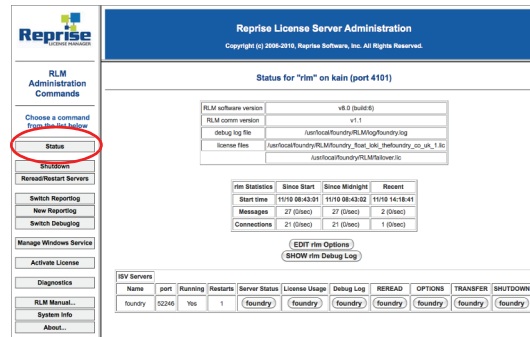
Install key

If you have a licence key from The Foundry, you can add that now. Navigate to `/Applications/TheFoundry/LicensingTools6.0/` and double click on the Foundry Licence Installer.

Drag your licence key file, located in the same directory, into the window or copy and paste the licence text across.

Check RLM

Using a web browser, check the status of the licence server by navigating to http://<server_name>:4102 and clicking **Status** on the right.



Where do all the files go?

The vendor daemon and application files go here:

```
/Applications/TheFoundry/LicensingTools6.0/
```

The licence and log files go here:

```
/Library/Application Support/TheFoundry/RLM
```

Removing FLT

You can uninstall FLT by running the **FLT Uninstaller** script from a terminal with root or sudo permissions:

```
/Applications/TheFoundry/LicensingTools6.0/uninstall.sh
```

Linux

Follow these instructions to install floating licence software for a Linux machine. For node locked licences, see "About Node Locked Licences" on page 18.

Download Foundry Licensing Tools (FLT)

Download *FLT_6.0v3_linux-x86-release-32.tgz* from our web site onto the machine you wish to use as a licence server. There is also a 64-bit version for use on Linux 64 machines. Move the downloaded file to /tmp.

Install FLT

Extract the contents of the tar file then, as root, install.

```
cd /tmp
tar xvzf FLT_6.0v3_linux-x86-release-32.tgz
cd FLT_6.0v3_linux-x86-release-32
./install.sh
```

Where do all the files go?

The vendor daemon and application files go here:

```
/usr/local/foundry/LicensingTools6.0/
```

The licence and log files go here:

```
/usr/local/foundry/RLM/
```

Install key

If you have a licence key from The Foundry, you can add that now:

```
cd /usr/local/foundry/LicensingTools6.0/bin
./install --licenseFile [my licence]
```

Replace **[my licence]** with the location of your licence file, for example:

```
./install --licenseFile /tmp/Foundry.lic
```

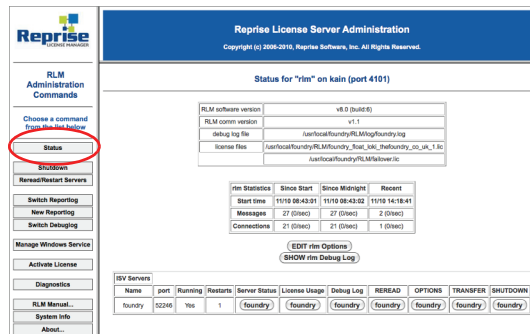
Start rlm.foundry

Start rlm.foundry by hand—you only have to do this once. Enter the command:

```
/etc/init.d/foundryrlmserver start
```

Check RLM

Using a web browser, check the status of the licence server by navigating to http://<server_name>:4102 and clicking **Status** on the right.



Removing FLT

You should uninstall FLT by running the script:

```
/usr/local/foundry/LicensingTools6.0/uninstall.sh
```

Windows XP

Follow these instructions to install floating licence software for a Windows XP machine. For node locked licences, see “About Node Locked Licences” on page 18.

Download Foundry Licensing Tools (FLT)

Download *FLT_6.0v3_win-x86-release-32.exe* from our web site onto the Windows machine you wish to use as a licence server.

On Windows XP 64-bit machines you should install the 32-bit version for Windows - *FLT_6.0v3_win-x86-release-32.exe*. The application files are installed to *C:\Program Files (x86)\The Foundry* and the licence keys are installed to both *C:\Program Files\The Foundry\RLM* and *C:\Program Files (x86)\The Foundry\RLM* so that both old and new products can find the licences.

Install FLT

Log in as Administrator, double-click on the installer, and follow the on-screen instructions.

Install key

If you have a licence key from The Foundry, you should add this now. From the **Start** menu go to **All Programs > The Foundry > FLT 6.0v4 > Foundry Licence Installer** to launch this application.

Drag your licence key file, located in the same directory, into the window or copy and paste the licence text across.

Check RLM

Using a web browser, check the status of the licence server by navigating to http://<server_name>:4102 and clicking **Status** on the right.

The screenshot shows the Reprise License Server Administration interface. On the left, a navigation menu includes 'RLM Administration Commands', 'Status' (circled in red), 'Shutdown', 'Reread/Restart Servers', 'Switch Reporting', 'New Reporting', 'Switch Debugging', 'Manage Windows Service', 'Activate License', 'Diagnostic', 'RLM Manual...', 'System Info', and 'About...'. The main content area is titled 'Reprise License Server Administration' and shows the status for 'rjm' on port 4101. It includes a table for RLM software version (v1.0 (32bit)), RLM comm version (v1.1), debug log file, and license file. Below this is a table for 'rjm' statistics showing start time, messages, and connections. At the bottom, there is a table for 'RLM Servers' with columns for Name, port, Running, Restarts, Server Status, License Usage, Debug Log, REREAD, OPTIONS, TRANSFER, and SHUTDOWN.

Name	port	Running	Restarts	Server Status	License Usage	Debug Log	REREAD	OPTIONS	TRANSFER	SHUTDOWN
foundry	5246	Yes	1	foundry	foundry	foundry	foundry	foundry	foundry	foundry

Firewalls

If your Windows (or other) firewall is switched on, it will block requests for licences from client machines. To fix this problem, follow the instructions under "Firewalls" on page 48.

Removing FLT

To stop the Foundry Licence Server and remove FLT from your machine, from the **Start** menu go to **All Programs > The Foundry > FLT 6.0v4 > Uninstall FLT 6.0v4**.

Windows 7

Follow these instructions to install floating licence software for a Windows 7 machine. For node locked licences, see "About Node Locked Licences" on page 18.

Download Foundry Licensing Tools (FLT)

Download *FLT_6.0v3_win-x86-release-32.exe* from our web site onto the windows machine you wish to use as a licence server.

On Windows 7 64-bit machines you should install the 32-bit version for Windows - *FLT_6.0v3_win-x86-release-32.exe*. The application files are installed to *C:\Program Files (x86)\The Foundry* and the licence keys are installed to *C:\ProgramData\The Foundry\RLM*.

Install FLT

Right-click on the installer, select **Run as Administrator**, and follow the on-screen instructions.

