

Overview

Beginning with the release of CAD (9.4), Security (9.4), InService (9.4), Planning & Response (4.0) and WebRMS/JMS/FBR (3.7.1710) products, a new licensing system will be implemented: Reprise licensing. This document will guide you through activating the required run-time licenses for these products.

Things to consider:

1. License files are issued to specific machines based on hardware characteristics. You cannot edit the license file and change any characteristics of the license file as it is encrypted with the exception of a specific vendor port, which is explained later in this document.
2. Where should the primary license file reside?
 - a. The primary license file should reside on the server you value the most. In other words, the server that must be functioning for the products to run.
 - b. By activating the license file to the most valued server hardware characteristic, you are ensured of your client machines having connectivity to the license service.
3. Reprise offers a failover license service, which will take over allowing new instances of the product in case the primary license service fails. Any client that is already running will not be impacted if the primary license service fails; the only impact is for new connections and the failover license service will allow for these new connections to be licensed. Please refer to the [Failover Licensing Instructions](#).
4. All client machines must have connectivity, either internet or intranet, to the license service to checkout a license.
5. The path for the license file cannot exceed 256 characters.
6. Ports 5053 and 5054 must be open for outbound traffic for licensing to work.
7. There is additional licensing information available on the License Resources support page: https://support.hexagonsafetyinfrastructure.com/infocenter/index?page=licensing_resources

How do I get a license?

Reprise licensing provides an activation key for each product. Multiple activation keys are consolidated into a **single Activation Key file** (*.aky extension) for ease of license activation. The .aky file is included in the order acknowledgement email or the license upgrade email. If you do not have the .aky file, contact Hexagon Safety & Infrastructure Licensing either via a Service Request filed with support or at license@hexagon.com.

To activate a Reprise license, the auto-activation feature can be used or an email can be sent to license@hexagon.com using the *request license command* in the License Manager Tool.

What about when I am offline and need to run the product?

1. If you are logged into the product when you disconnect from the network, the product will continue to run until you exit the program.
2. If you have not roamed the license prior to disconnecting, you will not be able to access the program again until you connect to the network.

3. It is best if you [roam](#) the license prior to disconnecting to ensure you can continue to work. Most concurrent licenses allow users to run in disconnected from the network.

How do I find my Host ID?

1. If you are using automatic activation from within the product, the licensing software determines the Host ID and sends to the licensing database. A runtime license is then placed on your machine.
2. If you use the License Manager Tool, the Host ID is displayed and is sent to the licensing database where a runtime license is activated and you will then import the license to your machine.

Perform these Actions in this Order:

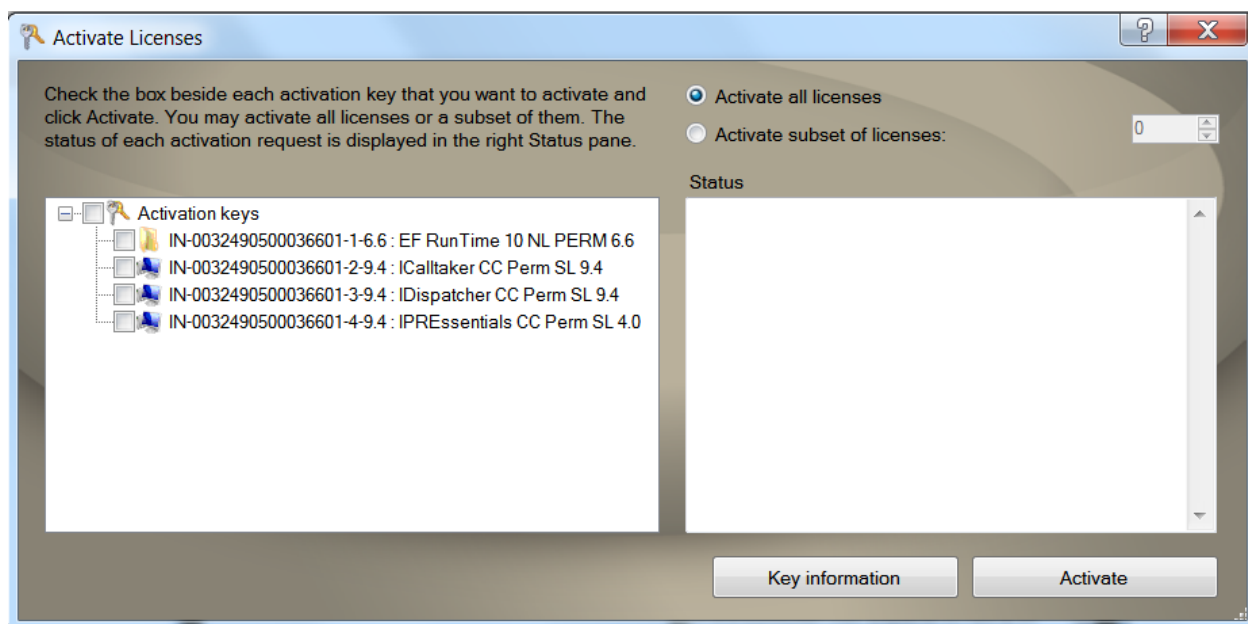
1. [Activate](#) Licenses making sure you activate all available licenses*
2. [Request Failover](#) license (if applicable)
3. [Create Options](#) file for Report Log
4. If specific port is required for communication, specify port following these [instructions](#)

