FAQ

eLicense software

Content

This document contains general information about GE Healthcare Life Sciences eLicense products that are required to provide access to the functions of certain software. Detailed information is provided about how to order the eLicense products and how they work.

This document does not include information about how to use the specific software functions - such information is available in the respective software user manuals.

Q **What is an eLicense and how does it work?**

A An eLicense is an electronic file that gives a specified number of users an electronically-managed permission to access specific software (or software functions) over a specified period of time. The software functions that require an eLicense will only work when the software detects a relevant eLicense file. (Fig 1). The eLicense file contains specifications as to which software functions will work, for how many users and for what period of time.
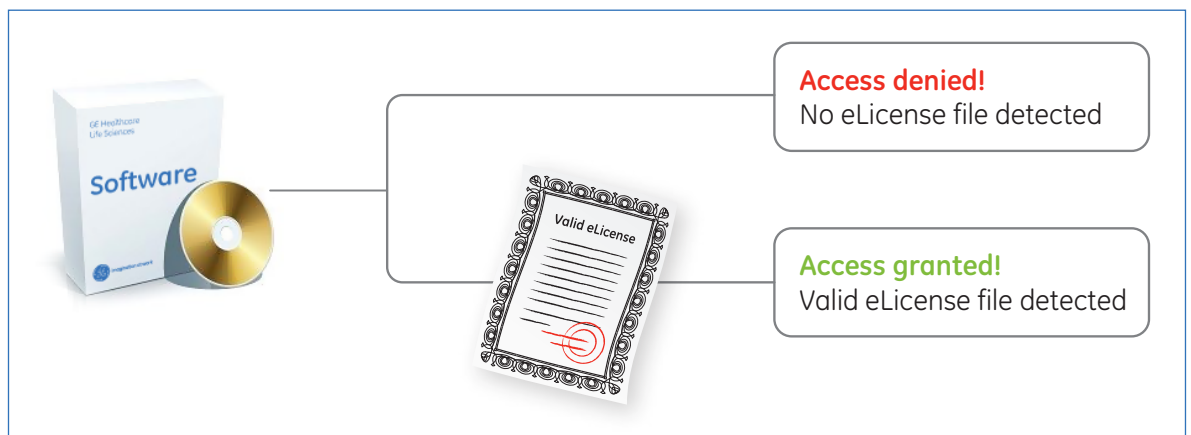

Fig 1. Overview of GE Healthcare Life Sciences software access/management via eLicense.

The advantages of using software that is access-restricted by an eLicense (other than specifying the rightful user) include:

- faster support and software upgrade services
- only one installation is needed, with different functionalities managed by different eLicenses
- easier management over software usage and upgrades if several software packages are installed
- easy to retrieve lost access using relevant license information provided at time of purchase

A GE Healthcare Life Sciences eLicense and the relevant software can be sold separately or as a single product. Please contact your local customer service or sales representative (*www.gelifesciences.com*) to find out which product you need.

GE Healthcare Life Sciences eLicense files can be specific to a host computer that acts as a license server to several computers (concurrent eLicense), or to a stand-alone computer that is accessing the software (node-locked eLicense). For more information on concurrent and node-Locked eLicense, read further.

Q **Is eLicense software available for network (server) and stand-alone purposes?**

A GE Healthcare Life Sciences provides two types eLicense software that differ in how the eLicense file is used - via a license server (concurrent eLicense) or as a stand-alone (node-locked eLicense).

1. **Node-locked eLicense** – also known as fixed or machine license. These licenses are hosted individually on single computers. Each computer must have the software and the eLicense file. The user will get one access code for each computer (Fig 2). Node-locked licenses are suitable for individual users who often need to work independent of a server.

   Single node-locked license: A user who purchases n units of single node-locked license will get n access codes or activation IDs to collect n eLicense files, each of which can be hosted on each of n computers. Example: if two units of a single node-locked license are purchased, two eLicense files can be hosted, one on each of two computers.

   Multipled node-locked license: A customer who purchases n units of node-locked license for multiple y users will get n access codes, each with y activation IDs to collect $n \times y$ eLicense files, each of which can be hosted on each of $n \times y$ computers. Example, if two units of a node-locked license for two users are purchased, then four eLicense files can be hosted, one on each of 4 computers.