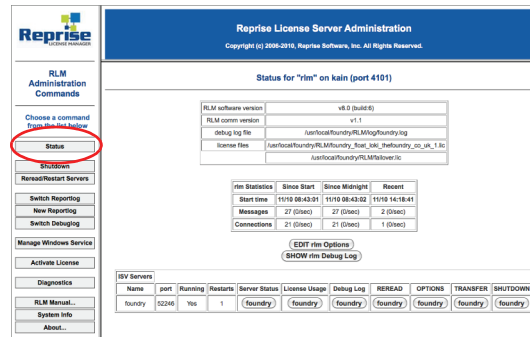
Install key

If you have a licence key from The Foundry, you should add this now. From the **Start** menu go to **All Programs > The Foundry > FLT 6.0v4 > Foundry Licence Installer** to launch this application.

Drag your licence key file, located in the same directory, into the window or copy and paste the licence text across.

Check RLM

Using a web browser, check the status of the licence server by navigating to http://<server_name>:4102 and clicking **Status** on the right.



Firewalls

If your Windows (or other) firewall is switched on, it will block requests for licences from client machines. To fix this problem, follow the instructions under "Firewalls" on page 48.

Removing FLT

To stop the Foundry Licence Server and remove FLT from your machine, from the **Start** menu go to **All Programs > The Foundry > FLT 6.0v4 > Uninstall FLT 6.0v4**.

Licensing Clients

There are two ways to license clients. One using a licence file and the other using an environment variable.

Licence File Method

1. When you installed the floating licence key on your server using the Foundry Licence Installer (FLI), you were provided with a <port>@<server_name>. You will need this to license clients.

Note *You need to make sure that you run an FLI appropriate to the operating system on the client. There are versions of the FLI for Mac OS X, Linux, Windows XP and Windows 7.*

2. You need to use your Foundry product rather than the FLI to license clients, so launch your Foundry product on a client machine.
3. In the licensing dialog that opens, click **Activate Licence or Use Server**.
4. Enter your <port>@<server_name> and click **OK**.
This points your client machine at the licence server.

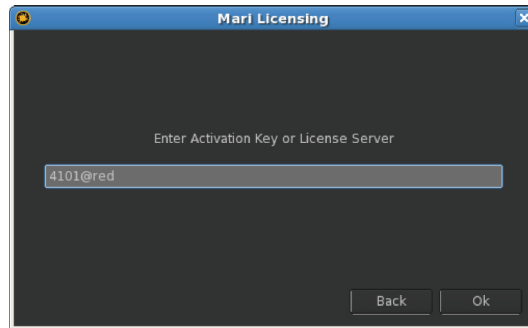


Figure 10. Mari Floating Licence Installation.

If you prefer, you can manually create a client licence:

1. Take the **foundry.lic** file from the server, then rename the file and call it **foundry_client.lic**¹ and edit it so it looks like this:

HOST red 000a957bade9 4101

or if you had your own port number set:

HOST red 000a957bade9 <port number>

2. Then copy it to this directory on the client:

On Mac OS X:

/Library/Application Support/TheFoundry/RLM/

On Linux:

/usr/local/foundry/RLM/

On Windows XP (32- and 64-bit):

C:\Program Files\The Foundry\RLM\

C:\Program Files (x86)\The Foundry\RLM\

On Windows 7:

C:\ProgramData\The Foundry\RLM\

Environment Variable Method

Set the environment variable on your client as follows:

Tip *For more in-depth information on environment variables, refer to "Setting Environment Variables" on page 42.*

On Mac OS X:

Open a terminal and enter:

```
setenv foundry_LICENSE 4101@red
```

¹ If you do create this file yourself, you should not call it **foundry.lic** to avoid conflicts. Instead call the client file **foundry_client.lic**

On Linux:

1. On Linux, the procedure for setting an environment variable depends on what your default shell is. To get the name of the shell you are using, launch a shell and enter:

```
echo $SHELL
```

2. Depending on the output of the previous step, do one of the following:

If your shell is a csh or tcsh shell, enter:

```
setenv foundry_LICENSE 4101@red
```

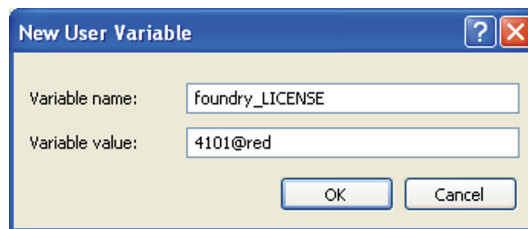
If your shell is a bash or ksh shell, enter:

```
export foundry_LICENSE 4101@red
```

On Windows XP or Windows 7:

Navigate to **Start > Control Panel > System**, select the **Advanced** tab and then click **Environment Variables**.

Click **New** and enter the variable name and value as shown:

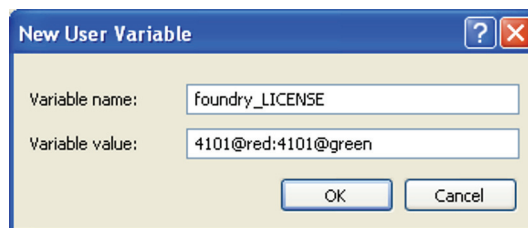


You only need to do this once. After a successful connection has been made this is stored in the user's home directory or in the registry, depending on the platform you're using.

If you have more than one server, you could say:

```
setenv foundry_LICENSE 4101@red:4101@green
```

OR



If you have specified a particular server port number (30001) in the

foundry.lic file on the server, you should set the environment variable as follows.

```
setenv foundry_LICENSE 30001@red
```

Licence Administration

The following section contains details on licence management and administration, including licence behaviour, file location, and updating licences.

Where are the RLM Files?

You can move the RLM files anywhere, but by default they are installed to the following directories. We will refer to this directory throughout this guide and assume all the RLM components we ship are here.

Application files

These are files included in the Foundry Licence Installer. We'll refer to this location as the <app path>.

<app path> on Mac OS X:

```
/Applications/TheFoundry/LicensingTools6.0/bin/
```

<app path> on Linux:

```
/usr/local/foundry/LicensingTools6.0/bin/
```

<app path> on Windows XP or Windows 7:

```
C:\Program Files\The Foundry\LicensingTools6.0\bin\
```

```
C:\Program Files(x86)\The Foundry\LicensingTools6.0\bin\
```

Data files

These include the licence keys and log files. We'll refer to these locations as the <data path>.

<data path> on Mac OS X:

```
/Library/Application Support/TheFoundry/RLM/
```

<data path> on Linux:

```
/usr/local/foundry/RLM/
```

<data path> on Windows XP:

```
C:\Program Files\The Foundry\RLM\
```

```
C:\Program Files (x86)\The Foundry\RLM\
```

<data path> on Windows 7:

```
C:\ProgramData\The Foundry\RLM\
```

Moving the RLM Files

If you move your node locked licence key, you have to set an environment variable to point to the new location. Here's an example.