License Activation Process

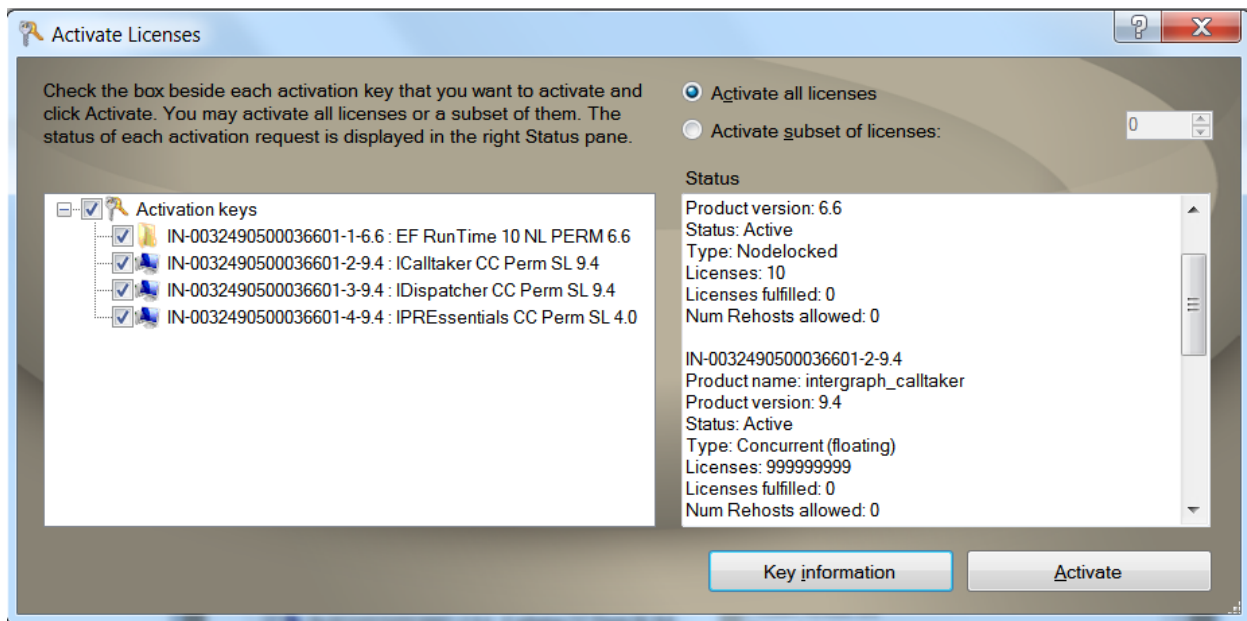
Reprise provides several methods to activate licenses.

1. Activation Key File (.aky)

Select Import Activation Key File under the File tab of the license manager. To activate a license or licenses from an activation key file, select **File > Import Activation Key File** or **Activation > Import Activation Key File** to open the Activate Licenses dialog box. Use this dialog box to activate the licenses using the activation keys in the selected file. (The activation key file has a .aky extension and is provided by Hexagon Safety & Infrastructure.)

