

GV File Installation Guide Windows



Version History

Table 1: Version Table

Date	Version	Released by	Reason for Change
22/01/2014	1.0	Andy Gingell	Initial release
30/01/2014	1.1	Andy Gingell	Minor typing errors
04/02/2014	1.2	Andy Gingell	Added NVIDIA GPU TCC configuration
03/03/2014	1.3	Andy Gingell	Run the command-line prompt using the Run as administrator mode when running the NVIDIA command
24/03/2104	1.4	Andy Gingell	Updated GV File services Log on As details
25/03/2014	1.5	Andy Gingell	Revised the NVIDIA driver version
07/05/2014	1.6	Andy Gingell	Revised edit for Alchemist OD version 1.1.0.6
02/09/2014	1.7	Jeremy Courtney	Renamed GV File Installation Guide
09/10/2014	1.8	Andy Gingell	Added license revocation warning
17/03/2015	2.0	Jeremy Courtney	Revised edit for V2.*.*
08/06/2015	2.1	Greg Emerson	Updated license generation/application
08/09/2015	2.2	Jon Metcalf	Edit for XF rebrand
25/01/2016	2.3	Greg Emerson	Completed rebrand
23/02/2016	2.4	Andy Gingell	Minor corrections
20/09/2016	2.5	Andy Gingell	Appendix D – advising not to reinstall SafeNet during upgrade, and notice for upgrading from 2.1.*.* or Prior
18/10/2016	2.6	Jon Metcalf	Update Support web links
27/01/2017	3.0	Jon Metcalf	Update for V3 release
13/02/2017	3.1	Jon Metcalf	Notes added.
07/01/2019	4.0	Jon Metcalf	Update for V4 release, + GV rebrand
12/03/2021	4.1	Jon Metcalf	Rebrand
20/05/2021	4.2	Jon Metcalf	Remove note regarding installing license server on a VM
11/06/2021	4.3	Jon Metcalf	Add instructions for uninstalling GV File Trial

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1. Introduction

1.1 Purpose

This document is a GV File Installation guide. It describes how to install the GV File framework and how to license it.

By following the steps described, all the GV File Services/Applications will be installed on a single host machine. However the GV File framework does facilitate a distributed system and some of the Services/Applications can be run on other PC/ where appropriate. This is discussed later in the document.

Please note that this is not a GV File Upgrade Guide. Where GV File is already installed and it is desired to upgrade, please refer to the **GV File Upgrade Document**:

[GV File Upgrade Procedure-Windows.pdf](#)

1.2 GV File Framework License Warning

The GV File product licenses are locked to specified locking criteria of the host machine of the license service.

Please be aware any changes made to this host machine could invalidate the licenses and stop your GV File products from working (locking criteria is discussed in Appendix C)

The locking criteria includes unique hardware ID's, hostname and the operating system i.e. a reinstall will invalidate your licenses.

If you need to change the license server host machine in anyway please contact SAM Support first as it is **imperative that we revoke your existing license prior to supplying a new one** after you have made your changes.

Please note adding memory or Replacing /adding GPUs are not classified as major hardware changes and will not invalidate the license.

1.3 Assumptions

- The GV File host machine has at least the minimum specification, including a GPU with correct GPU driver. (see paragraph 2 below).
- The GV File services will be initially installed on one host machine but there are possibilities of supporting multiple instances of the GV File Browser, Watcher and Node depending on topology.
- It must be possible to access the host machine either locally via a display, keyboard and mouse, or via remote console.

1.4 Definitions, Acronyms and Abbreviations

Table 2: Table of Terminology

Term	Definition
API	Application Programming Interface. An API specifies how some software components should interact with each other
Destination folder	Folder where finished jobs are written to (access and authorisation is required)
FIMS	Framework for Interoperable Media Services. A framework of service definitions for implementing media related operations using a Service Orientated Architecture (SOA)
GPU	Graphical Processing Unit. Very efficient, highly parallel compute engine for advanced image processing techniques.
Install / Installation	Installation of the services within the GV File framework
Locking code	Lock code base on specified locking criteria
License file	Defines the quantity of products available
License Server	Manages product licenses
XF	GV File
Profile (default/user)	Describes a collection of parameters for a given job. User and a selection of read only default profiles are available
REST	Representational state transfer. Rest is a simple way of sending and receiving data between client and server. A RESTful web service is a web API implemented using HTTP and REST principles. Request methods include GET, POST, PUT, DELETE
GV File Browser	Service which provides access and directory listings for local and remote shares to the client. Enables the use of browse feature in the client
GV File Deployment	A collection of GV File services which touch the actual media assets. This might be dictated by geographic location and/or SAN configuration. The services which touch the media are the GV File Node, GV File Browser and GV File Watcher
GV File Node	Service which executes the jobs within the job queue. It performs all data processing (image/audio/metadata)
GV File Server	Service which orchestrates the framework and manages the products, profiles, licenses available within a given server. One server can manage multiple deployments
GV File Watcher	Service to monitor watch folders and automatically add jobs to the job queue Monitoring can be based on notification or polling
SOAP	Simple Object Access Protocol. SOAP is a method of transferring messages, or small amounts of information, over the Internet. SOAP messages are formatted in XML and are typically sent using HTTP (hypertext transfer protocol)

Term	Definition
Source file	Location of the source file. Path can be entered explicitly or via the “browse” feature (access and authorisation is required).
TCC	NVIDIA Tesla Compute Cluster Mode. Professional NVIDIA GPUs which offer a graphics output need to have TCC mode enabled if they are to be used as a compute engine. Enabling TCC will disable the graphical output.
WDDM	Windows Display Driver Model - is the graphic driver architecture for a video card drivers.

2. Hardware and Software Requirements

Please refer to the website for details of the hardware and software required to run GV File.

Alchemist File:

https://www.grassvalley.com/products/alchemy_file/

Kronos File:

https://www.grassvalley.com/products/kronos_file/

Quasar File

https://www.grassvalley.com/products/quasar_file/

For more detailed info, please see Optimising Performance documents here:

Alchemist File:

[Alchemist File Optimizing Performance.pdf](#)

Kronos-XF:

[Kronos File Optimizing Performance.pdf](#)

Quasar-XF

[Quasar File Optimizing Performance.pdf](#)

3. GV File Architecture

3.1 Overview

The GV File framework benefits from a Service Orientated Architecture (SOA). This SOA design philosophy aids the ability to develop and evolve the installation.

The minimum required services are:

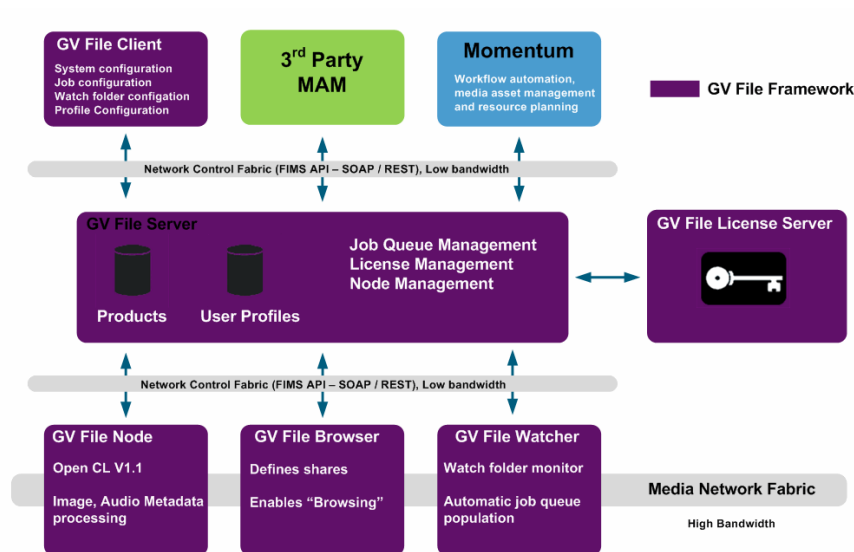
- GV File Client
- GV File Server
- GV File Node (minimum of one)

Optional Services are:

- GV File Browser
- GV File Watcher

Without the **Browser** installed and started the **Browse** feature will not work in the **Client**.

Without the **Watcher** installed and started the **Watch Folders** feature will not work.



GV File Framework

3.2 Deployment Components

There are separate installers for each of the application/services allowing deployment on a distributed system. Alternatively, each application/service may be installed on a single host machine. The install components are:

- GV File Client: Client application
- GV File Server: Service
- GV File Node: Service (default) or Application
- GV File Browser Service
- GV File Watcher Service
- License Server Service

GV File Client is the application that is the control surface for GV File. It can be installed locally on the host machine, or run from a remote computer which is running a 64 bit version Microsoft Windows (Win 7 / Win 8 / Win 10 / Win Server 2008 / Win Server 2012, Win Server 2016). A Mac Client is also available meaning GV File may be controlled via a remote Mac computer. Multiple clients can be connected to a single GV File system. The GV File Client offers intelligent profile creation, job creation, visibility of available products (and associated quantity of licenses), framework configuration and status.

GV File Server is the service responsible for the orchestration of the framework. It organizes the various deployments and their associated services and manages; the job queue, the license server and products and their associated profiles (users/default). Job priority can be specified. Jobs of an equal priority are executed on a first come, first served basis. For a job to start, the required node and license must be available.

GV File Node is the service/application which transforms/converts the video/audio and metadata. For successful operation an Open CL V1.1 environment is required. This can be achieved using single or multiple GPUs within a host machine.

Details of supported GPUs can be found in the appropriate Datasheet on the web site (see section 2 above).

Multiple GPUs within a host machine can be used to increase the speed of processing up to real time.

A deployment can consist of multiple nodes to enable parallel processing of jobs within the queue. The quantity of GV File Node's available dictates the quantity of jobs that can be run in parallel at any one time.

Dependant on the network topology, this service may require authorisation to access the media on specified shares.

From V2.0.0.10 the GV File Node should be installed as an Application if multiple Nodes are to be configured.

GV File Browser is a service which provides access and directory listings for local and remote shares to the client. This enables the **browsing** feature within the client and enhances the user experience when creating new jobs. Dependant on the network topology, this service may require authorisation to access the media on specified shares.

GV File Watcher is a service which monitors user specified Watch Folders and automatically adds them to the job queue. Monitoring can be based on file system notifications or dedicated polling. The user specifies a Profile to be applied to each asset which is copied to a Watch Folder. The processed asset is then written to the associated Drop Folder. Filters and output filenames can be assigned to each Watch Folder. Dependant on the network topology, this service may require authorisation to access the media on specified shares.

License Service – is the service that manages licensing of the with the GV File framework. If the license service is not available, or cannot be accessed over the network, products within the framework will not be available for use.

4. Framework Topology

The GV File software framework benefits from a Service Orientated Architecture (SOA) which has been engineered to support a range of deployments from a single node through to a cluster of nodes within a data centre.

This SOA design philosophy aids your ability to evolve your installation and allow it to grow as your needs change. Whether you want a centralized job queue managing many processing nodes, or prefer singular job queues managing individual nodes, the framework can accommodate your requirements.