Move your node locked licence key to:

```
/home/licences/mylicence.lic
```

Now set an environment variable for the client:

```
setenv foundry_LICENSE /home/licences/mylicence.lic
```

If you want to move a floating licence key to another directory then, if you have an RLM licence server already running you need to shut it down. You'll need to edit the startup scripts to look in the new location. Then restart the RLM licence server.

For **Mac OS X** edit:

```
/Library/LaunchDaemons/uk.co.thefoundry.rlm
```

changing these lines:

```
<string>-c</string>
```

```
<string>/Library/Application Support/TheFoundry/RLM/</string>
```

to this, assuming your licence is in /home/licenses

```
string>-c</string>
```

```
<string>/Library/Application Support/TheFoundry/RLM:/home/licenses</string>
```

For **Linux** edit:

```
/etc/init.d/foundryrlmserver
```

changing this line:

```
FnLicDir=/usr/local/foundry/RLM
```

to this, assuming your licence is in /home/licenses

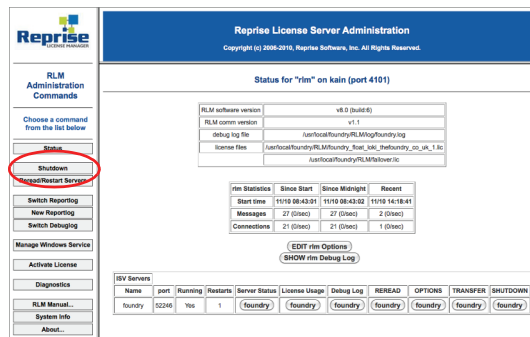
```
FnLicDir=/usr/local/foundry/RLM:/home/licenses
```

For **Windows XP** you'll need to edit the registry. Stop the RLM licence server if it's running:

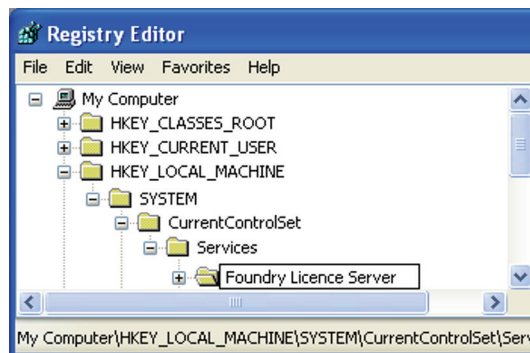
1. Navigate to **Start > Control Panel > Administrative Tools > Services**.
2. Select **Foundry Licence Server** and click **Stop**.

OR

1. Use a web browser to go to the http://<server_name>:4102 server page.
2. Click **Status > Stop**.



3. From the **Start** menu, select **Run...** type **regedit** and press **return** on your keyboard.



4. Move down the Registry as shown and select **ImagePath**.
5. Assuming your licences are in C:\tmp, insert this into the path as shown:

```
"C:\Program Files (x86)\
The Foundry\LicensingTools6.0\bin\rlm.foundry.exe" "-c"
"C:\ProgramData\The Foundry\RLM\C\tmp" "-ws" "4102" "-dlog"
"C:\ProgramData\The Foundry\RLM\log\foundry.log" -service
```

Note *Semi colons are used to separate licence directories on Windows and colons are used on Mac OS X and Linux.*

6. Quit regedit.

When is a Licence Taken or Dropped?

Product licences are checked out from the server when the product is first used on the client. By default, the licence is given back to the server only if the product exits or is deleted/unloaded from the client. If you take a licence from the server and then go to lunch for an hour, your licence will still be there when you get back. If you want your licence to go back to the server if you don't use it for a while, you will need to change the default behaviour by disabling the heartbeat. See "Disabling the Heartbeat" on page 34.

Usually, exiting a Foundry product will return the licence to the server. Plug-in products, however, generally take a licence when the first plug-in of the set is used and return that licence when the last plug-in of the set is removed from the effects tree or layer stack. The exact point at which a licence is returned by a plug-in product is host specific, and can be unpredictable.

Disabling the Heartbeat

So to be clear, the behaviour of a floating licence is either:

- **Default**—you keep the licence, even if you're not actively using it, until you exit the product.
- **Timeout**—the licence is returned to the server if you don't use the product for a specified TIMEOUT period.

You can change the default behaviour by setting an environment variable on the client as follows:

```
setenv FOUNDRY_HEARTBEAT_DISABLE true
```

If you disable the heartbeat, you **must** set a TIMEOUT value in the options file so that licences are returned to the server correctly—there is no default TIMEOUT period. For more information, see "The Options File" on page 45.

Capping Licences

Have you ever needed a licence only to find they have all been checked out by your colleagues? Just needed a command to stop someone's licence so you can grab it? Then this is the command for you!

The **rlmremove** utility allows you to remove a single user's licence for a specified feature. As ever, let's consider an example. First who's got the licences? Using the **rlmutil** command:

```
<app path>/rlmutil rlmstat -c <data path> -a
```

Note See "Application files" on page 31 for the correct <app path>.

might produce this output:

```
foundry licence usage status on licserv (port 38565)
mari_i v2015.1231: duncan@red 1/0 at 10/07 14:40 (handle: 8a)
mari_i v2015.1231: mike@green 1/0 at 10/07 14:41 (handle: 67)
```

where the user is **duncan**, the user's computer is **red**, and the licence handle is **8a**.

To remove duncan's licence, use this command:

```
<app path>/rlmutil rlmremove licserv 38565 foundry 8a
```

Since it's a bit rude to cap someone's licence, systems administrators can disable this functionality by starting the **rlm.foundry** with a flag, **-x rlmremove**.

Appending to an Existing Licence

You can add a new licence to an existing key using two methods:

- Drop the licence file onto the Foundry Licence Installer. This is the easiest method.
- Use the command line. For more information, see "From the command line" below.

From the command line

This is **not** recommended for most users. However, if you're a command line user, we suggest using this method. You can add a new licence key by editing the **foundry.lic** text file and then using **rlmutil** to re-read this file.