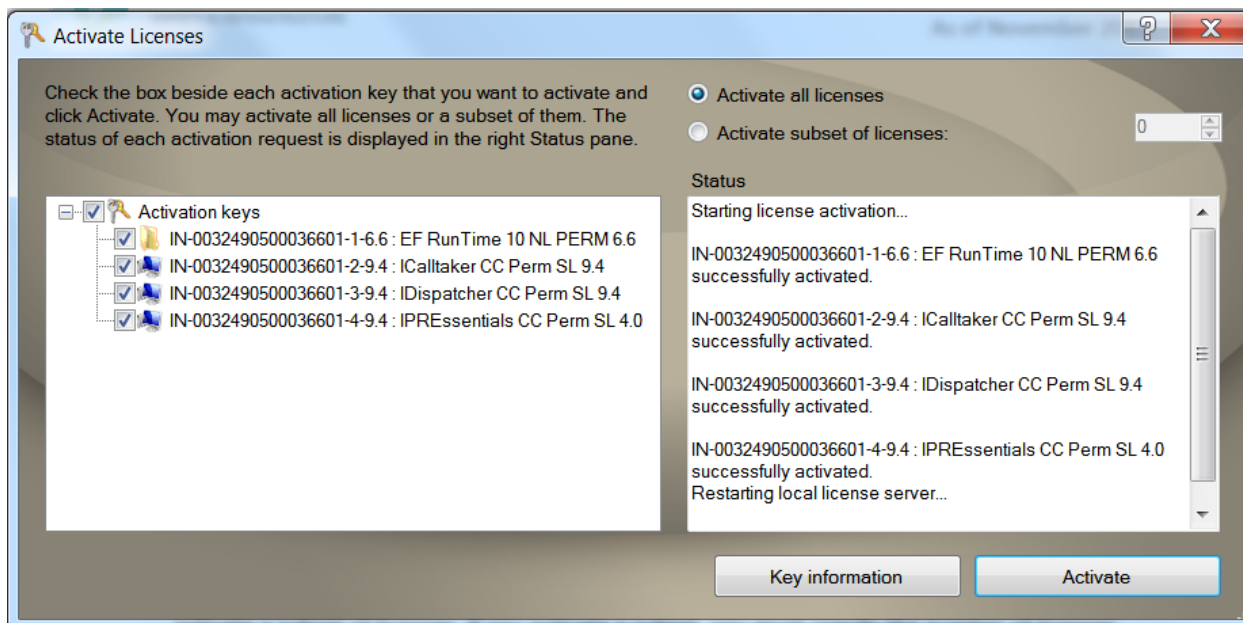


To **display the information about the activation keys**, check the box beside each key you need the information for and click the Key information button. The information appears in the Status pane. This information includes the product name, version, status of the key, type of the key (nodelocked or concurrent), number of licenses associated with the key, number of licenses already fulfilled on the key, number of rehosts on the key and number of rehosts already used on the key.



Check the box beside each license that you want to activate and click **Activate**. The status of each activation request is displayed in the Status pane. Once you have selected the Activate button, the license manager connects to the Hexagon Safety & Infrastructure license database, reads the Host ID of the machine, activates the license(s) and places the license file automatically in the correct folder on the machine with no more input required.

Automatic activation requires the user's machine to allow Hexagon Safety & Infrastructure license database to place the license file on the machine. As the communication is through port 80, the port must be open during the activation process. Once the licenses are activated and placed on the system you may close port 80.



For concurrent license activations, you can activate all licenses defined for an activation key or activate a subset of licenses. If you activate a subset, you must specify the number of licenses you want to activate. By definition, a nodelocked license is not counted, so the number of licenses specified is ignored for nodelocked licenses.

A nodelocked activation copies a nodelocked license to the appropriate folder. If that folder is not in the license sources listed in the License source pane, it is added.

A concurrent activation installs, starts, and displays the local license server in the License sources pane. If the local license server is already installed, it is restarted to pick up the new licenses.

2. Email Request

Open License Manager tool, **Client > Host ID > Copy into email request.**



This email will display. Include your Activation key or attach your .aky file, provide the quantities for all products requesting licenses and Hexagon Safety & Infrastructure licensing will activate and email you the requested license files. Once you receive the file, save to your system and then use the **File > Import License** command to import the licenses.

Send	To...	R-US-HSI Licensing
	Cc...	
	Bcc...	
Subject	Request for a license	

In order to obtain a product license file, you must provide your activation key and the quantity required in the places provided below. If you require licenses for multiple products, provide the activation key and quantity for each product on a separate line. Once Hexagon Safety and Infrastructure Licensing has all the required information, a license file will be sent to you.

disksn=IF550N461850501M6

Activation key:

Quantity:

How do I license if I split my licenses between 2 (or more) servers?

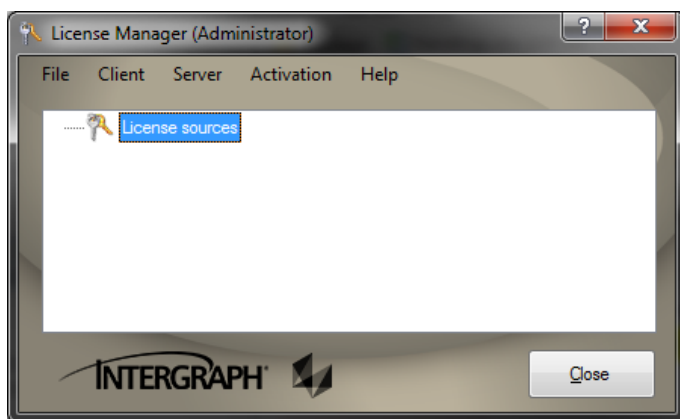
1. There is no need to split the licenses between 2 or more servers but you may do so if desired. If you have load balancing for the product, all clients will still point to the single primary license service because the license server just serves licenses and has no impact on the software.
2. If the primary license server is on the primary software server and the primary software server goes down, you should have a Failover license setup to take over issuing licenses. It is absolutely essential there be no firewall between the primary and failover license servers. If there is, failover will not take over serving licenses. If there is a firewall, you may want to split the licenses between two separate servers and have the client machines point to both.
3. It is critical the [Options](#) file be set up on both the primary, load balancing and failover license servers.

License Manager Software

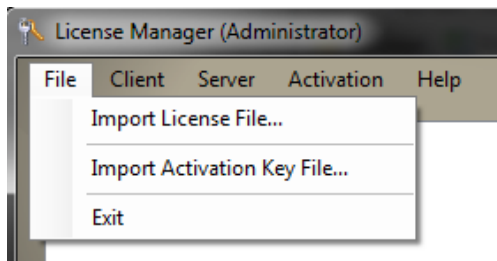
Reprise licensing uses the Intergraph License Manager, a locally written tool. It is the one stop shop for managing licenses on a system. There are commands to add, remove, promote, and demote license sources (both nodelocked and concurrent), to import license files, to start, stop and remove the local license service.

The following are images of the license manager tool with explanations of each feature.