   Demo eLicense products are usually provided free-of-charge to registered users in a demo software download service from our website. Demo eLicense products are usually single, node-locked eLicenses that are time-limited, usually expiring after a few weeks of use. To continue using the software, the user could purchase a permanent eLicense for that software.

A permanent node-locked eLicense file provides the user permanent access to the software as long as the same host server or computer specified in the eLicense file is used to access the software. If a computer other than that currently hosting the eLicense file will be used to access the software, the eLicense file can be updated to reflect the new host. Rehosting your eLicense file is further explained later in this FAQ.
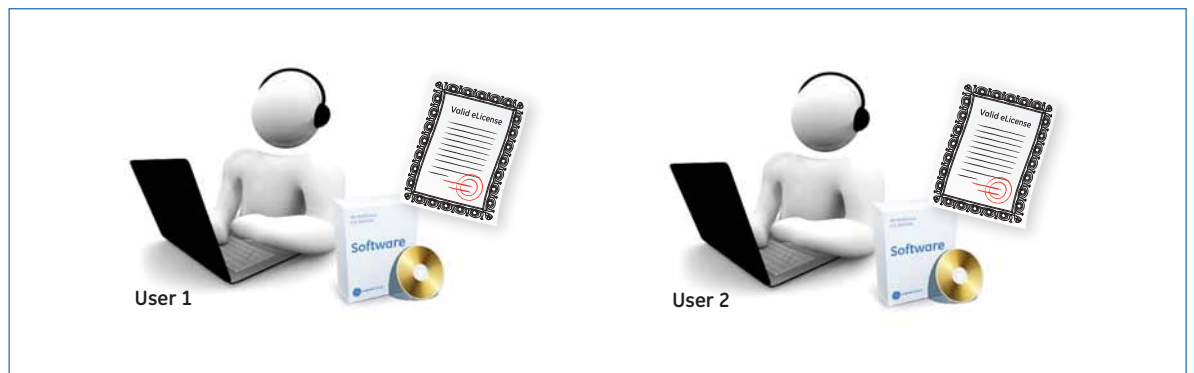

Fig 2. An overview of Node-locked eLicenses.

Concurrent eLicense – Concurrent eLicense files are hosted in a computer that acts as a license server to other computers. All computers using the software managed by the concurrent license must be able to access the license server through a computer network (Fig 3). One eLicense file can allow from one to multiple users at a given time (concurrent time), depending on the product specification. A license server can host several concurrent eLicense files to increase the number of concurrent users using a single software installation. A concurrent eLicense is usually the economical option for a large team of workers using the same software. For single users who may want to access the software through different computers, for example in the laboratory and the office, a concurrent eLicense for a single user is also appropriate.