Here is an example floating licence key for a machine called **red** with system ID **000EA641D7A1** that serves 2 floating Mari licences onto the network:

```
HOST red 000EA641D7A1 4101
ISV foundry
LICENSE foundry mari_i 2010.1231 permanent 2 share=h
start=6-oct-2010 issued=6-oct-2010 _ck=fad7306732
sig="60Q04580SBD4AEEY4C93A1K0H718JRY9DWGP1HWR08AG1CY16HPHCK
KQ44FDKGYQKE0BXXKGRJ3WBT"
```

If you are then sent a MariX licence key for the same machine, just add the **LICENSE** lines to your existing file, ignoring any **HOST** or **ISV** lines, so that it would look like this:

```
HOST red 000EA641D7A1 4101
ISV foundry
LICENSE foundry mari_i 2010.1231 permanent 2 share=h
start=6-oct-2010 issued=6-oct-2010 _ck=fad7306732
```

```
sig="60Q04580SBD4AEEY4C93A1K0H718JRY9DWGP1HWR08AG1CY16HPHCK
KQ44FDKGYQKE0BXKGRJ3WBT"
```

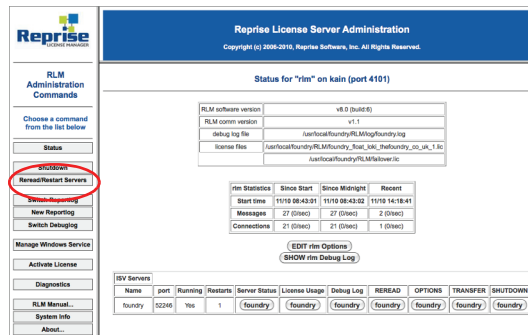
```
LICENSE foundry marix_i 2010.1231 permanent 2 share=h
start=6-oct-2010 issued=6-oct-2010 _ck=72d73079d7
sig="60PG4512DMXC338XEG3F0XBNPFREB6SHHD0QXA822M09MNJUB3E9VQ
UXKJP69DJ5CYR27AUYFRS0"
```

Now re-read the licence file with this command:

```
<app path>/rlmutil rlmreread -c <data path>
```

OR,

Using a web browser, go to <http://red:4102> and click **Status > Reread**.



The <server_name> Variable

If you requested a floating licence key but didn't tell us the hostname of your licence server then we will have given you a licence key with <server_name> in the first line. The key would look like this.

```
HOST <server_name> 000EA641D7A1 4101
```

```
ISV foundry
```

```
LICENSE foundry mari_i 2010.1231 permanent 2 share=h
start=6-oct-2010 issued=6-oct-2010 _ck=fad7305c5d
sig="60PG4580PP23CMQMTSRKD19BVN7PQTKCBY6VH8PP08A6CX9J7HJMR0
T38WS9ANTKJ97J3PWTK790"
```

You need to replace the text <server_name> with the name of your licence server (If you use the Foundry Licence Installer, it will do this for you). If this name was "red" then your licence key would look like this.

```
HOST red 000EA641D7A1 4101
```

```
ISV foundry
```

```
LICENSE foundry mari_i 2010.1231 permanent 2 share=h
start=6-oct-2010 issued=6-oct-2010 _ck=fad730cc8b
sig="60PG451YS80Y8FSVN3CECAW7VBKAFK1Q3T9SA8R22M0BWFNU1RG1R3
N7JNE908TPTKD4BM084TA0"
```

Replace Licences

You may see the word REPLACE in your licence file. This flag is used in conjunction with the **start** flag to roll together multiple licences. For example, let's consider this floating licence for 2 Mari bought on 6th October 2010 with one year's maintenance allowing you to run all future versions of Mari until 6th October 2011.

```
HOST red 000EA641D7A1 4101
```

```
ISV foundry
```

```
LICENSE foundry mari_i 2011.1006 permanent 2 share=h
start=6-oct-2010 issued=6-oct-2010 _ck=fbd7300e5b
sig="60PG4580QEQ193TDKQD0REE7A3WUUDE0FB4U2H4908A0J6P8PN2KBQ
PEWNRERUU7MSXUDFR0X340"
```

If you bought another 3 licences 6 months later with 6 months support, so your annual maintenance renewal date remains at 6th October 2011, we would issue the following licence for 5 floats. The supersede flag forces RLM to ignore any mari_i licences with an **start** date older than 6th May 2011.

```
HOST red 000EA641D7A1 4101
```

```
ISV foundry
```

```
LICENSE foundry mari_i 2011.1006 permanent 5 share=h
start=6-oct-2010 issued=6-may-2011 replace _ck=fbdaaldce6
sig="60PG4580JSQKCQW35KRR549XXGPGQUYA2P1H2VVK08A73G83FDGYAG
34X479GPCHBF4MDP7HPU20"
```

Managing the Web Server

The RLM server contains an embedded Web Server which can be used to perform most RLM server administration tasks.

Starting the RLM Licence Server

The RLM Licence Server starts automatically when you reboot your machine but you can start it manually:

1. Using a web browser, navigate to the http://<server_name>:4102 server page.

Mac OS X Only

If you're browsing from the Licence Server itself, you must add .local in the browser address: http://<server_name>.local:4102.

2. Click the **Status** button.
3. Click **Start** on the Foundry Licence Server.

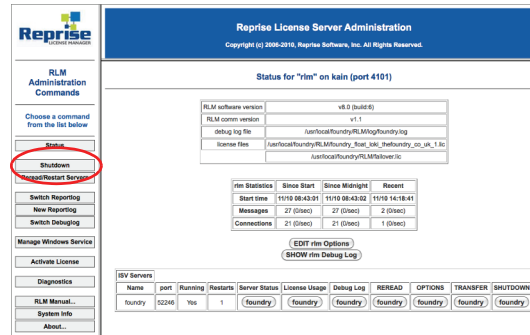


Figure 11. Starting RLM Licence Server.

If you insist, you can enter a command in a shell, but these vary according to the operating system.

Linux

```
/etc/init.d/foundryrlmserver start
```

Mac OS X

Note *You must run RLM as root or use the sudo prefix.*

```
sudo launchctl load /Library/LaunchDaemons/  
uk.co.thefoundry.rlm
```

Windows

From a DOS shell:

```
net start "Foundry Licence Server"
```

Stopping the RLM Licence Server

Mac OS X Only

For all operating systems we recommend that you use the browser address http://<server_name>:4102 and press **Stop**.

If you're browsing from the Licence Server itself, you must add .local in the browser address: http://<server_name>.local:4102.

If you insist, you can enter a command in a shell, but these vary according to the operating system.

Linux

```
/etc/init.d/foundryrlmserver stop
```

Mac OS X

Note You must stop RLM as root or use the sudo prefix.

```
sudo launchctl unload /Library/LaunchDaemon/  
uk.co.thefoundry.rlm
```

Windows

From a DOS shell:

```
net stop "Foundry Licence Server"
```

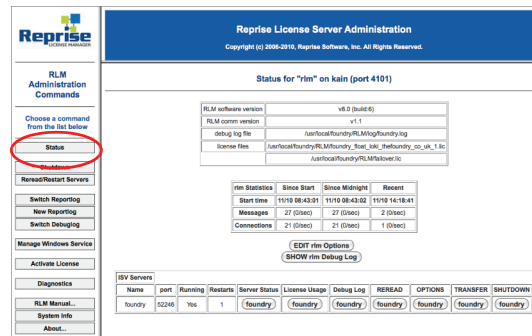
**Other Web Server
 Commands**

The web server also allows you to:

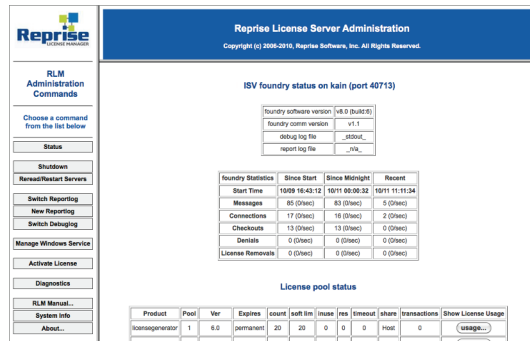
- retrieve server and licence status (similar to **rlmstat**)
- cause the servers to re-read the licence files (**rlmread**)
- switch debug (**rlmswitch**) or report log (**rlmswitchr**) files
- move the current report log file to a new name (**rlmnewlog**)
- shutdown and startup the licence servers (**rlmshutdown/rlmstart**).