This is the landing page for the Intergraph License Manager. Screenshots of the commands under each tab are below. If using the auto-activation during product install, the license source will be added here.



File Tab:

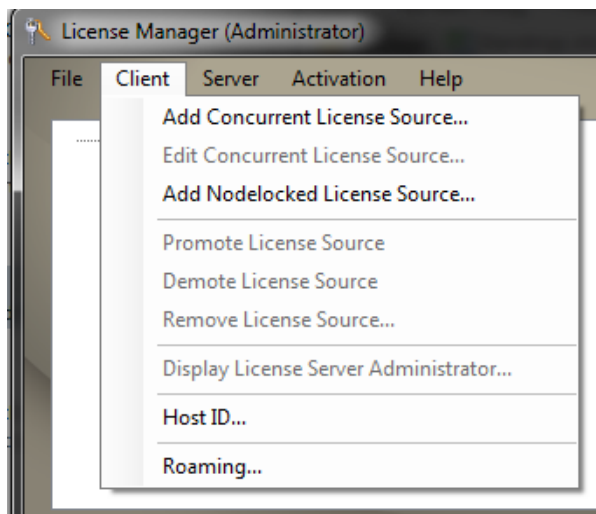


Use the **Import License File** command to load a license (.lic) file, nodelocked or concurrent. If concurrent, the license service starts and displays the local server in the sources pane. If nodelocked, the license file is automatically placed in the nodelocked directory. This directory is then added to the sources pane.

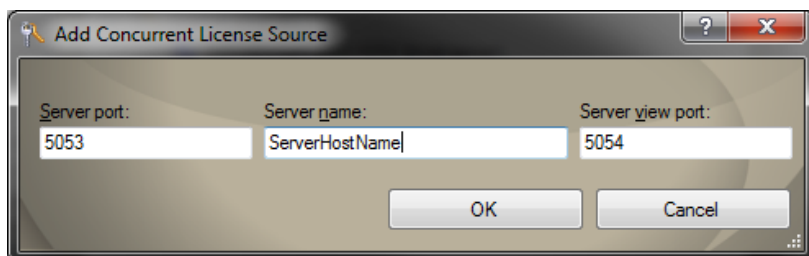
The **Import Activation Key File** command can also be found under the *Activation* tab. This command is explained in detail [here](#).

Client Tab:

The commands on the *Client* menu allow a user to manage license sources, either nodelocked or concurrent, and access the Host ID and Roaming utility.



Select **Add Concurrent License Source**. This dialog box is displayed:



The server port and server view port are predefined. The server port allows the applications to communicate with the license server, and the view port is used to access the web-based license administrator. In the *Server name* field, type the name of the license server or its static IP address and click *OK*. The new license source is displayed in the license sources pane.

To **Edit a Concurrent License Source**, first select it in the license sources pane and then click the command. The server port, server name, or server view port can be edited. Once done, click *OK* and the changes are displayed in the license sources pane.

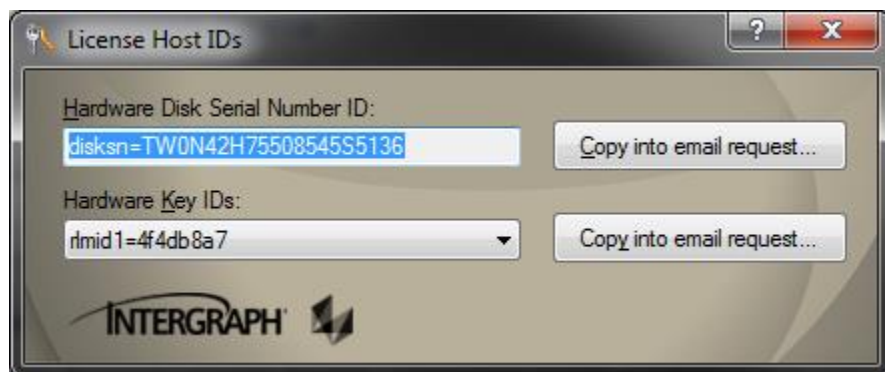
Nodelocked license files are usually added to a system using the File > Import License File command. If there is a need to specify a folder or folders for license files, the user can manually add these folders using the **Add Nodelocked License Source** command. When the user selects this menu item, a *Browse*

for *Folder* dialog box is displayed. Locate the appropriate folder and click *OK*. The new nodelocked license source is displayed in the license sources pane.

Each time a user starts an Intergraph software product, the license sources pane is searched starting at the top of the list and going to the bottom. The order can be changed by promoting or demoting them. To do this, use either the **Promote License Source** or **Demote License Source** commands to re-order the license sources.

Use the **Remove License Source** command to remove a nodelocked or concurrent license source from the license sources pane.

The **Host ID** utility can be accessed by selecting this menu item.