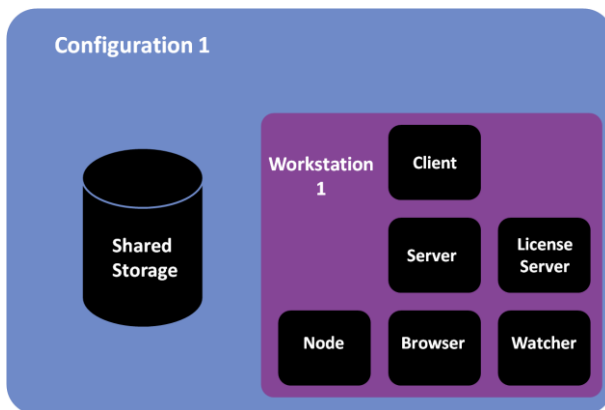
4.1 Framework Configuration Examples

Here are few examples to demonstrate the various ways you could configure your GV File Framework.

4.1.1 Standalone

This example shows a typical installation where all Services and the Client have been installed on a single workstation/Server. The key consideration here is that the license server is installed on the same piece of hardware that the node is running. Typically the node is more likely to be upgraded (operating system and/or, hardware).

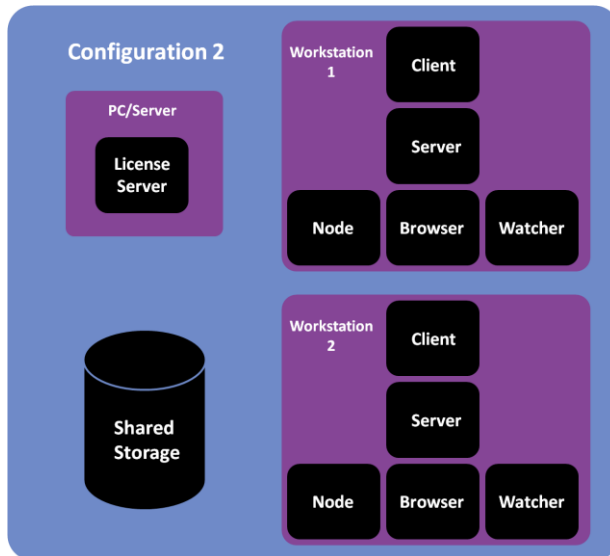
As the license is locked to specific criteria of the hardware it could be argued it is not ideal having the license server and node coexist on the same hardware.



4.1.2 Multiple Servers

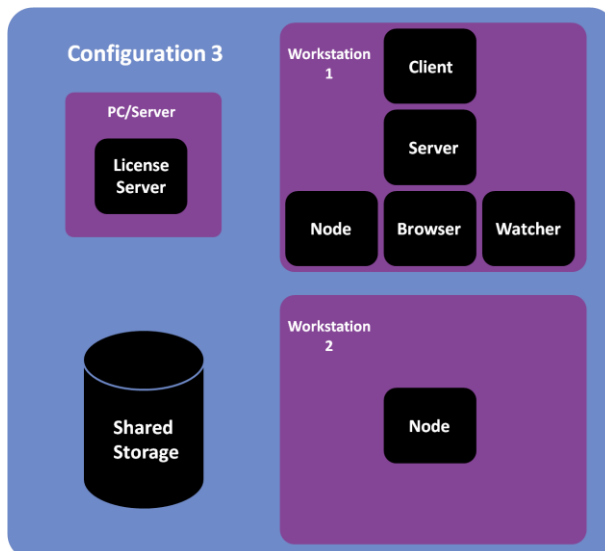
This example shows how multiples servers can be configured to support separate workflows with a common license server.

This topology would be useful when the two workstations support different user groups or workflows. The job queues and profiles are independently managed.



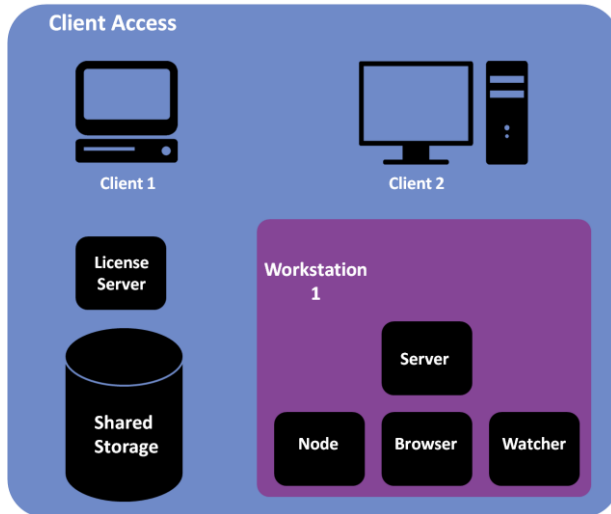
4.1.3 Single Server, Multiple Nodes

This example shows how a single server can manage multiple nodes. This offers the ability to process jobs in parallel (assuming multiple licenses are available). One server manages all the jobs and all the profiles. As soon as both a node and a license are available the next job in the queue will be processed.



4.1.4 Use of the Client

The Client can be installed directly on the workstation/server or it can run remotely on a desktop/laptop. Any number of clients can access a single GV File Server.



4.2 Considerations for Distributed Installations

Key Considerations:

1. It is recommended the License Server is located on a compute instance which is permanently available.
Note - for security reasons, virtual machines are not permitted.
2. The GV File Node must have one or more GPUs offering an Open CL environment.
3. The GV File Node, Watcher and Browser all require authorisation to access the media files.
4. The GV File Node requires high bandwidth access to shares.

5. Package Download

The GV File software package is downloaded from the SAM store.

Using your internet browser go to: <http://store.s-a-m.com/GV File>

grassvalley

Home GV File Live Conversion SigMA Multiviewers Shopping Cart Checkout Login Create an account Contact Us

Welcome to the GV store

Cart 0 item(s) - £0.00

Home - GV File

GV File

Categories

- GV File
- LiveConversion
- SigMA
- Multiviewers

A scalable, file based software framework, GV File combines Grass Valley's image processing expertise with commodity IT equipment to offer the next generation of media processing products. Its Service Orientated Architecture and floating licensing model provides the versatility to evolve and adapt with changing business requirements.

SORT BY: Default SHOW: 8 Product Compare (0)

Alchemist File Base Model single license
Fastest frame rate and format conversion of media files in software. Why Alchemist File? / Features World's best

Scroll down the opening page and click on your chosen GV File product.

Add the **Product Base Model single license** to your Cart. Go to the Cart and checkout.

You will have to register, or login if you're a returning customer and then complete the order.

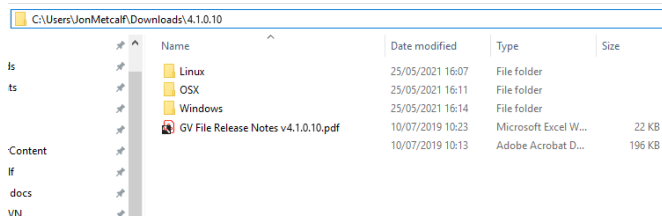
Once an order has been placed, you will be given access to a download package within the **Downloads** section of the SAM Store.

Download and store the software package on your server you wish to install.

6. GV File Installer Contents

The GV File Installer package downloaded from the store will arrive in the form of a zip file.

Unzip the GV File Installer package to the GV File Host Machine:

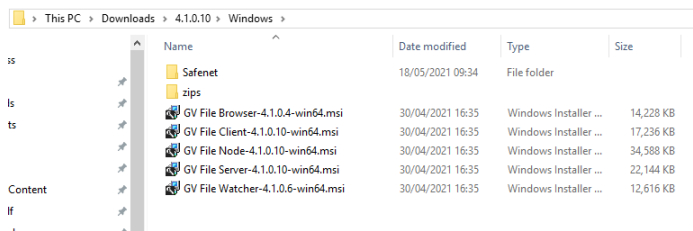


Name	Date modified	Type	Size
Linux	25/05/2021 16:07	File folder	
OSX	25/05/2021 16:11	File folder	
Windows	25/05/2021 16:14	File folder	
GV File Release Notes v4.1.0.10.pdf	10/07/2019 10:23	Microsoft Excel W...	22 KB
	10/07/2019 10:13	Adobe Acrobat D...	196 KB

Note that the package includes full install packages for Windows and for Linux.

An OSX version of the GV File Client is also included enabling a GV File installation to be controlled from a remote MAC (note – currently GV File Installation is not supported on OSX).

Opening the Windows folder will reveal the component Installers.



Name	Date modified	Type	Size
Safenet	18/05/2021 09:34	File folder	
zips			
GV File Browser-4.1.0.4-win64.msi	30/04/2021 16:35	Windows Installer ...	14,228 KB
GV File Client-4.1.0.10-win64.msi	30/04/2021 16:35	Windows Installer ...	17,236 KB
GV File Node-4.1.0.10-win64.msi	30/04/2021 16:35	Windows Installer ...	34,588 KB
GV File Server-4.1.0.10-win64.msi	30/04/2021 16:35	Windows Installer ...	22,144 KB
GV File Watcher-4.1.0.6-win64.msi	30/04/2021 16:35	Windows Installer ...	12,616 KB

7. Software Installation

7.1 Overview

Each MSI file is installed in turn by double click on them; there is no specific installation order. Each installation program will guide you through the procedure.

During installation of some Services/Applications, the user will be prompted to specify the logon account for each Service. It is recommended that the nominated account has the required authorization to access all remote shares within the installation.

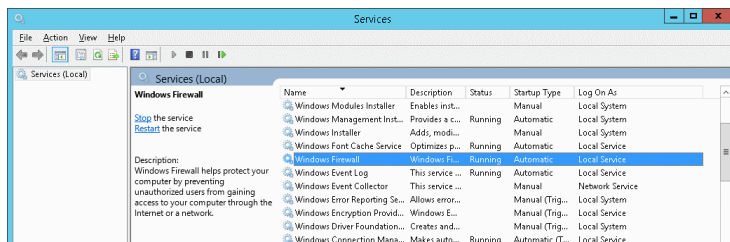
At the end of each MSI installation (except for the GV File Client) you will be prompted to restart the server. However it is only necessary to reboot the system once, after all the components have been installed.

When the GV File Client is installed a GV File shortcut icon will be added to the desktop. If the GV File Node is installed as an Application a second shortcut icon, to start the Node, will be added to the desktop.

7.2 Prerequisites

Before commencing the Upgrade, please consider the following:

- It is a requirement that in order to Install or Uninstall the GV File Components, that the Windows Firewall Service must be running.



- Usual practice is to install all the GV File Components on the same Host PC/Server. However, it is possible to install GV File components on separate machines. In particular, it may be desired to run the GV File Node (or Nodes in a multi Node install) on separate host machines. In such cases these GV File components will need to be updated on their respective host machines.