Using this web-based interface, you can administer the licence servers from any platform, and you do not need to install the RLM utilities - you only need a web browser.

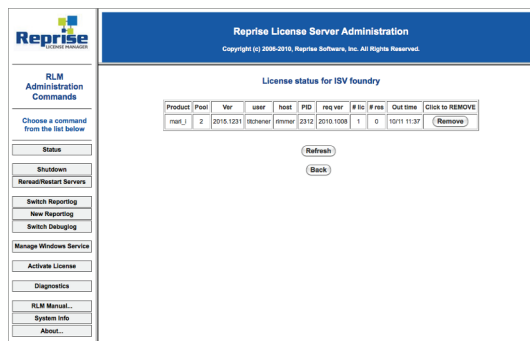
- **Main Status**—If you select **Status** from the menu on the left, the main status screen is displayed in the view area as shown below.



- **Server Status**—click on an ISV button in the **Server Status** column to display a detailed status display for an individual ISV server (shown below) in the view area. This displays some server statistics in a table at the top, followed by a table of all the licences served by this ISV server.

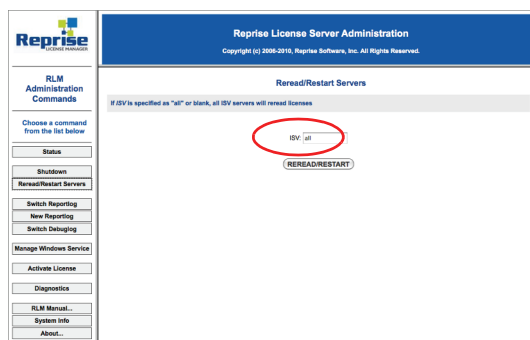


- **Licence Status**—If you click on the **usage...** button in the **Show Licence Usage** column above, you will see the licence status screen, as shown below.



- **Reread/Restart/Shutdown**—click **Reread/Restart Servers** from the menu on the left (or from the **REREAD** column in the ISV server status display) to display the **Reread/Restart Servers** screen in the view area. Enter an ISV name to be restarted if it is not running, or it will be sent a reread command if it is running.

Note You can also type all to refresh or restart all discovered servers.



Useful Commands for System Admins

Type all these commands from the Foundry RLM applications directory on the server. See "Application files" on page 31 for a description of the <app path> variable.

Is the Foundry RLM Licence Server up and running?

```
<app path>/rlmutil rlmstat -c <data path>
```

How do I know what licences I've got?

```
<app path>/rlmutil rlmstat -c <data path> -a
```

I'm using The Foundry software on machine "blue". Which licences is the licence server "red" offering?

```
<app path>/rlmutil rlmstat -c <port>@red -a
```

What is my System ID number?

```
<app path>/rlmutil rlmhostid
```

What's my <server_name>?

```
<app path>/rlmutil rlmhostid host
```

Show me all my licences and who has checked them out.

```
<app path>/rlmutil rlmstat -c <data path> -a
```

OR

Using a browser, go to <http://<server name>:4102> and click **Status > Server Status** to view licence usage.

Mac OS X Only *If you're browsing from the Licence Server itself, you must add .local in the browser address: <http://<server name>.local:4102>.*

Who has checked out a particular licence?

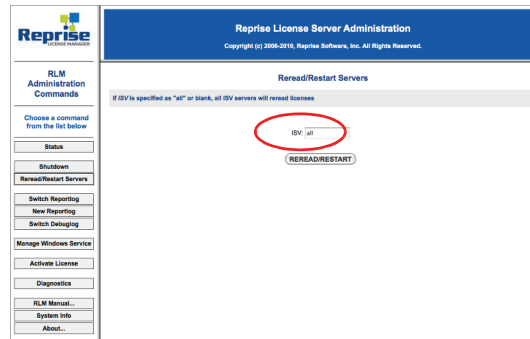
```
<app path>/rlmutil rlmstat -c <data path> -i
```

I've been given a new floating licence key which I've edited into my licence file, but it has not been picked up by the server. What do I do?

Using a browser, go to <http://<server name>:4102> and click **Reread/Restart Servers**.

Mac OS X Only *If you're browsing from the Licence Server itself, you must add .local in the browser address: <http://<server name>.local:4102>.*

Enter the server name you want to reread and click **Reread/Restart**:



My default debug log file (foundry.log) is too big. How do I start a new one called october.log without interrupting the rlm.foundry daemon?

```
<app path>/rlmutil rlmswitch foundry october.log
```

Defining Licensing Behaviour

This section describes how to tailor your Foundry Licensing Tools to your particular setup using environment variables and the licence files.

Setting Environment Variables

There are many occasions when you might need to set an environment variable to tailor the functionality of FLT. Of course, how you do this differs for each operating system. Here's a brief guide if you can't find your systems administrator.

Mac OS X

You can easily set an environment variable that is active in one terminal only. Simply, start a terminal (**Applications > Utilities > Terminal**) and type this command.

```
setenv foundry_LICENSE /tmp/foundry.lic
```

If you open another terminal, this environment variable will not be set in that terminal unless you type it in there too.