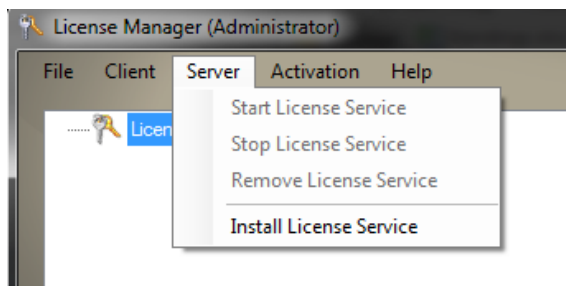


Use the *Copy into email request* command to send this information in a pre-populated email to license@hexagon.com. This command will be used when the machine being licensed has no outbound internet connection to accept data from our licensing database, or the customer's protocol will not allow HSI' licensing DB to write to their machine. The user must provide activation keys and quantity of licenses needed. If multiple product licenses are required, all activation keys need to be provided along with the quantity of required licenses from each.

The [Roaming](#) utility can be accessed by selecting this menu item.

Server Tab:

The commands on the *Server* menu allow a user to manage a license server so that it can fulfill requests for software licenses for computers on the network.



If a license service has been configured, but is stopped, start the license service by selecting the **Start License Service**.

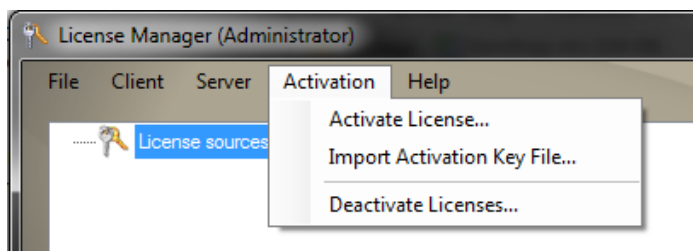
To stop the license service, select the **Stop License Service** command. When the service is stopped, the license service is not accessible to others on the network.

If the license service has been configured, remove the license service by selecting the **Remove License Service** command. When the service has been removed, it is not accessible on the network, and it cannot be started.

If concurrent licenses have already been imported or activated, but the license service was removed for some reason, the **Install License Service** command can be used to re-install the license service.

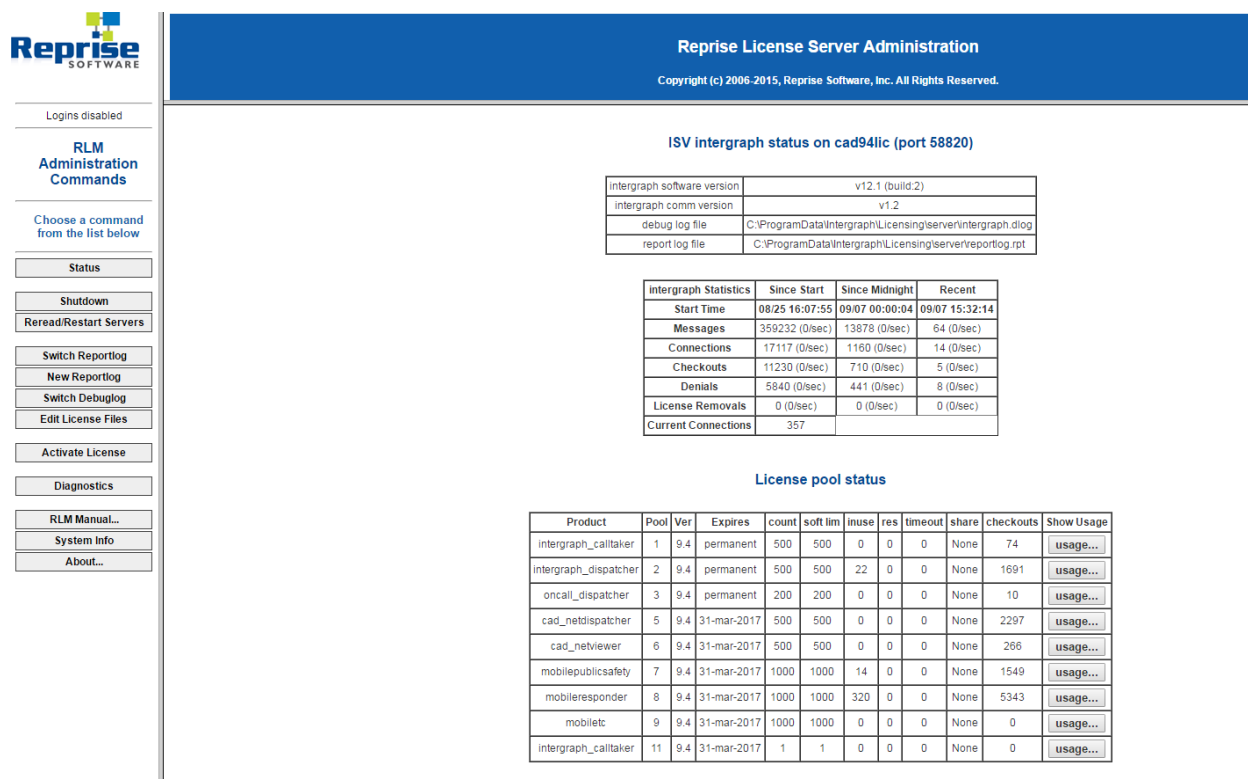
Activation Tab:

The *Activation* commands allow a user to activate nodelocked or concurrent licenses. Notice the commands are the same as those under the **File** tab. The only difference is this tab also includes the Deactivate Licenses. Note: Deactivate Licenses only works for **nodelocked** licenses which were activated automatically. If Hexagon Safety & Infrastructure activated the licenses and emailed them, the command will not work.