The GV File Node may be installed either as a Service, or as an Application. Normally the GV File Node would be installed as a Service. However, there are certain criteria that make it necessary to install the GV File Node as an Application. This is necessary if multiple GV File Nodes are to be installed on the same host machine.

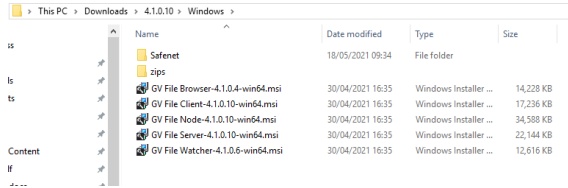
Important: if a GV File Trial has previously been installed on the Host Machine, it is imperative that the trial is completely removed before installation of the full product is began.

See Appendix D below for GV File Trial uninstall instructions.

7.3 Service Install

The installation procedure is described below

1. Locate the MSI files that were downloaded as described in part 5 above.

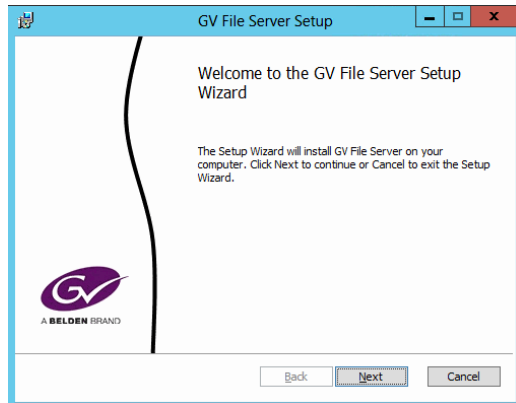


In this example, the GV File Server is chosen to be installed first, although the order in which each MSI is actually installed is irrelevant.

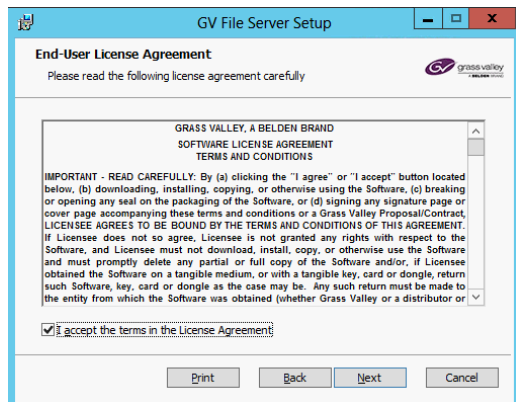
Double click on the relevant MSI file to initiate the installation procedure.

Remember, if it is intended to install multiple GV File Nodes on the same host machine, then the GV File Node must be installed as an Application.

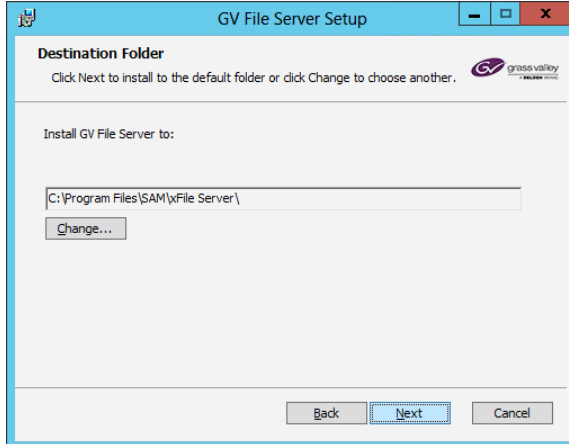
2. Click on the **Next** button to continue.



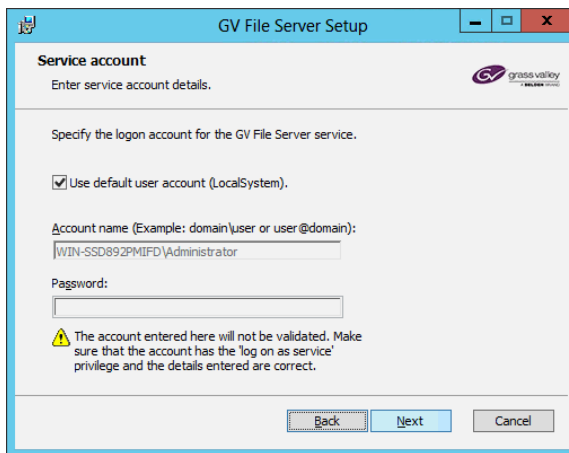
3. Click on **I Accept the terms in the License Agreement** and click on **Next** button.



4. Select the program install location, and then click on the **Next** button.



5. Continue with **default user account** or enter a nominated account name and password, and then click on the **Next** button.



Important: with regard to the GV File Browser, GV File Watcher and GV File Node, in circumstances where media is to be read from, or written to, a remote storage device, then it is essential that these GV File components have administrative rights access to the remote storage.

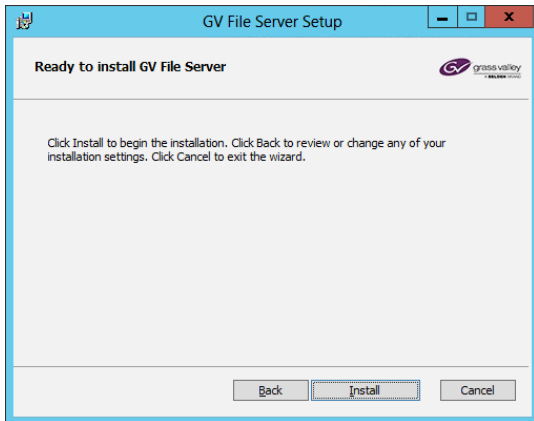
Hence that it is important to consider this when entering the Service Account details entered.

Note that with respect to the GV File Node, this is not relevant if the Node is installed as an Application.

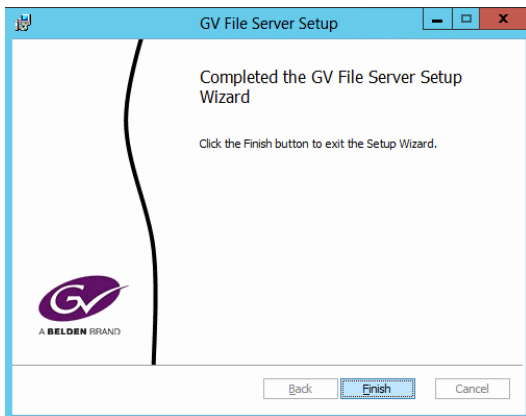
The GV File Server is not critical in this respect, and the default User Account can be used.

Note also that the Service Account window is not seen when installing the GV File Client.

6. Click on the **Install** button

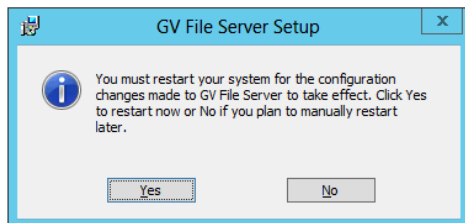


7. When the install completes the **Completed** window will appear.



Click **Finish**.

8. A warning box will now appear indicating that the Server will need to be restarted to complete the installation.



Select **No**.

9. Repeat the installation for the other required GV File services on this server.

Only restart the Server once the last Service has been installed. This will limit the server restarts to just one rather than multiple times. Applications will not require a restart.

8. System Configuration

Once GV File components have been installed, configuration can begin. Configuration is required before any of the GV File products can be used. Configuration includes specifying where the various services are located and configuring the locations of shares.

8.1 Default Deployment Creation

This section covers the creation of a **Default Deployment**. A Default Deployment assumes all Applications/Services have been installed on a single host machine.

1. From the Windows desktop, double click on the **GV File** icon to launch the **GV File Client**.



The GV File Client will now open.

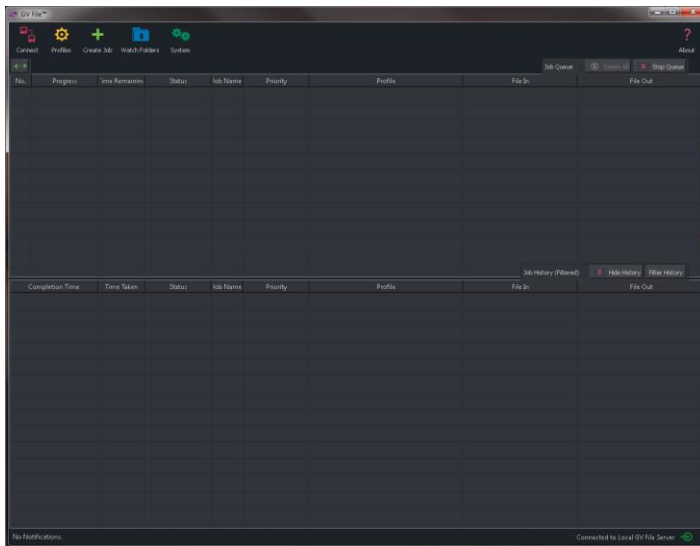


Figure 1: GV File Connection Screen

Key points of interest:



Connect is used to define the GV File Server you wish to connect to.



Profiles is used to configure **User Profiles**.



Create Job is used to add a new manual job to the job queue.



Watch Folders is used to manage Watch Folder Configuration.



System is used to configure, manage and maintain the GV File deployments and services.



About is used to inform the user of the client version currently in use.

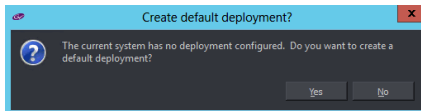


Connection to is used to indicate Server connection success (green) or failure (red).

- The GV File Client will automatically connect to the GV File Server. This can be confirmed by looking at the bottom right corner of the client. Successful connection will be confirmed by the green **Connected** icon:

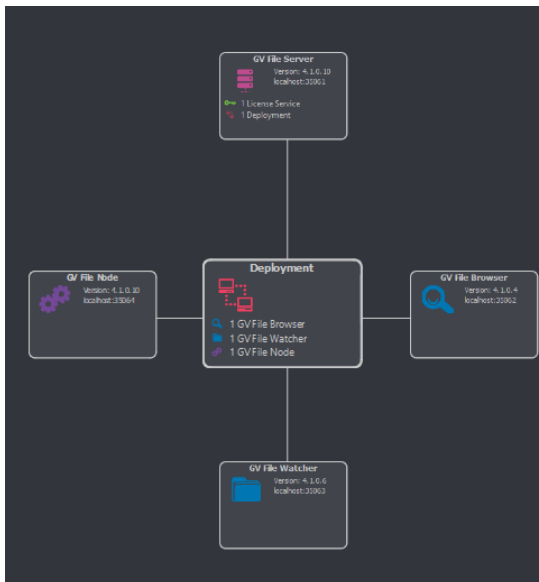


- Once connected, a pop up window will appear .



Click **Yes** to create a **default deployment**.

- Check the default deployment has been successfully configured. Click on the **System** icon, followed by **Deployment**. The Deployment should appear like this:



8.2 Remote Client Installation

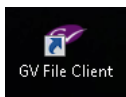
A GV File installation may be controlled via the GV File Client installed on an external workstation. A network connection is required between the GV File host machine and remote workstation.