If a user needs to use the software outside of the license server, the eLicense file can be borrowed for a temporary time period (Borrowing). If the license server is to be updated to another computer, the eLicense file can be permanently rehosted to reflect the new license server (Rehosting).
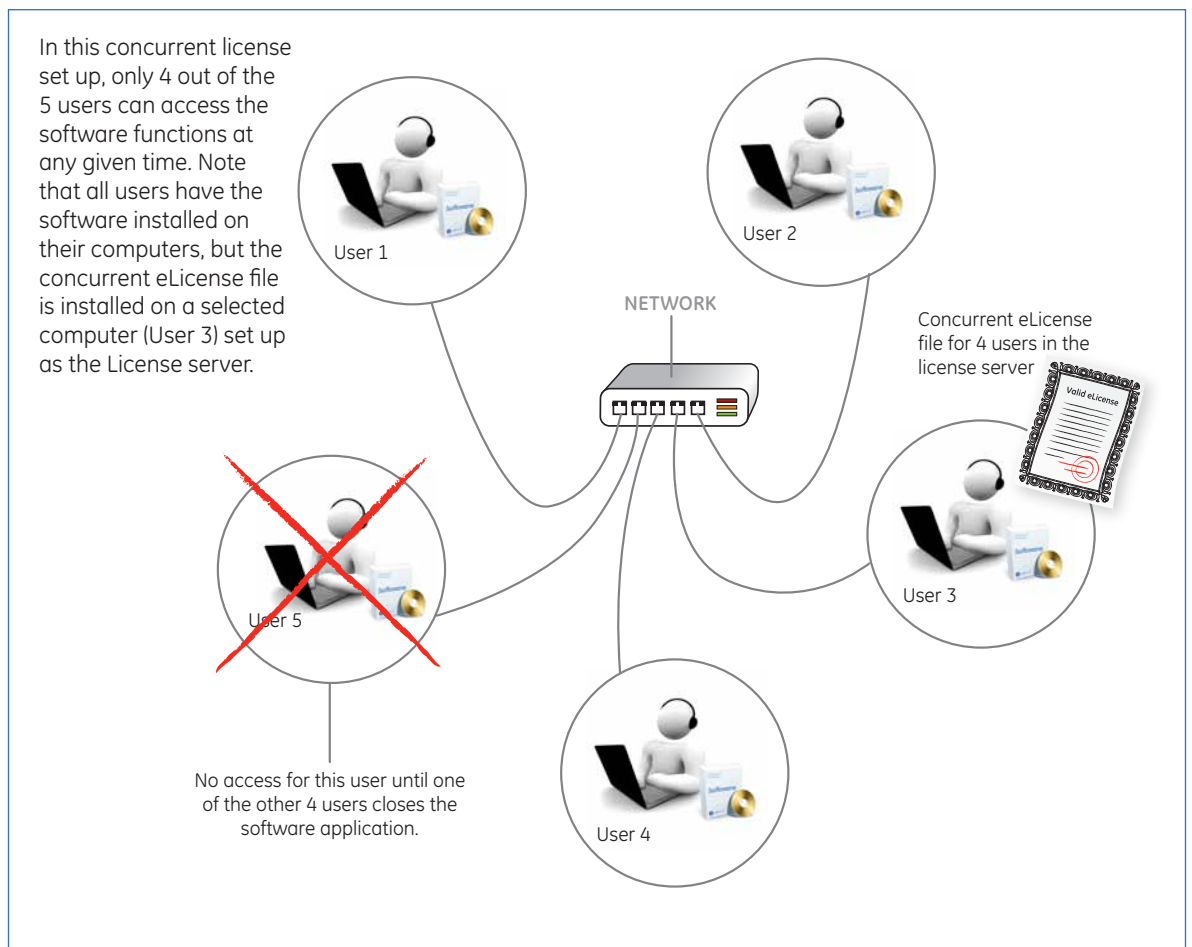

In this concurrent license set up, only 4 out of the 5 users can access the software functions at any given time. Note that all users have the software installed on their computers, but the concurrent eLicense file is installed on a selected computer (User 3) set up as the License server.

User 1

User 2

NETWORK

Concurrent eLicense file for 4 users in the license server

Valid eLicense

User 3

User 5

No access for this user until one of the other 4 users closes the software application.

User 4

Fig 3. Overview of concurrent eLicenses.

Q How does a node-locked eLicense work?