For a more permanent solution, you can set an environment variable for all processes launched by a specific user by creating an environment file in the user's home directory:

```
~/MacOSX/environment.plist
```

Note *The tilde (-) represents the home directory of the target user, and the command is case sensitive, so take care to copy the string exactly.*

You will have to create the **.MacOSX** directory yourself using a terminal (by typing **mkdir .MacOSX** in your home directory). You will also have to create the environment file yourself. The environment file is actually in XML/plist format (make sure to add the **.plist** extension to the end of the filename or this won't work). An example environment file is shown below. The file can be created using **/Developer/Applications/PropertyListEditor.app** or you can use a text editor if you're careful with the formatting. We can also send you one if you wish.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple Computer//DTD PLIST 1.0//
EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
    <key>foundry_LICENSE</key>
    <string>/tmp/foundry.lic</string>
</dict>
</plist>
```

In this case we set the environment variable **foundry_LICENSE** to **/tmp/foundry.lic**. Note also that the environment variable is only active once you've logged out and logged back in.

Windows XP

Launch the Control Panel from the **Start** menu and double click on the System icon. Figure 12.



Figure 12. System.

Click on the **Advanced** tab and then the **Environment Variables** button. You can specify system wide variables that all users will pick up or user variables to restrict the environment variable to one particular user. Click on **New** and enter the variable name and value as shown in Figure 14.

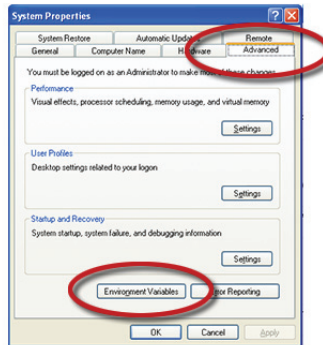


Figure 13. System Properties.

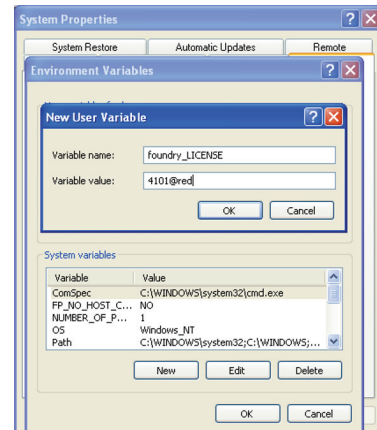


Figure 14. Environment Variables.

Windows 7

Environment variables are set in the same way as Windows XP but, of course, Microsoft have moved things about and it's prettier. Here are some snapshots though.

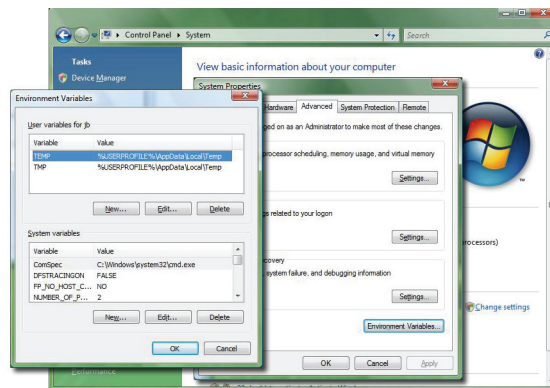


Figure 15. Environment Variables in Windows 7.

Linux

1. The procedure for setting an environment variable depends on what your default shell is. To get the name of the shell you are using, launch a shell and enter:


```
echo $SHELL.
```
2. Depending on the output of the previous step, do one of the following:
 - If your shell is a csh or tcsh shell, enter:


```
setenv foundry_LICENSE /tmp/foundry.lic
```
 - If your shell is a bash or ksh shell, enter:

```
export foundry_LICENSE=/tmp/foundry.lic
```

3. To make this permanent for any shell launched, you can edit your .cshrc, .tcshrc, .bashrc, or .kshrc file in your home directory.
4. If you want it to be system wide, then /etc/profile can be used (or /etc/environment on some flavours of Linux).

The Licence File

The licence file is a plain text file that stores the licence keys in a human readable form. This file must have a .lic file extension. The name of the file can be anything you like, but we recommend the following.

Node Locked Licences

```
foundry.lic
```

Floating Licences

```
foundry_float.lic
```

Client Licences

```
foundry_client.lic
```

The Options File

The options file can tune the behaviour of your licences. For example, you can exclude some users from getting a licence.

The options file should be called **foundry.opt** and should be put in the data directory. An example options file is supplied.

Note See "Data files" on page 31 for the location of the data directory.

The options file should be referenced from the licence file (foundry.lic) after the vendor daemon as follows:

```
HOST red 000EA641D7A1 4101
ISV isvname [isv-binary-pathname] [options-file-filename]
[port-number]
ISV foundry /usr/local/foundry/LicensingTools6.0/bin/
rlm.foundry /usr/local/foundry/RLM/foundry.opt
```

Note If no specification is given in the ISV line, RLM looks for **foundry.opt** in the location with the first licence file.

If you're on Windows XP, don't forget the quotes around the pathname:

```
HOST red 000EA641D7A1 4101
```

```
ISV foundry "c:\Program Files\The
Foundry\LicensingTools\bin\rlm.foundry" "c:\Program
Files\The Foundry\RLM\foundry.opt"
```

EXCLUDE

Here is an example of an options file that prevents the user called rob from running Mari.

```
# cat foundry.opt
EXCLUDE mari_i USER rob
```

When you exit your Foundry product the licence is returned to the server. It is possible that were you to restart the product, at times of large demand, the licence would have already been reassigned to another user. It is possible to retain your licence for a period of time after you exit your product. Licences issued with 'hold=<secs>' in the options file ensure the licence lingers with you after you exit.

TIMEOUT

If you disable the heartbeat (see "Disabling the Heartbeat" on page 34) you must set a TIMEOUT to define after what period of inactivity a licence is automatically returned to the server. For example:

```
TIMEOUT mari_i 3600
```

Note *The options file TIMEOUT can only be set to a minimum of 3600 seconds (1 hour) unless your licence contains a min_timeout=<secs> flag.*

The Log Files

There are several log files created to help diagnose problems. Two log files are created on the server and one on the client machine.

Server

Errors, check-outs, check-ins and other information reported by the RLM daemon is written to a log directory in the data directory:

On Mac OS X:

```
/Library/Application Support/TheFoundry/RLM/log/foundry.log
```

On Linux:

```
/usr/local/foundry/RLM/log/foundry.log
```

On Windows XP 32- and 64-bit:

```
C:\Program Files\The Foundry\RLM\log\foundry.log
```

```
C:\Program Files(x86)\The Foundry\RLM\log\foundry.log
```

On Windows 7:

```
C:\ProgramData\The Foundry\RLM\log\foundry.log
```

Errors when starting the RLM daemon using the startup script provided are logged to:

```
<data path>/log/boot.log
```

Note *See "Data files" on page 31 for the location of the data directory.*

Client

By default, problems with licences are written to:

```
<data path>/licence.log
```

You can change the location as follows:

```
setenv foundry_LICENSE_LOG /home/fred/problems.log
```

Tip *A good command to use on very large log files to display the last 30 entries is:*