The Client Installer should be copied to the remote workstation and installed, as described in part 7.3 above.

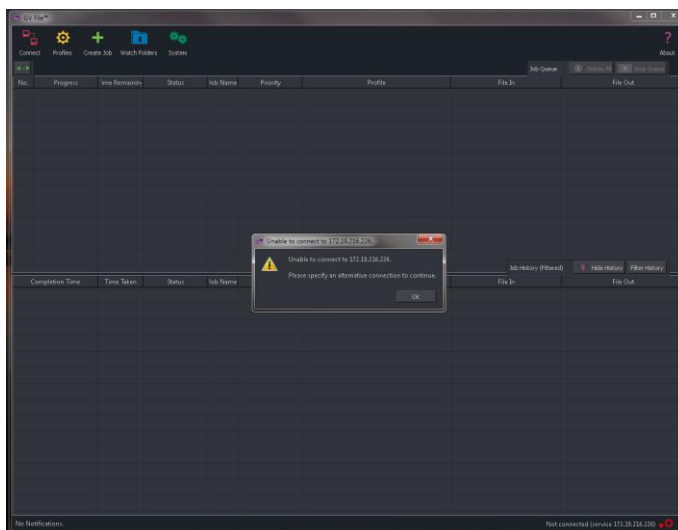
Remote Client Configuration

1. Launch the **GV File Client**:

On the remote Windows desktop, double click on the **GV File** icon to start the GV File Client.



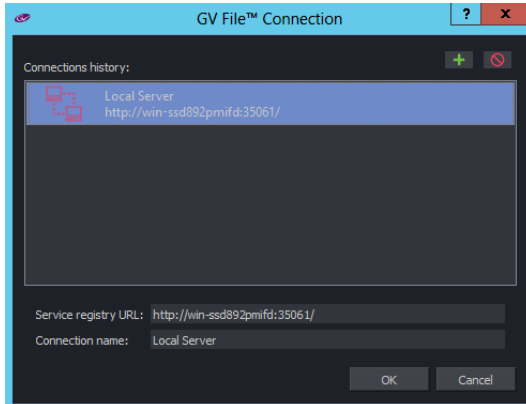
The Client will open, but will currently not be connected to any GV File Server.



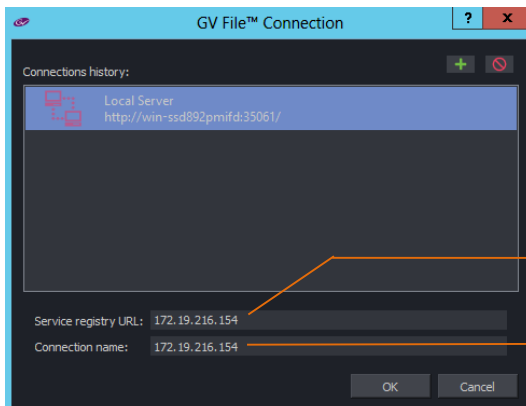
- Click on the **Connect** icon



The **GV File Connection** window will appear.



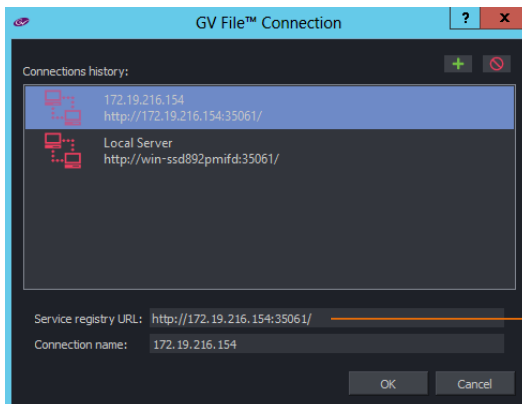
- Specify the desired GV File server using the **Service registry URL** field.



In this example the **IP Address** of the GV File host machine is used. It is only necessary to input the IP Address.

The **Connection name** will automatically populate.

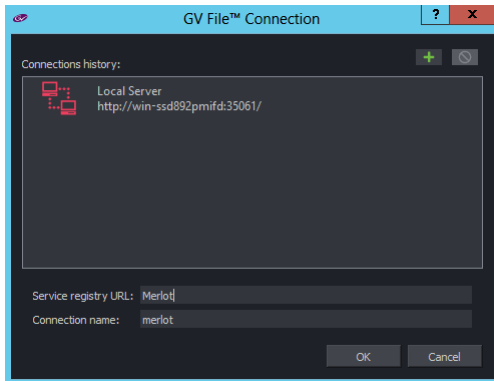
The new connection will be added to the **Connection History** pane:



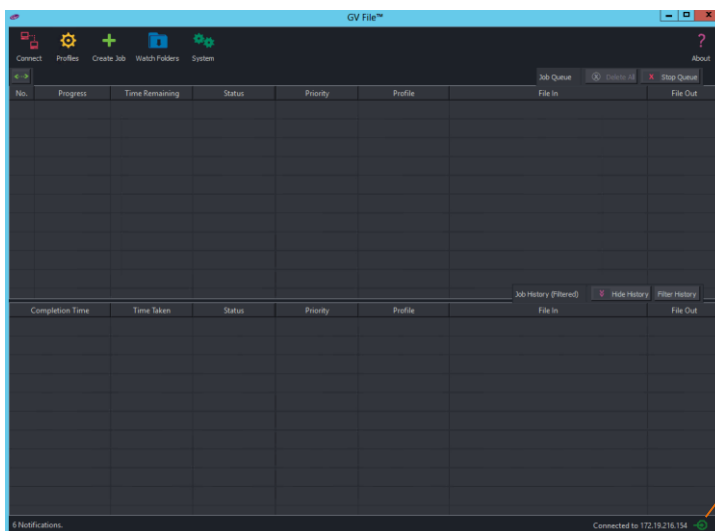
The **Service registry URL** field will populate with the full URL path, including the Port, automatically.

The port used here is always **35061**

Alternatively, a qualified name can be used:



Once connected to the GV File Server, the following screen will be displayed.

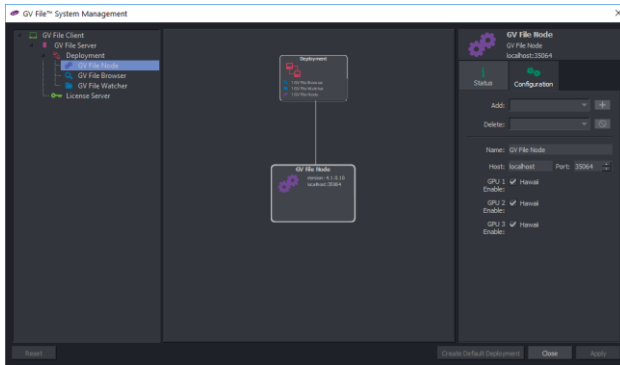


The green icon confirms a successful connection

8.3 GV File Node Configuration

GPUs can be enabled and disabled within the configuration tab of the GV File Node.

The status tab will show the status of each GPU installed onto the host machine. Using this status information the user can decide which GPUs to disable/enable.



Typical reason for disabling a GPU would be:

- A low spec GPU is installed to drive a monitor
- The system has a mixture of GPUs installed, and the user wants to maximise performance.
- Testing the performance of a single GPU.

Important!

Multiple GPUs should be matched. If different GPUs are used, higher spec GPUs will only operate at the speed of the lowest spec GPU. It is recommended only GPUs from the same vendor are used within a host machine.

It is highly recommended not to mix AMD and NVidia GPU within the same compute enclosure. The respective drivers will conflict and the system will not function.

9. Licensing

The following steps are for a Production installation. During a Trial installation the license is automatically installed. The License Server installation can be found within the **Safenet** folder.

Before Installation of the License Server, please refer to:

- Section 1.2: GV File Framework License Warning
- Section 4: Frame Topology.

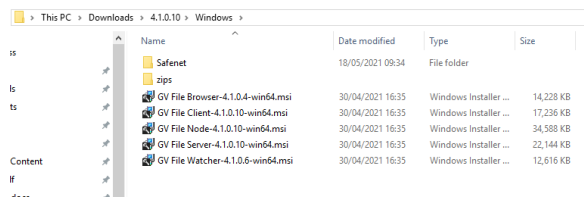
The License Server may be installed either locally on the GV File Host Machine, or on a separate workstation.

The following instructions describe the procedure if the License Server is running on the GV File Host Machine.

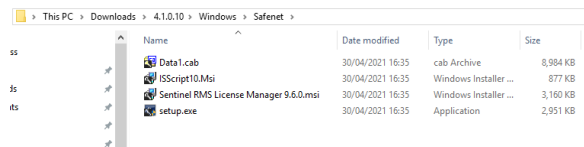
If the License server is to be installed on a separate workstation, please refer to **Appendix C**.

9.1 License Software Installation

1. Locate the **Safenet** folder that was downloaded as described in part 6 above.

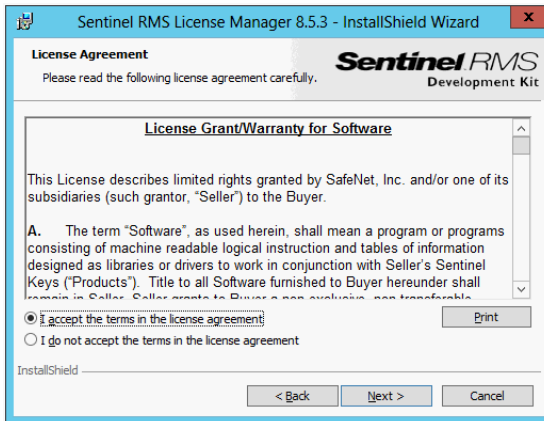


2. Double click on the **Safenet** folder.



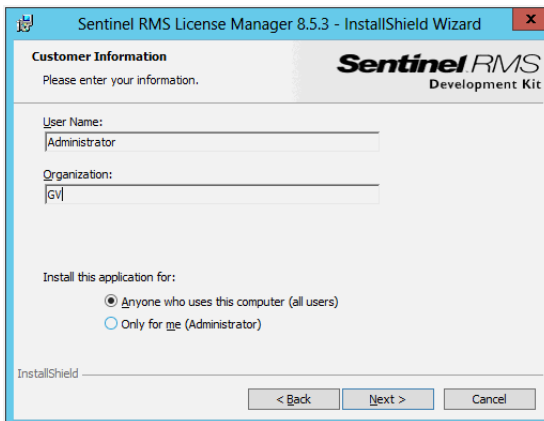
3. Double click on the **setup.exe**, and then click on **Next** button.

4. **Accept** the license agreement.



5. When prompted add your Customer information.

User name **GV File** has been used as an example.



6. Continue with the installation: select the defaults for the remaining parts of the installation until it is completed.

Click on **Finished** to exit the installation program.