A All GE Healthcare Life Science software that is access-restricted by eLicense will refer to a license-handling component in the software when opened (Fig 4). The license-handling component will look for required node-locked eLicense file on the same computer. If the relevant eLicense file is found, it will send a positive signal to the software to allow software access. If the relevant eLicense file is not found on the computer, the license-handling component will send a negative signal to the software to deny access.
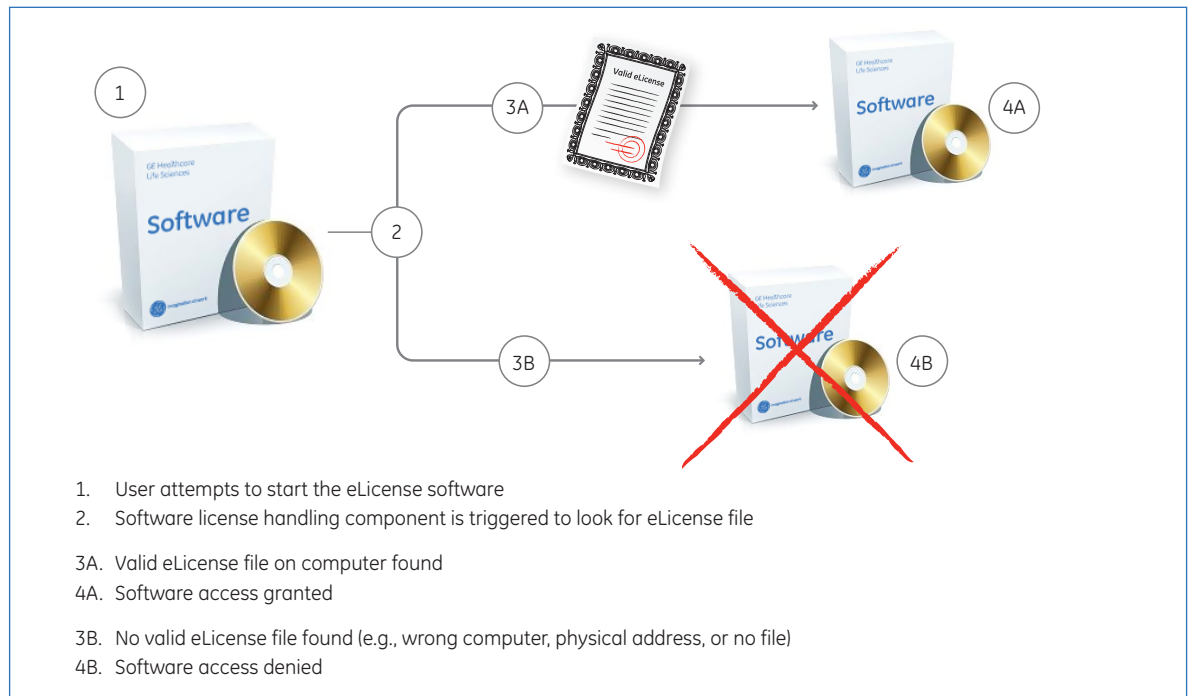

1. User attempts to start the eLicense software
2. Software license handling component is triggered to look for eLicense file

3A. Valid eLicense file on computer found
4A. Software access granted

3B. No valid eLicense file found (e.g., wrong computer, physical address, or no file)
4B. Software access denied

Fig 4. A license-handling component in software looks for the presence of the node-locked eLicense file on the computer in order to allow access to the software functions.

Q How does a concurrent elicense work?

A All GE Healthcare Life Science software that is access-restricted by eLicense will refer to a license-handling component in the software when the software is opened. For concurrent elicense-protected software, the software installation package will also include an installation package for setting up a GE Healthcare License server. The license server application is installed separately from the software. The software and the license server could be installed in the same or on physically separate computers.