Display License Server Administrator (not applicable to nodelocked licenses)

The new features allow users to activate directly from the tool as well as providing the ability to display a license administration web browser interface for **concurrent** and local license servers. The web based interface displays the status of the license server as well as license feature usage and availability. This tool is local to the user's license server; it is not accessing the HSI license server.



Reprise License Server Administration
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Logins disabled

RLM Administration Commands

Choose a command from the list below

- Status
- Shutdown
- Reread/Restart Servers
- Switch Reportlog
- New Reportlog
- Switch Debuglog
- Edit License Files
- Activate License
- Diagnostics
- RLM Manual...
- System Info
- About...

ISV intergraph status on cad94lic (port 58820)

intergraph software version	v12.1 (build 2)
intergraph comm version	v1.2
debug log file	C:\ProgramData\Intergraph\Licensing\server\intergraph.dlog
report log file	C:\ProgramData\Intergraph\Licensing\server\reportlog.rpt

Intergraph Statistics	Since Start	Since Midnight	Recent
Start Time	08/25 16:07:55	09/07 00:00:04	09/07 15:32:14
Messages	359232 (0/sec)	13878 (0/sec)	64 (0/sec)
Connections	17117 (0/sec)	1160 (0/sec)	14 (0/sec)
Checkouts	11230 (0/sec)	710 (0/sec)	5 (0/sec)
Denials	5840 (0/sec)	441 (0/sec)	8 (0/sec)
License Removals	0 (0/sec)	0 (0/sec)	0 (0/sec)
Current Connections	357		

License pool status

Product	Pool	Ver	Expires	count	soft lim	inuse	res	timeout	share	checkouts	Show Usage
intergraph_calltaker	1	9.4	permanent	500	500	0	0	0	None	74	usage...
intergraph_dispatcher	2	9.4	permanent	500	500	22	0	0	None	1691	usage...
oncall_dispatcher	3	9.4	permanent	200	200	0	0	0	None	10	usage...
cad_netdispatcher	5	9.4	31-mar-2017	500	500	0	0	0	None	2297	usage...
cad_netviewer	6	9.4	31-mar-2017	500	500	0	0	0	None	266	usage...
mobilepublicsafety	7	9.4	31-mar-2017	1000	1000	14	0	0	None	1549	usage...
mobileresponder	8	9.4	31-mar-2017	1000	1000	320	0	0	None	5343	usage...
mobiletc	9	9.4	31-mar-2017	1000	1000	0	0	0	None	0	usage...
intergraph_calltaker	11	9.4	31-mar-2017	1	1	0	0	0	None	0	usage...

Flexera licensing uses a port range of 27000-27010 to serve licenses. If Flexera-based product licenses from multiple vendors are being hosted on the same server, port issues arise. Reprise licensing utilizes 3 default ports:

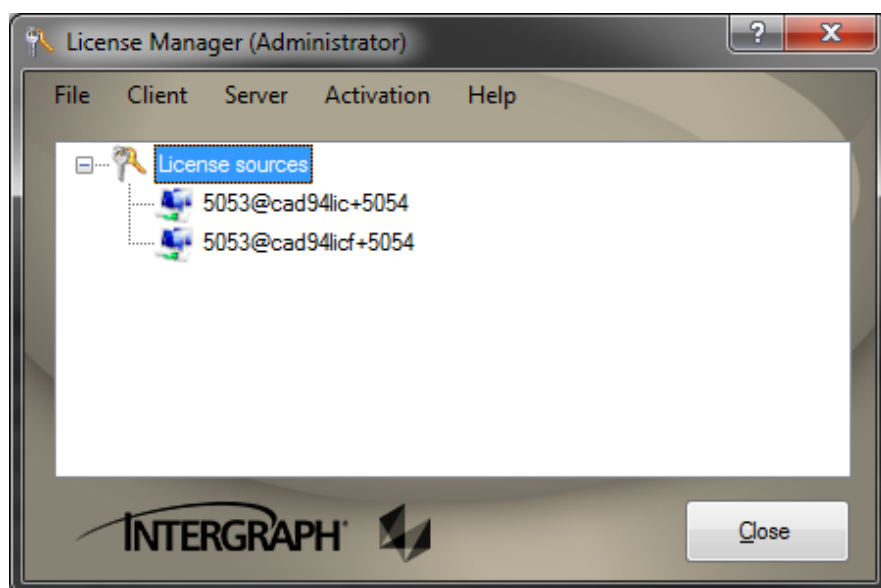
- 5053, server port – allows the applications to communicate with the license server.
- 5054, server view port – used to access the web-based license administrator.
- 80, auto-activation port – must be opened to allow for automatic activation of licenses and can be closed immediately after licenses are activated.