```
tail -n 30 foundry.log
```

Troubleshooting Licences

There are many reasons why your licence key may fail to work. This section is here to guide you through some of the common problems and how to fix them.

Accessing the Web Server on Mac OS X

The Problem

On Mac OS X, you're browsing to http://<server_name>:4102, on the Licence Server itself, looking for the RLM Web Server page, but you can't connect.

The Solution

Due to Mac OS X system architecture, you must add **.local** to the URL address when you're browsing from the Licence Server itself:
http://<server_name>.local:4102

Note *You can use this address on other platforms, but it's not necessary.*

Firewalls

The Problem

You have set up a floating licence on a Windows computer but client machines are not able to get a licence from the server. Everything seems to be setup correctly. The server is on and is floating licences. The client is correctly pointing to the server using a client.lic file or an environment variable. So what's wrong?

The Solution

This could be any number of things, but if everything is setup correctly, it could be the Windows firewall on the server blocking perfectly legitimate requests from the client. Here's what you do to fix it. Two methods are discussed, the first using programs and the second using port numbers. This should enable client machines to both checkout licences and also connect to the web service in the RLM Licence Server.

Programs

From the Windows **Start** menu, click on the **Control Panel** and double click on **Windows Firewall** to display the dialog as shown in Figure 16. Click on the **Exceptions** tab at the top and then click the **Add Program** button at the bottom. You can also bypass the firewall using port numbers, see See "Ports" on page 50.

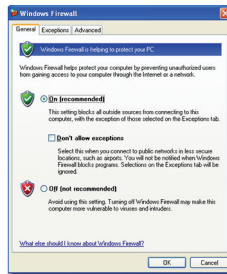


Figure 16. Windows Firewall.

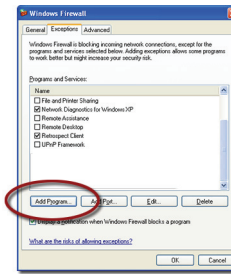


Figure 17. Add Program...

Browse to C:\Program Files\The Foundry\LicensingTools6.0\bin and add **rlm.foundry.exe** as shown in Figure 18.

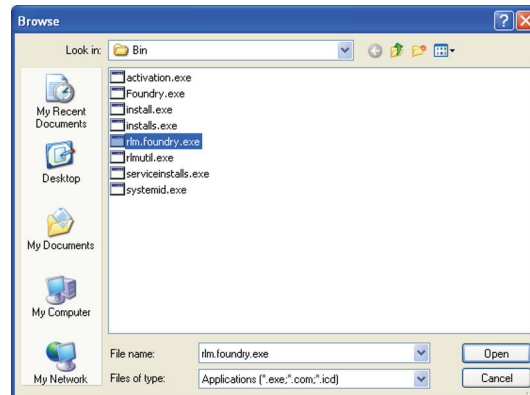


Figure 18. rlm.foundry.exe

The amended list of exceptions is shown in Figure 19. Select the checkbox and click **OK** to add the exception.

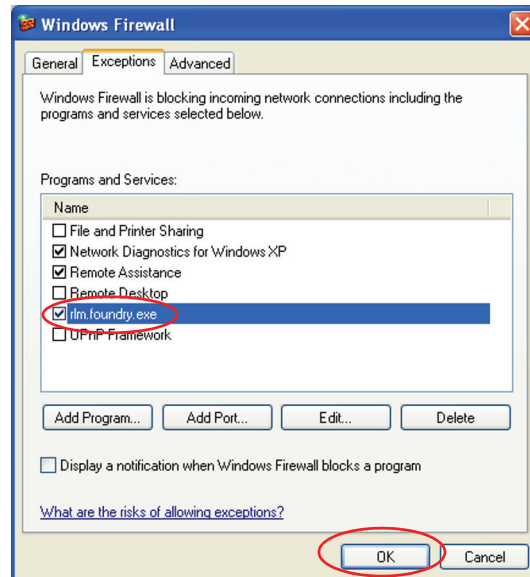


Figure 19. Exceptions list.

Ports

The second method allows access through ports. First, you need to change your licence file to include port numbers on the server and vendor lines. These numbers must be different. For example:

```
HOST red 000ea641d7a1 4101
ISV foundry /usr/local/foundry/RLM/foundry.opt 1001
```

Note *You must specify an options file if you want to specify a port.*

Go to your firewall settings and add an exception for TCP ports with the port number in the ISV line and for the port number in the HOST line.

For example, for Windows firewall:

1. Navigate to **Control Panel > Windows Firewall**.
2. Select the **Exceptions** tab and click **Add Port**.

- In **Name** field type **Foundry Licence Server** (this can be any name you like) and enter the port number specified in the ISV line of the licence file.

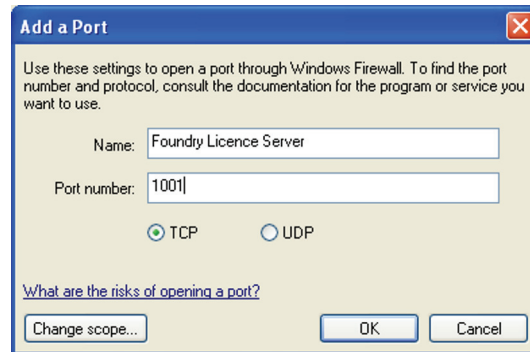


Figure 20. TCP Port Exception.

- Ensure that the TCP radio button is selected then click **OK**.
- Add another port, this time put in the name of the computer (**red**) and enter the port number specified in the HOST line of the licence file.
- Ensure that the TCP radio button is selected then click **OK**.
- Then **OK** the firewall settings.

Note *This may require a reread of the licence file if it has already been read, or possibly a reboot of this machine. You may want to check with your system administrator that the port number you choose is not already in use by another program.*

Node Locked Client Licences

This is **not** recommended. If you have a node locked licence in a client licence file that is pointing to the server for its licences, the node locked licence won't work. Use separate files for the node locked licence (**foundry.lic**) and client licence (**foundry_client.lic**). For example, this Mari licence won't work in this file that is looking on "red" for its licences.