9.2 Accessing the Lock Code

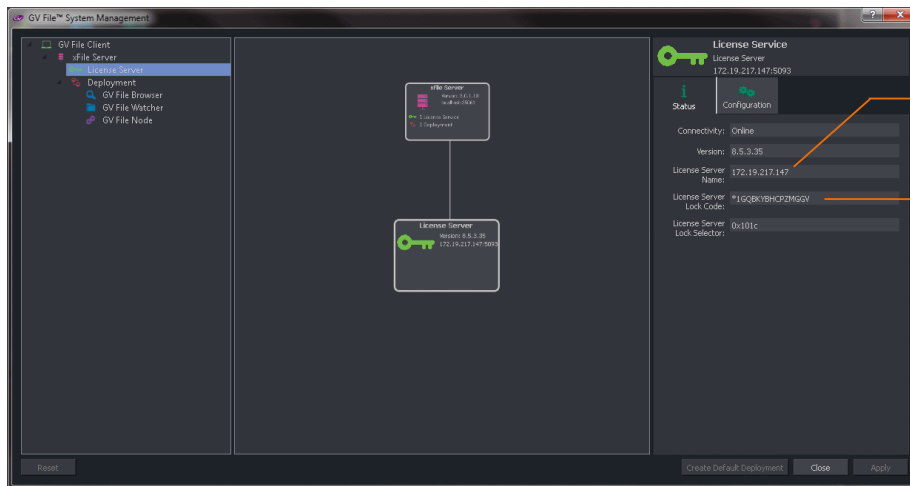
The lock code is required to generate a unique GV File license.

The lock code is generated using unique hardware information from the host of the License Server.

The License generated for this host will only work when installed on this host.

Important: Any required changes to the system hostname should be made prior to retrieving the license server lock code; modifying the license server hostname following license activation will result in the XF software becoming unlicensed.

Using the GV File Client, click **System** followed by **License Server**.



Verify the hostname is the license server

Copy and paste the unique code into Notepad.

This code is required to generate a new license.

Copy and paste the **License Server lock Code** into notepad, and give the file an appropriate name. This string will be used by to create your license via the SAM Store.

Important note!

- The license will only work on the system the lock details were generated on!

9.3 License Generation

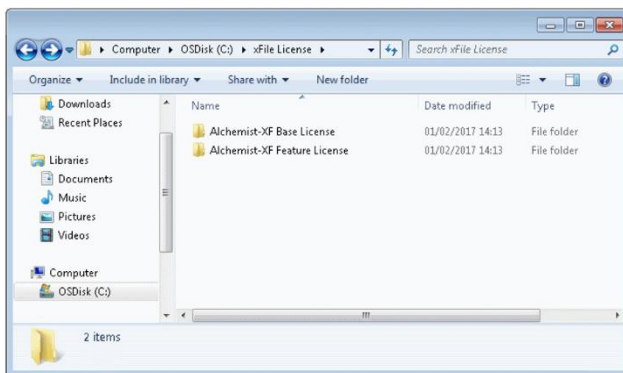
Note on Licensing:

A confirmation email is sent once your order has been processed but it does not contain any license details or files.

To access your **Base** license, log into your [SAM Store](#) account and review the **Order History** section. The license(s) can be activated by entering the **License Server Lock Code** (retrieved in part 9.2 above) then clicking the **Send** button.

Accept the license file download (lserverc) and save it in a safe location on the License Server host machine.

Once the Locking Code has been entered in your SAM Store account, a Feature License will be sent as an email attachment. As with the Base License above, this will be in the form of a **lserverc** file. This file should be saved alongside the Base License on the License Server host machine.

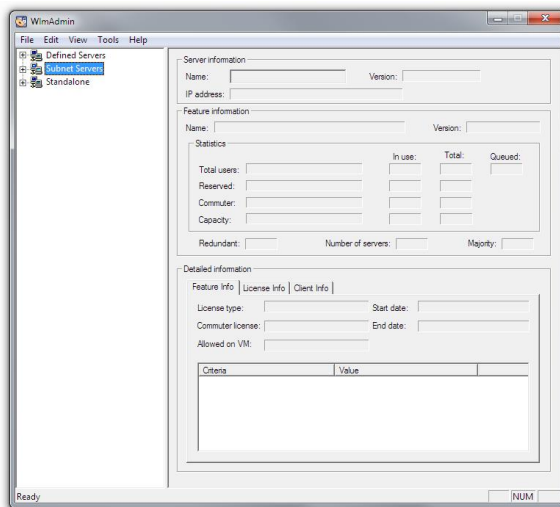


9.4 License Installation

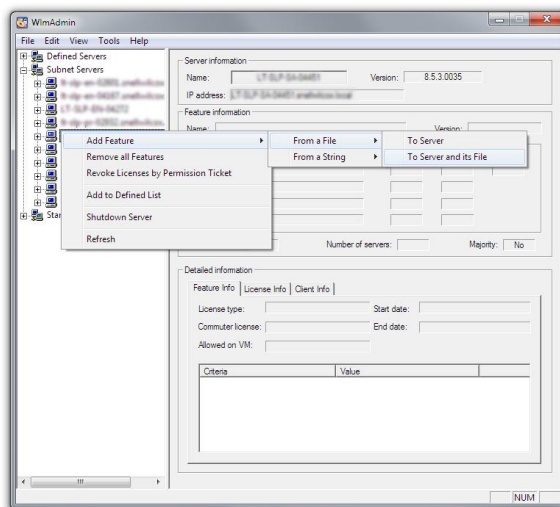
The license key needs to be added to the License Server before your purchased GV File product can be used.

9.4.1 Applying License to License Server

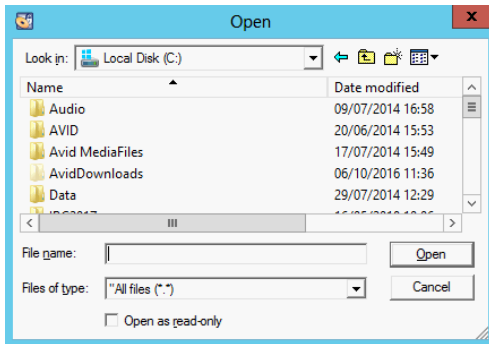
1. Log on to the License Server Host Machine.
2. Using File Explorer navigate to:
`c:\Program Files\SAM\XFile_Server\Licensing Tools`
3. Double click on the **WlmAdmin.exe**.
4. Click on the **+** icon next to **Subnet Servers** to expand the list.



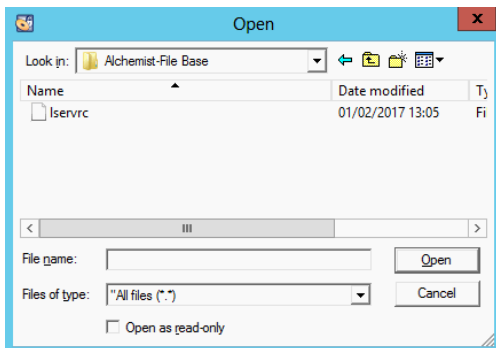
5. Select the server you wish to be the License server.
6. Right click the server then expand to: **Add Feature > From a File > To Server and its File**.



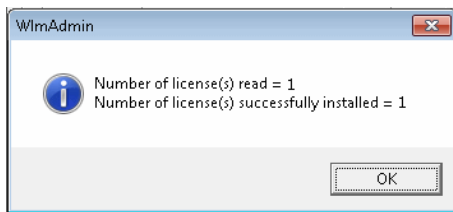
Upon selecting **To Server and its File** a new window will appear called **Open**



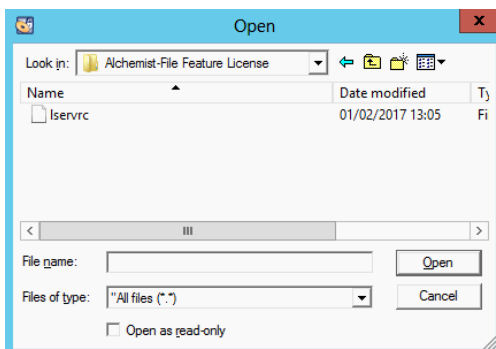
7. Within this window, browse to the location of the Base License (as described in part 9.3 above)



8. Clicking **Open** will apply the license. A confirmation message will be seen:



9. Repeat the License installation process for the Feature License

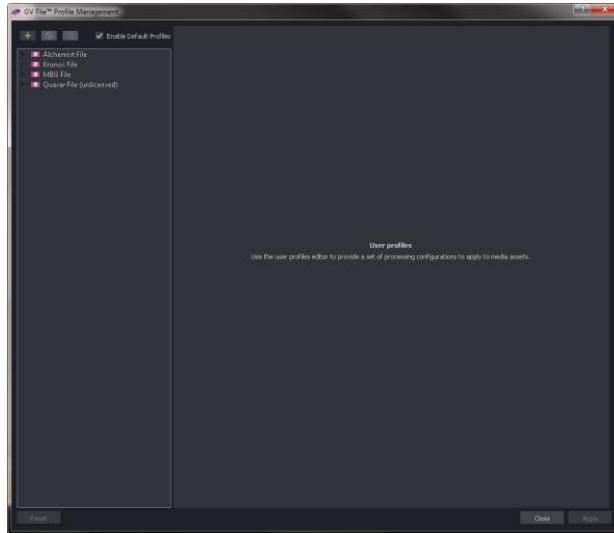


This completes the license installation.

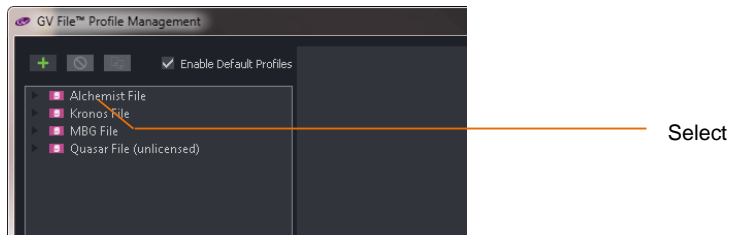
9.5 Validation of the GV File License Using the GV File Client

In the GV File Client, click the **Profiles** icon.