Failover Licensing

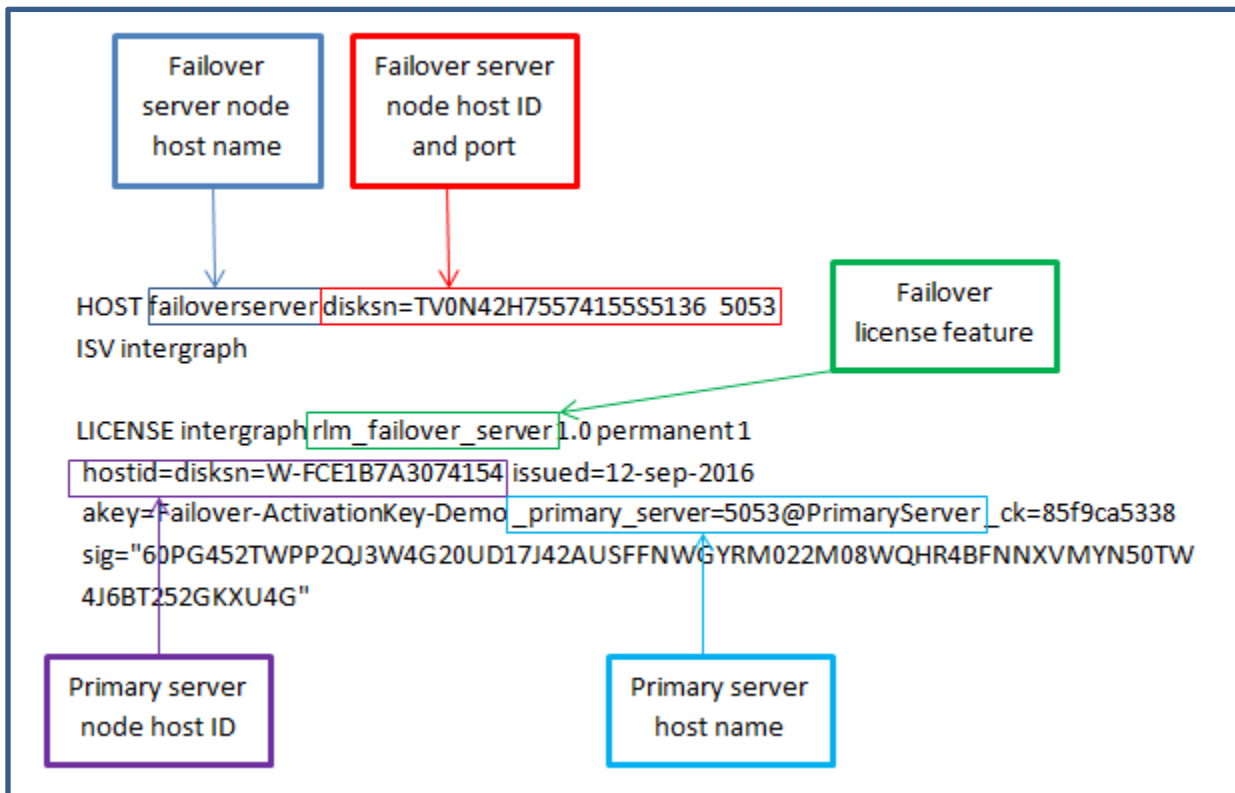
Reprise licensing uses two servers for failover licensing. To enable a failover license server, the licensing team will provide an *rlm_failover_server* license with the characteristics diagramed below. Licenses cannot be roamed from a failover server. **There cannot be a firewall between the two servers.** When you receive the *rlm_failover_server* license file, do the following, to configure a failover license server:

1. Install the license manager software on the failover license server node.
2. Import all license files from the primary server on the failover license server node.
3. Import the license file provided that contains the *rlm_failover_server* license.
4. Make sure that all client machines are pointed to the failover license server and that the connection is open.

This is an example of a client machine that is pointed to a primary and failover license server:
To point a machine to each license server, use the *Add Concurrent License Source* command under the *Client* tab in the license manager on each client machine. The primary license server will need to be added first, followed by the failover server.



Anatomy of a failover license:



Options file and Report Log

Reprise Licensing provides software asset management reports of license usage via an options file and report log. The report log generated from the parameters set in the options file contains license usage information that allows the customer to review license usage over time to help determine peak times, slow times and if additional licenses are required.

CRITICAL: This process must be performed immediately after the license files are activated.

Creating the report log

To ensure that the report log can be used by the Hexagon Safety & Infrastructure License Statistic tool (provided separately) these steps must be followed precisely **on each license server - primary, failover, backup, etc.:**

1. Create the options file
 - a. Open NotePad++ or WordPad
 - b. Copy and paste the bolded text below into the file
**REPORTLOG +C:\ProgramData\Intergraph\Licensing\server\CustomerName_ServerName.rpt
detailed**

ROTATE monthly
 - c. Modify the CustomerName and ServerName in the line of code
 - i Ex: *CustomerName* = HXGNCust; *ServerName* = PrimaryCAD1
 - ii Ensure there are no spaces in the underlined sectionExample:

REPORTLOG +C:\ProgramData\Intergraph\Licensing\server\HXGNCust_PrimaryCAD1.rpt detailed

ROTATE monthly
 - d. Save the file: *File>>Save As*
 - e. Change *Save as type* from .txt to *All Files*
 - f. **The file name must be *intergraph.opt***
 - i There can be absolutely no variation here.
 - ii Verify the file has not been saved as *intergraph.opt.txt*
 - g. Open the Windows File Explorer
 - h. Locate the folder *C:\ProgramData\Intergraph\Licensing\server*
 - i. Save the options file to this location
2. The options file is in place. Any action on the license server that causes a reread of this directory will activate the options file, thus creating the report log.
3. The options file and report log must remain in the directory. Moving either will cause loss of data.