When a user tries to start software protected using concurrent eLicense, the license-handling component will communicate with the GE Healthcare License server through the computer network by using TCP/IP protocols. The license server will look for concurrent eLicense files (Fig 5). If the relevant eLicense file is found, access will be granted to the software functions following the specifications on the eLicense file for the number of concurrent users and the duration of the license validity. If the relevant eLicense file for the software functions is not found on the computer, the license server will send a negative signal to the license-handling component, and access to the software functions will be denied to the user.
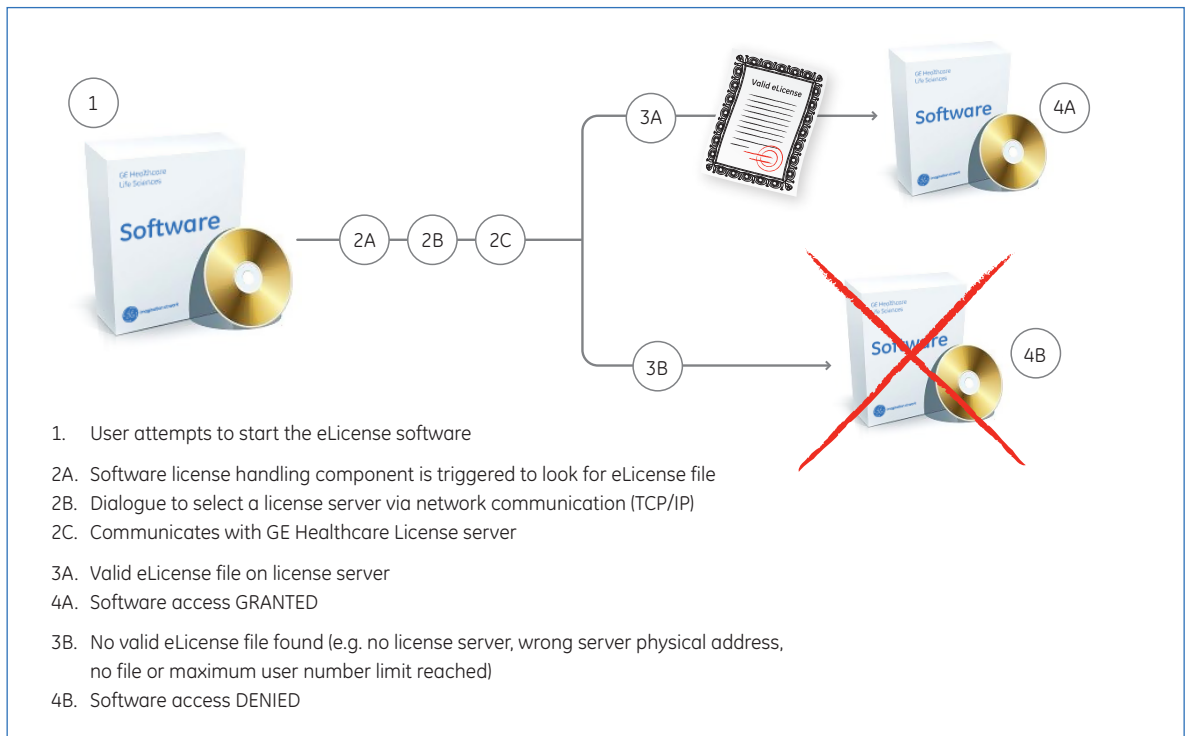
1. User attempts to start the eLicense software

2A. Software license handling component is triggered to look for eLicense file
2B. Dialogue to select a license server via network communication (TCP/IP)
2C. Communicates with GE Healthcare License server

3A. Valid eLicense file on license server
4A. Software access GRANTED

3B. No valid eLicense file found (e.g. no license server, wrong server physical address,
no file or maximum user number limit reached)
4B. Software access DENIED

Fig 5. A license-handling component in a software communicates with the GE Healthcare license server to look for a valid eLicense file and provides access for a specified number of users to the software functions.

Q What is a license server?

A A license server is a software application that acts as a storage bank for concurrent eLicense files that could be accessed through a computer network. The license server is accessed by the software license-handling component to check for the presence of a relevant concurrent eLicense file in order to allow access to a specified software function.

A license server application is provided with GE Healthcare Life Science software installation packages for software that use concurrent eLicense protection. The application is installed separately from the software. The software and the license server can be installed on the same or on separate computers. If the license server is set up on a computer with an active firewall, refer to the firewall settings section at the end of this document.

Depending on your software installation package, the set up and maintenance of the license server may be automated or you may need to provide manual input with the help from another application (called LMTOOLS) in the license server installation. Consult your software installation manual for specific instructions on how to set up your license server.

Q **Can node-locked and concurrent eLicenses be set up for the same group of users?**