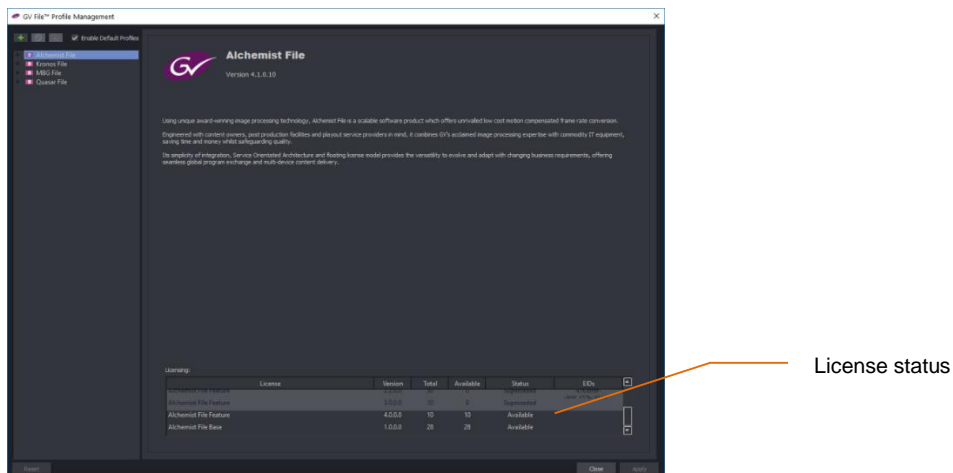
The **GV File Profile Management** window will open:



Click on the Product that is to be verified:



A product information page for the selected product; in this example, Alchemist File:



10. Remote Shares

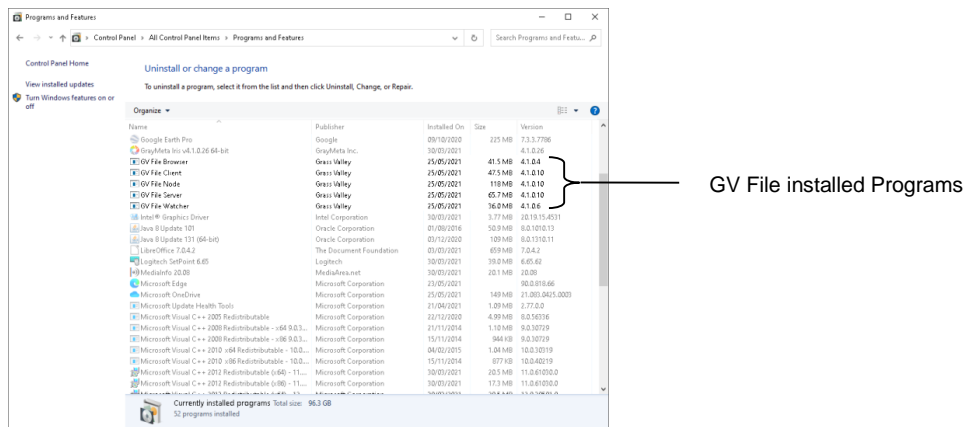
For assistance setting up Remote Shares please refer to the help document on the website here:

[GV File-how-to-setup-remote-shares-windows.pdf](#)

11. Programs and Features Listing

Each MSI adds entries to the **Programs and features**

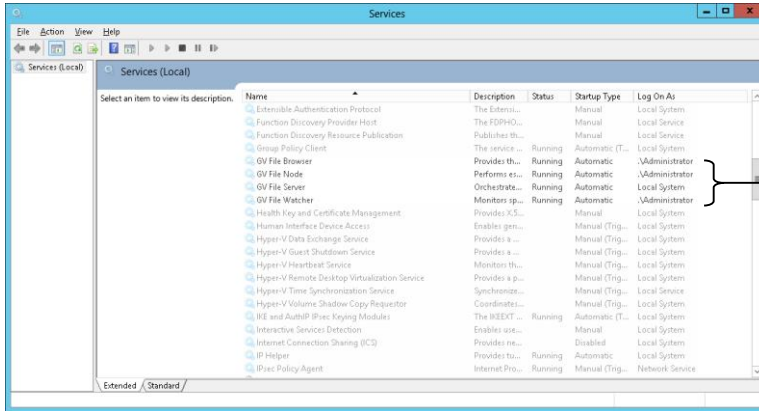
Click on **Start \ Control Panel \ Programs and features** to view.



12. Services listing

To view the GV File services click on **Start \ Control Panel \ Administrative tools \ Services**

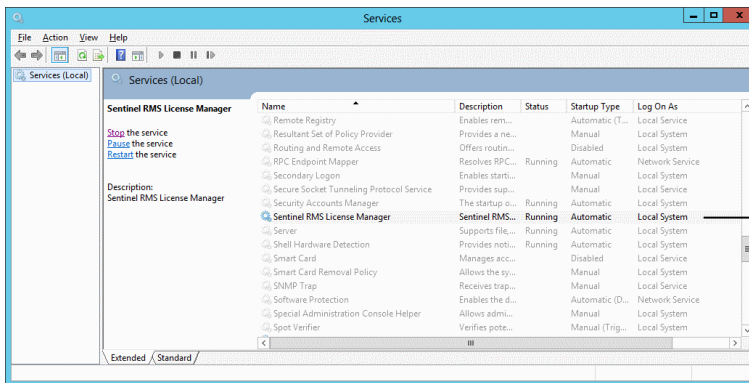
Scroll down the presented list to the GV File services and the License Manager Service.



GV File Services

Note that if the GV File Node is running as an Application, it will not appear in the list of Services.

The Sentinel License Manager also runs as a Service:



Sentinel License Manager Service

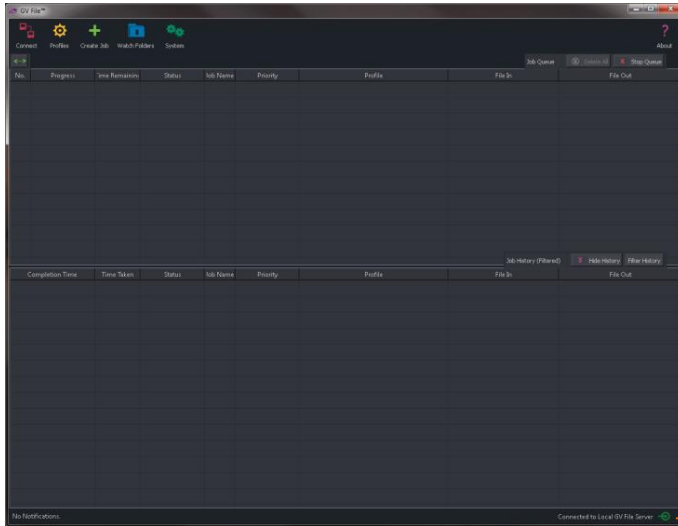
The Install is now complete.

13. Testing the GV File System

Once the Install is complete, it is recommended to test the system.

It is suggested that a small test file (i.e. 30 second duration, SD file) is copied to the GV File host machine.

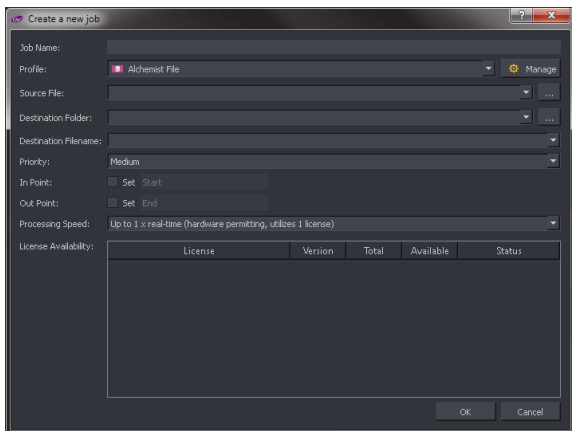
1. Open the GV File Client.



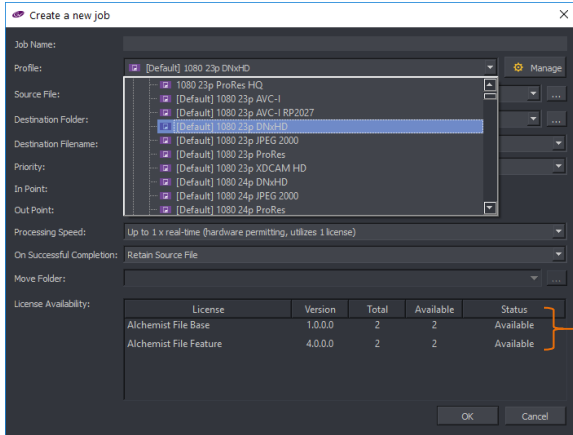
Confirm the Client is connected to the new GV File installation

Select **Create Job**.

The **Select Job** window will appear.



2. Select one of the Default Profiles from the list of profiles.

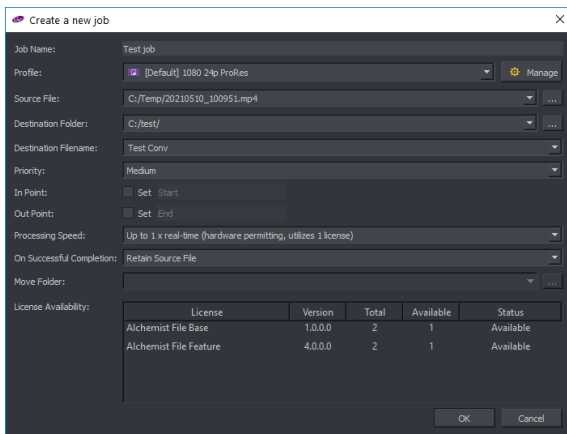


Note that upon selecting a Profile, Licensing information will be displayed in the **License Availability** field.

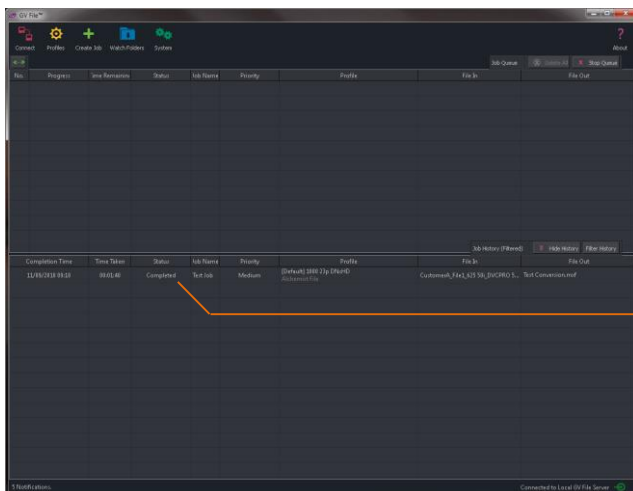
In this example a single Alchemist File license is available and so a job can be processed.

License information

Configure a job using the small source file now present on the GV File Host Machine and configure the output file to be written also to a location on the GV File host machine.



Confirm that the job processes correctly.



Confirm job completes

Appendix A. Communication Matrix – Firewall Info

Table 3: Alchemist File Services Names, and Communication Matrix.

Source Service	Source Port	Destination Service	Destination Port	TCP/UDP
GV File Client	HIGH PORT	GV File Server	35061,35060	TCP
GV File Client	HIGH PORT	GV File Watcher	35063	TCP
GV File Server	HIGH PORT	GV File Browser	35062	TCP
GV File Server	HIGH PORT	GV File Watcher	35063, 35069	TCP
GV File Server	HIGH PORT	GV File Node	35064	TCP
GV File Server	HIGH PORT	License Server	5093	UDP
GV File Node	HIGH PORT	License Server	5093	UDP

Here is a table that shows the Alchemist File required connectivity if the services are distributed. The above table gives the required details to configure the hosts firewall.

- If all services are installed on one Server, then no Firewall configuration is required.
- If you have a GV File Client installed on a remote PC/Server, then the Firewall will need to be open between the GV File Client and the GV File Server, and also between the GV File Client and GV File Watcher, as detailed above.