```
HOST red 000EA641D7A1 4101
ISV foundry
LICENSE foundry mari_i 2011.1006 permanent uncounted
hostid=000ea641d7a1 share=h start=6-oct-2010 issued=6-oct-
2010 _ck=fbf430af8c
sig="60PG4515BFTJCYAXSYJ6GTUJ3B9NRRGF3VUUKD022M0BXU48SSESUG
SAFJ8BAD5BN883526ETKQ0"
```

Windows 7 Hidden Files

By default, on Windows 7, the C:/ProgramData directory is hidden. You can make it visible by double clicking on **Control Panel > Folder Options** and then selecting **Show hidden files and folders**.

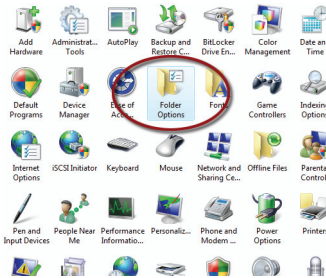


Figure 21. Control Panel - Folder Options.

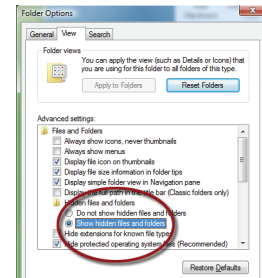


Figure 22. Switch on "Show hidden files and folders".

Contacting Support

If you have flicked through this user guide and it's not given you the answer to your question, then please contact our support team on support@thefoundry.co.uk

Before you do this, run the Foundry Licence Diagnostics (FLD) tool. This gathers lots of information on your machine that will help us diagnose the problem. No personal information is gathered. This tool writes out a text file that you can email to support.

All Foundry Licensing Tools are available from our web site:
www.thefoundry.co.uk/support/licensing/tools/rlm/

APPENDIX A

Release Notes

This section describes the requirements, new features, improvements, fixed bugs and known bugs & workarounds for each release of The Foundry Licensing Tools (FLT).

FLT 6.0v4

This is the fourth release of The Foundry Licensing Tools (FLT) addressing issues that arose during previous builds.

Release Date

October 2011

System Requirements

- Mac OS X (10.5 (Leopard) and 10.6 (Snow Leopard))
- Linux Centos 4.5 (32-bit or 64-bit)
- Windows XP or Windows 7.

Note *Other operating systems are likely to work.*

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Fixed Bugs

- The installer failed to install the RLM Licence Server on Mac OS 10.7 (Lion). While this bug has been resolved, Mac OS 10.7 (Lion) is not yet fully supported.
- Linux 64-bit: The licence server was unable to cope with more than 1000 simultaneous licence checkouts.
- Linux: The default file descriptor limit has been increased to 10240 in the **foundryrlmserver** start up script.

Known Issues and Workarounds

- Bug 23186 - Mac only: RLM Licence Server is limited to approximately 247 checkouts.

FLT 6.0v3

This is the third release of The Foundry Licensing Tools (FLT) addressing issues that arose during previous builds.

Release Date

November 2010

System Requirements

- Mac OS X (10.5 (Leopard) and 10.6 (Snow Leopard))
- Linux Centos 4.5 (32-bit or 64-bit)
- Windows XP or Windows 7.

Note *Other operating systems are likely to work.*

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Fixed Bugs

- The default RLM Web Server (5054) and Foundry Licence Server (5053) ports could cause issues at startup with other servers present on the network.
To avoid conflicts with other servers that may be present:
 - The default **RLM Web Server** port has changed to **4102**.
 - The default **Foundry Licence Server** port has changed to **4101**.
- Setting the foundry_LICENSE_LOG environment variable was being ignored.
- The Foundry Licence Diagnostic Tool was not correctly determining the status of the server on Linux.
- The Foundry Licence Diagnostic Tool was not correctly diagnosing client licence file issues.

Known Bugs & Workarounds

There are no known bugs and workarounds in this release.

FLT 6.0v2

This was an internal build of The Foundry Licensing Tools (FLT).

Release Date

November 2010

System Requirements

- Mac OS X (10.5 (Leopard) and 10.6 (Snow Leopard))
- Linux Centos 4.5 (32-bit or 64-bit)
- Windows XP or Windows 7.

Note *Other operating systems are likely to work.*

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Fixed Bugs

This section will contain descriptions of fixed bugs in future releases.

FLT 6.0v1

This is the first release of The Foundry Licensing Tools (FLT).

Release Date

November 2010

System Requirements

- Mac OS X (10.5 (Leopard) and 10.6 (Snow Leopard))
- Linux Centos 4.5 (32-bit or 64-bit)
- Windows XP or Windows 7.

Note *Other operating systems are likely to work.*

New Features

This section will contain descriptions of new features in future releases.

Feature Enhancements

This section will contain descriptions of feature enhancements in future releases.

Fixed Bugs

This section will contain descriptions of fixed bugs in future releases.

APPENDIX B

Uncounted Licence Syntax

An uncounted or node locked licence looks like this:

```
LICENSE foundry mari_i 2011.1006 permanent uncounted  
hostid=000ea641d7a1 share=h start=6-oct-2010 issued=6-oct-  
2010 _ck=fbf430af8c  
sig="60PG4515BFTJCYAXSYJ6GTUJ3B9NRRGF3VUUKD022M0BXU48SSESUG  
SAFJ8BAD5BN883526ETKQ0"
```

Uncounted licences are broken down into 11 parts:

LICENSE—indicates the start of an RLM licence feature.

foundry—the vendor name. All licences from The Foundry must contain the vendor name foundry.

mari_i —the product to be licensed. In this example, it's a Mari interactive licence. A background render licence would be <product>_r.

2011.1006—the maintenance date. All Mari releases built before this date will run until the licence timeout. All release built after this date will not run.

For non maintenance products this is often just the version of the product, e.g. 3.0

permanent—this is a permanent licence. If this field were a date 5-jul-2011 it would be a temporary licence with that expiry date.

uncounted—this is a node locked licence. Floating licences have a number in place of the uncounted tag.

hostid—also known as the System ID, this is the ethernet (mac) address of the machine to be licensed.

share—this indicates how multiple checkouts from the same client machine are treated. **share=h** indicates licences are shared by the same host.

start=6-oct-2010—the date when the licence will start. This date may be in the future.

issued—the day the licence was made, which may differ from the licence start date.

ck and sig—the encrypted licence key. It represents a unique hash of the information in the licence and is used to validate the licence.

Counted Licence Syntax

A counted or floating licence looks like this:

```
HOST <server_name> <server host id> <port>
ISV foundry <foundry daemon path> <options file> <port>
LICENSE foundry mari_i 2011.1006 permanent 10 share=h
start=6-oct-2010 issued=6-oct-2010 _ck=fb063057fd
sig="60PG451E0VM5S81E5EWRYM8E82CMKYR6SSB93P822M0AT1UU7FWA85
M9P34UKXK4HMD7ERG65YA0"
```

Counted licences are broken down into a HOST line, an ISV line, and one or more LICENSE lines:

HOST—The host line indicates which server may provide the counted licences in the licence file.

- <server_name> also known as the hostname, is the name of the licence server, for example **red**.
- <server host id> also known as the RLM host id or System ID, is a unique number for that machine running RLM.
- <port> is the user defined server port number over which requests from the client are made to the RLM daemon.

You can display the hostname with this command:

```
<app path>/rlmutil rlmhostid host
```

You can display the RLM host id with this command:

```
<app path>/rlmutil rlmhostid
```

ISV—The ISV line indicates which vendor made the licence. The vendor line helps decode the licence line for the Foundry's specific licensing keys and identify the vendor licensing daemon.

- <options file> is the plain text file that controls the behaviour of the server. See "The Options File" on page 45.
- <port> is the user defined port over which the vendor daemon communicates to the client. If left blank the port number will be picked for you.

Note *The host port number and the ISV port number MUST be different, and remember to avoid port 4102 which is reserved for the web server.*

LICENSE—licence feature line. The only difference from a uncounted licence is that uncounted is replaced with the number of available floating licences and the hostid is omitted from the LICENSE block.

The above licence will work on any 10 hosts simultaneously. It will license all Mari releases built before 6/10/2011 and it begins 6/10/2010.

Client Licence Syntax

Client licences typically have just one line:

```
HOST <server_name> <server host id> <port>
```

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