Intergraph License Roaming (Disconnected from license service)

Concurrent licenses can be in one of the following states:

- In use - in use and connected to the license server
- Roamed - in use and disconnected from the license server

In contrast to when your computer checks out a concurrent license for a given product (and you are required to be connected to that license server if you are using that product), Intergraph License Roaming lets you roam a concurrent license for a given period when you plan to be disconnected from the license server.

IMPORTANT: You can only roam licenses for products or features that are currently installed on your computer. Not all Intergraph features can be roamed. If your product is listed on the **License Roaming** dialog box, it is available for you to roam.

NOTE: License roaming only applies to concurrent licenses. Nodelocked licenses are always available to the specific computer (except for remote access) and do not need to be roamed

Process:

1. Start the License Roaming tool at **Start>All Programs>Intergraph Licensing >Intergraph License Roaming**
 - a. The Intergraph License Roaming pane displays products with 3 color codes:
 - b. Yellow circle: license feature is available to roam.
 - c. Green circle: indicates that the feature is currently roamed
 - d. Red circle: indicates that the feature failed to roam or return.
 - e. The pane shows the list of individual licensed features within the installed products.
 - f. Click the plus sign to expand the lists, and the minus sign to collapse them.
 - g. Hover the cursor over a feature to display the name of the license feature, its version and how many licenses will be roamed if this feature is selected.
2. To roam the licenses associated with a product, check the box to the left of the product description.
 - a. The list of available features is current as of the time the Intergraph License Roaming was started.
 - b. If the user wants to check out all available features, they check the first check box in the list
 - c. Specify the number of days to roam the license.
3. The license on the server dictates the maximum number of days to roam. This setting can vary between products though the maximum is 90.
4. If the user attempts to roam a license for more days than is allowed, an error is displayed in the Status field.
 - a. The License server box displays the license server or servers. Select the license server to roam from.

- b. If the user chooses to return the licenses before the number of days has expired, they must return them to the same license server.
 - c. The Roam button initiates a roam operation from the specified server, for the specified number of days, on the licenses associated with the selected products.
 - d. The status of each roaming attempt will be updated in the Status field on the right side of the dialog box as the operations are being performed.
5. To return the licenses associated with a product, check the box to the left of the product description.
- a. The status field displays the status of the return operation.
 - b. If the license is returned before the number of days expires, the roam is terminated and the license is returned to the server.
 - c. If the number of days expires before the license is returned, the roam is automatically terminated and the license becomes available for another user.

Ports and Firewalls

Overview

Sometimes it is desirable for a license server to be behind a firewall. Reprise licensing supports this, but there is a small amount of configuration that must be performed.

If there is an active firewall on the license server node which is not allowing the software to check out a license, you must use a fixed port for the ISV Server by putting a port=<port number" on the ISV line. Without this designation, the port floats and the operating system chooses a port. The port chosen will be a different one every time RLM starts up unless you specify the fixed port. Note you may not use port 5054 because 5054 is the RLM Web Server Port, not the ISV Server Port. (The process assumes that the licenses have been activated on the license server.)

Process

1. Locate your license (.lic) file(s) in the C:\ProgramData\Intergraph\Licensing\server directory on the license server.
2. Open the license file using Notepad or WordPad so you can edit the license file vendor line. DO NOT EDIT ANYTHING ELSE or you risk the license being corrupted.
3. Pick a port for the ISV server. It needs to be a port that is not in use for anything else on the license server system. We recommend using a port in the 4xxxx range as we do not know of anything else that is using this series.
4. Lock the ISV server port on the ISV line to your desired port using the following syntax.
 - a. **ISV intergraph port=4xxxxx** (where 4xxxxx is a number you select)
5. Save the license file(s).
6. Configure your firewall to allow access to the ISV port number (the 4xxxxx), main-RLM-server-port# (5053) and the RLM Web Server Port (5054).
7. Open the Intergraph License Manager on the license server
8. Perform a Start/Stop on the license service.
 - a. Select the service listed under the License Sources
 - b. Click the *Server* tab and then *Stop License Service*
 - c. Click the *Server* tab and then *Start License Service*
9. Start any of the licensed software on a client machine to confirm if the license checkout succeeds now that the ports are configured.

Example of license with port specified:

```
HOST Analytics-dev ip=129.135.252.156 5053
```

```
ISV intergraph port=41334
```

```
LICENSE intergraph insightexplorer 1.0 permanent 100 max_roam=90
```

```
issuer=Hexagon customer="ACME" issued=3-apr-2017
```

```
akey=IN-0038117500000735-1-1.0 kh_ck=f336cf8235 sig="60PG452SMDW0QH
```

```
BXSFAKOE38U1E2KBKMVD6GR6822M08RBESUG41KWXT525WRT89U7HR4569H8KG"
```