Appendix B. NVIDIA TCC Mode Check / Configuration

Overview

This only affects host machines which are using older consumer Nvidia GPUs on a Windows Operating System and when the Node application is installed as a Service.

NVIDIA Quadro GPU cards can run in one of two modes: WDDM or TCC

WDDM (Windows Display Driver Model) is the normal working mode when the GPU is used to drive a display.

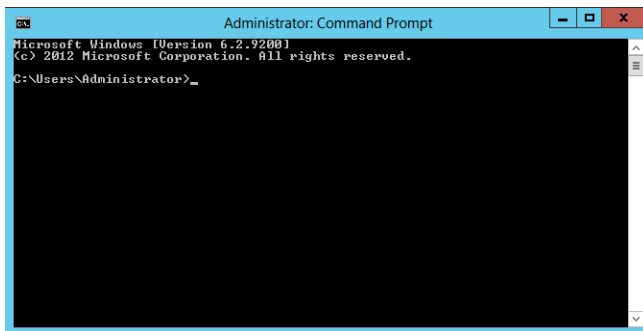
TCC (Tesla Compute Cluster) maybe required for successful operation of the GV File Node when using older NVidia consumer GPU, but enabling this will disable the graphics output, therefore if a local display is required another display adapter will be required. This could be either an on-board device or another GPU.

Alternatively access to the server could be achieved via RDP (Remote Desktop Protocol), this negates the need for a local display.

Another way to avoid this scenario is to simply install the GV File Node as an Application.

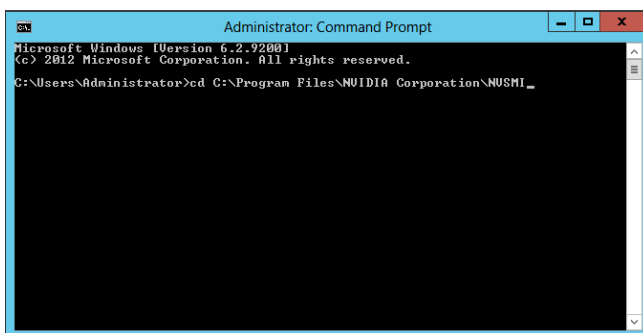
Checking Current GPU Mode

1. On the Host machine the GPU/s are installed in, open a Windows Command Prompt and **Run as Administrator**.
2. The command line window will open as follows:

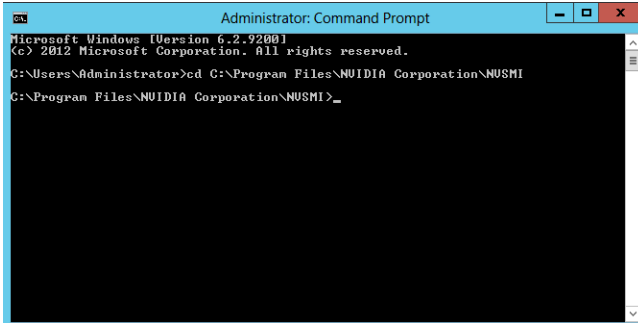


3. Change the directory by typing:

```
cd C:\Program Files\NVIDIA Corporation\NVSMI
```

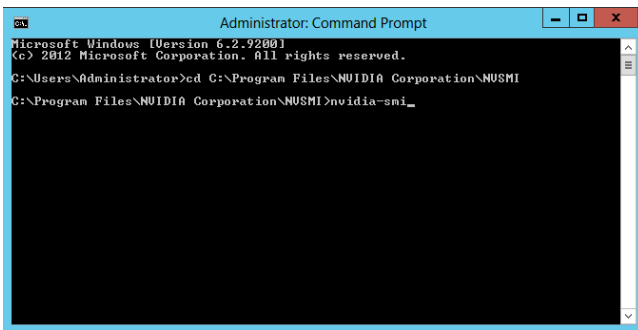


The Windows command Prompt will update.



4. In the Command Prompt, type:

`nvidia-smi`



5. The Command Prompt window will now update to show a table detailing the status of the installed NVidia GPU's:

```

Administrator: Command Prompt
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.
C:\Users\Administrator>cd C:\Program Files\NVIDIA Corporation\NUSMI
C:\Program Files\NVIDIA Corporation\NUSMI>nvidia-smi
Thu Apr 17 11:52:11 2014

+-----+
| NVIDIA-SMI 332.76   | Driver Version: 332.76      |
+-----+-----+
| GPU   Name           | TCC/WDDM | Bus-Id  | Disp.A | Volatile Uncorr. ECC |
| Fan  Temp  Perf    Pur:Usage/Cap | Memory-Usage | GPU-Util | Compute M. |
+-----+-----+-----+-----+-----+-----+
| 0  Tesla K20m       | TCC      | 0000:02:00.0 | Off    | 0%                  |
| N/A   33C    P0     49W / 225W | 1295MiB / 4799MiB |          | Default    |
+-----+-----+-----+-----+-----+-----+
| 1  Tesla K20m       | TCC      | 0000:03:00.0 | Off    | 0%                  |
| N/A   41C    P0     47W / 225W | 1295MiB / 4799MiB |          | Default    |
+-----+-----+-----+-----+-----+-----+
| 2  Tesla K20m       | TCC      | 0000:04:00.0 | Off    | 0%                  |
| N/A   35C    P0     47W / 225W | 1295MiB / 4799MiB |          | Default    |
+-----+-----+-----+-----+-----+-----+
| Compute processes: |                               | GPU Memory |
| GPU   PID  Process name |                               | Usage      |
+-----+-----+-----+-----+-----+-----+
| 0     1724  ..gran Files\Snell 0D Node\Snell10D_NodeWorker.exe | 3840MiB |
| 1     1724  ..gran Files\Snell 0D Node\Snell10D_NodeWorker.exe | 3840MiB |
| 2     1724  ..gran Files\Snell 0D Node\Snell10D_NodeWorker.exe | 3840MiB |
+-----+-----+-----+-----+-----+-----+
C:\Program Files\NVIDIA Corporation\NUSMI>_
    
```

In this particular example we can see that three NVidia GPUs are installed and all are currently running in TCC mode.

Changing to TCC Mode Instructions

1. If it is determined that the NVidia GPU is currently running in WDDM mode, and it is desired to change the mode to TCC mode.

```

Administrator: Command Prompt
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.
C:\Users\Administrator>CD C:\Program Files\NVIDIA Corporation\NUSMI
C:\Program Files\NVIDIA Corporation\NUSMI>nvidia-smi
Thu Apr 17 13:28:55 2014

+-----+
| NVIDIA-SMI 5.320.92   Driver Version: 320.92   |
+-----+-----+
| GPU Name   Perf   TCC/WDDM | Bus-Id   Disp.A | Volatile Uncorr. ECC |
| Fan  Temp  Perf  Pwr:Usage/Cap |      Memory-Usage | GPU-Util  Compute M. |
|-----+-----+-----+-----+-----+-----+
| 0  Tesla K40m   P8   35W / 235W | 0000:02:00.0   Off |           0         |
| N/A   36C    P8   35W / 235W | 69MB / 11519MB |    0%      Default |
+-----+-----+-----+-----+-----+
| 1  Tesla K40m   P8   35W / 235W | 0000:03:00.0   Off |           0         |
| N/A   39C    P8   35W / 235W | 69MB / 11519MB |    0%      Default |
+-----+-----+-----+-----+-----+
| 2  Tesla K40m   P8   32W / 235W | 0000:84:00.0   Off |           0         |
| N/A   27C    P8   32W / 235W | 11519MB / 11519MB |    0%      Default |
+-----+-----+-----+-----+-----+
| Compute processes:                               GPU Memory |
| GPU      PID  Process name                                     Usage      |
+-----+-----+-----+-----+-----+
| 2        2112 Insufficient Permissions             N/A        |
| 2        5280 Insufficient Permissions             N/A        |
| 2        6444 C:\Windows\Explorer.EXE             N/A        |
+-----+-----+-----+-----+-----+
C:\Program Files\NVIDIA Corporation\NUSMI>_

```

In this example GPU number 2 is running in WDDM mode.

2. To configure this GPU to operate in TCC mode, in the Command Prompt window type:

```
nvidia-smi -i 2 -dm 1
```

where:

- i 2 identifies the particular GPU, in this example GPU 2.
- dm 1 configures the mode to be TCC (0= WDDM, 1=TCC)

```

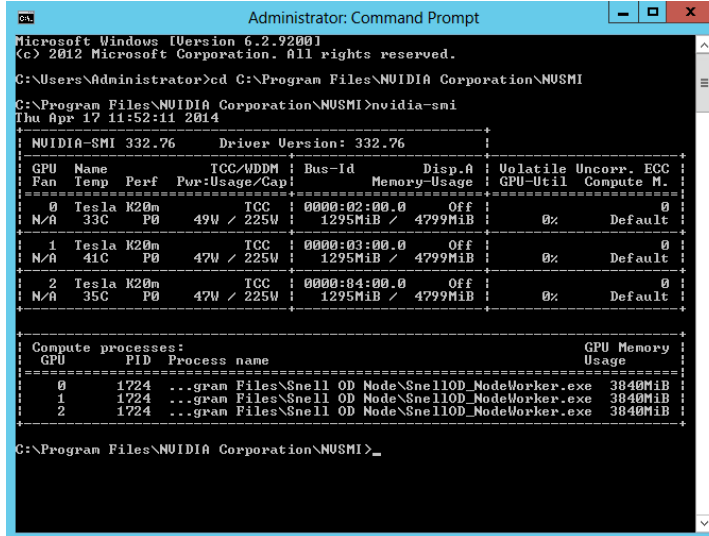
Administrator: Command Prompt
+-----+
| N/A   60C    P8   40W / 235W | 69MB / 11519MB |    0%      Default |
+-----+-----+
| 1  Tesla K40m   P8   37W / 235W | 0000:03:00.0   Off |           0         |
| N/A   53C    P8   37W / 235W | 69MB / 11519MB |    0%      Default |
+-----+-----+-----+-----+
| 2  Tesla K40m   P8   32W / 235W | 0000:84:00.0   Off |           0         |
| N/A   28C    P8   32W / 235W | 11519MB / 11519MB |    0%      Default |
+-----+-----+-----+-----+
| Compute processes:                               GPU Memory |
| GPU      PID  Process name                                     Usage      |
+-----+-----+-----+-----+-----+
| 2        2112 Insufficient Permissions             N/A        |
| 2        5280 Insufficient Permissions             N/A        |
| 2        6444 C:\Windows\Explorer.EXE             N/A        |
+-----+-----+-----+-----+
C:\Program Files\NVIDIA Corporation\NUSMI>nvidia-smi -i 2 -dm 1
Set driver model to TCC for GPU 0000:84:00.0.
All done.
Reboot required.
C:\Program Files\NVIDIA Corporation\NUSMI>_

```

2. After this step a prompt will appear to re-boot the host machine.

An asterisk will also appear next to the GPU that you have run the command on. This is notifying which GPU has been changed and is awaiting a reboot to activate the changes.

3. Re-boot and repeat procedure described in part 1 to confirm that any reconfigured GPU is now running in TCC mode.



```
Administrator: Command Prompt
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>cd C:\Program Files\NVIDIA Corporation\NUSMI
C:\Program Files\NVIDIA Corporation\NUSMI>nvidia-smi
Thu Apr 17 11:52:11 2014

+-----+
| NVIDIA-SMI 332.76      Driver Version: 332.76      |
+-----+-----+
| GPU   Name      TCC/WDDM | Bus-Id      Disp.A | Volatile Uncorr. ECC |
| Fan  Temp  Perf  Pwr:Usage/Cap | Memory-Usage | GPU-Util  Compute M. |
|-----+-----+-----+
|  0   Tesla K20m  TCC      | 0000:02:00.0  Off   |    0%      Default  |
| N/A   33C   P0     49W / 225W | 1295MiB / 4799MiB |          |          |
+-----+-----+-----+
|  1   Tesla K20m  TCC      | 0000:03:00.0  Off   |    0%      Default  |
| N/A   41C   P0     47W / 225W | 1295MiB / 4799MiB |          |          |
+-----+-----+-----+
|  2   Tesla K20m  TCC      | 0000:84:00.0  Off   |    0%      Default  |
| N/A   35C   P0     47W / 225W | 1295MiB / 4799MiB |          |          |
+-----+-----+-----+

+-----+
| Compute processes:      GPU Memory |
| GPU   PID  Process name      Usage   |
+-----+-----+-----+
|  0     1724  ..gram Files\Snell OD Node\SnellOD_NodeWorker.exe 3840MiB |
|  1     1724  ..gram Files\Snell OD Node\SnellOD_NodeWorker.exe 3840MiB |
|  2     1724  ..gram Files\Snell OD Node\SnellOD_NodeWorker.exe 3840MiB |
+-----+-----+-----+

C:\Program Files\NVIDIA Corporation\NUSMI>_
```


Appendix C. Remote License Server

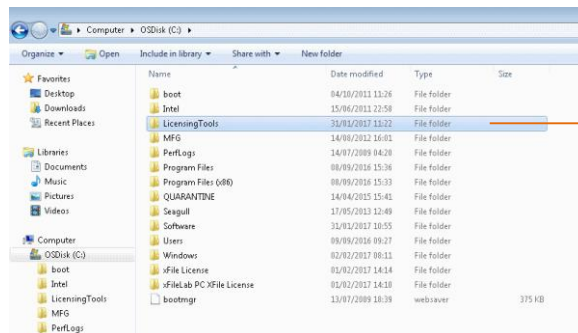
Where a PC/Server that does not have an GV File installation is to be configured as a License Server, the **Licensing Tools** folder that is created as part of an GV File install, will need to be manually copied to the License Server PC.

Procedure:

1. Logon to the GV File host machine.
2. Locate the **Licensing Tools** folder:

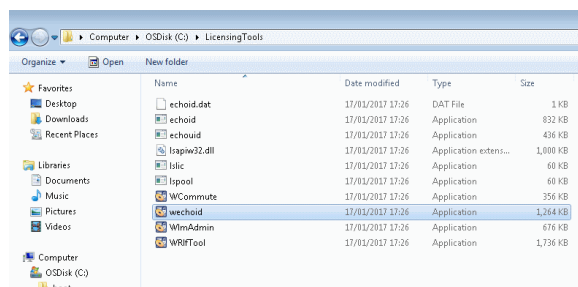
```
c:\Program Files\SAM\xFile_Server\Licensing Tools
```

Copy this folder to the workstation that is to act as the License Server.



In this example, the **Licensing Tools** folder has been copied directly to the C:/ Drive of the License Server workstation.

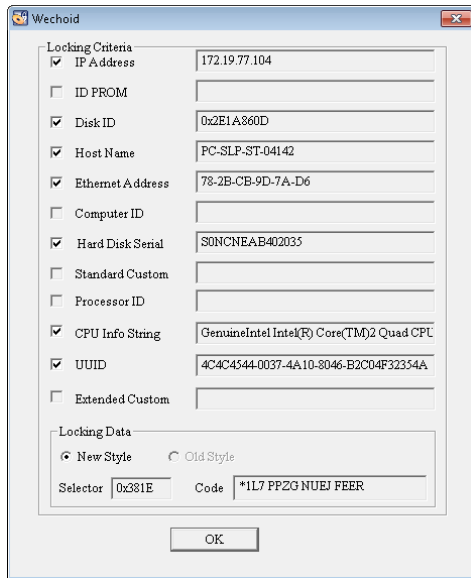
3. Open the Licensing Tools Folder on the remote PC/Server.



Locate the application: **wechoid**

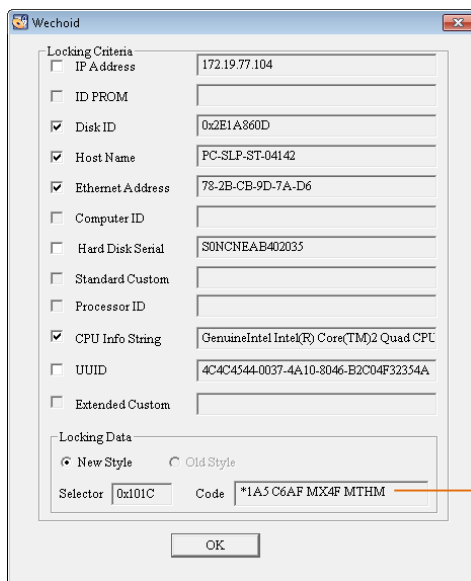
Double click to run the **wechoid** application.

4. The **wechoid** application will now open.



The **wechoid** tool is used to define the locking criteria of the License Server workstation.

5. Edit the **wechoid** locking criteria.



GV File licensing locking criteria uses:

- Disk ID
- Host Name
- Ethernet Address
- CPU Info String

Set the locking criteria by selecting the check-boxes, as shown above.

Copy and paste the resultant locking code into a suitable application (i.e. Notepad).

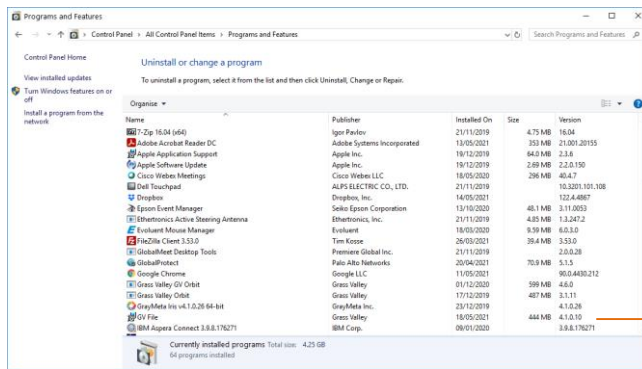
6. Now proceed with part **9.3 License Generation** above.

Appendix D. GV File Trial Uninstall Process

In circumstances where a trial version of GV File has been previously installed on the Host Machine, it will be necessary to completely uninstall the GV File Trial, prior to installing the full product. This is really important as the two products cannot co-exist on the same host machine.

Uninstalling Procedure:

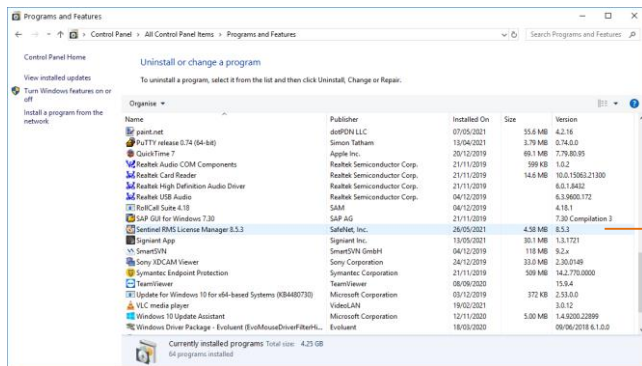
1. On the Host Machine, open: **Control Panel/Programs and Features**
Locate **GV File**



GV File

Uninstall the Trial.

2. Now locate the **Sentinel License Manager** in the list of installed Programs:

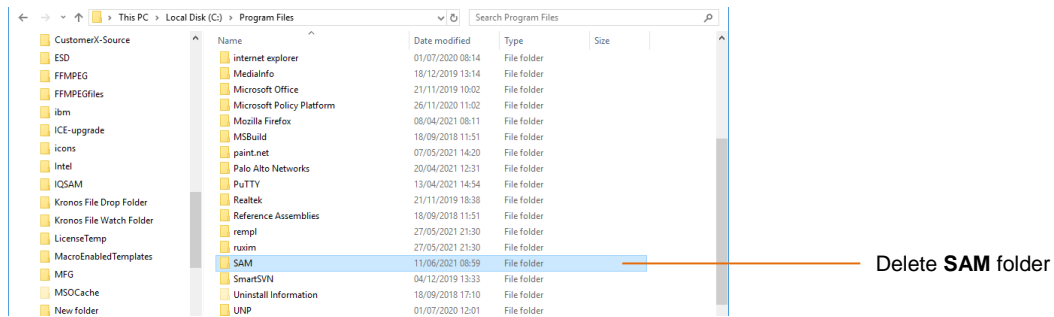


Sentinel License Manager

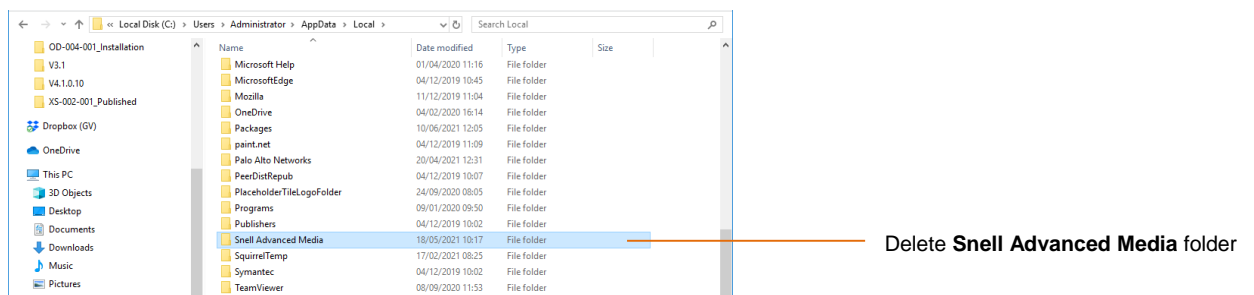
Uninstall the **Sentinel License Manager**.

- On the Host Machine, locate and delete the **SAM** folder:

C:\Program Files\SAM



- On the Host Machine, locate and delete the folder: **Snell Advanced Media**



Note: The **User** is the account that was used to log into the Host Machine when the Trial was installed. In this example the User is: **Administrator**

The GV file Installation and associated folders, have been removed from the Host Machine and the Installation of the full product can now proceed.