A Yes. A team of workers could be set up with a concurrent eLicense to allow users to access software by using a license server, as well as have certain team members on node-locked license files that allow them to use the software without needing to be connected to the license server (Fig 6).
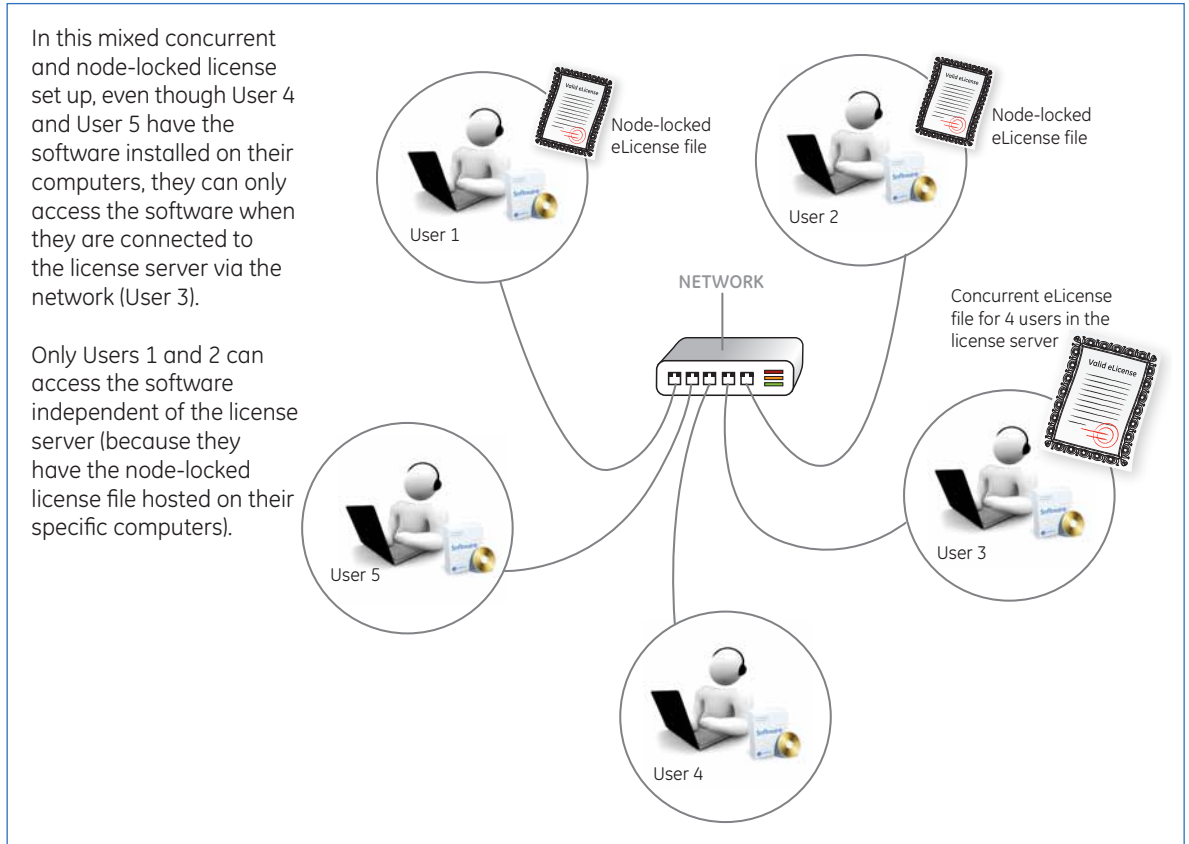
In this mixed concurrent and node-locked license set up, even though User 4 and User 5 have the software installed on their computers, they can only access the software when they are connected to the license server via the network (User 3).

Only Users 1 and 2 can access the software independent of the license server (because they have the node-locked license file hosted on their specific computers).

Node-locked eLicense file

Node-locked eLicense file

NETWORK

Concurrent eLicense file for 4 users in the license server

User 1

User 2

User 3

User 4

User 5

Fig 6. Using concurrent and node-locked licenses for a team of workers accessing the same software.

Q **What information must a user provide when ordering an eLicense product?**

A To order an eLicense product, the user must provide the following information:

1. Full name of the user (not the department purchasing officer)

2. Valid shipping address (not Freight Forwarding site)

3. Valid email address to which an eLicense access code could be delivered. Email addresses belonging to public domains such as yahoo, gmail, or hotmail will generally not be accepted.

If the above user information is not provided in the order, the access code delivery may be delayed or fail.

Q What is delivered with an eLicense product order?

A When you order an eLicense product, you will receive a certificate containing a code that is used to collect the eLicense file[1]. This code is usually an access code, also known as an "entitlement id".

The access code certificate is delivered in two ways:

1. by email from the GE Healthcare Life Sciences eLicensing database
2. as a letter delivered by Federal Express[2]

If you have ordered an eLicense product that includes the software as well, you will receive the software media separately from the access code email or letter.

If you have ordered an instrument that includes an eLicense product with software, the eLicense access codes are only delivered as a letter packaged together with the software and the main instrument.

[1] *Note that for software installation on a GE Healthcare instrument, this is usually performed by a service engineer.*

[2] *Note that for certain countries, the Federal express letter may not be allowed through local customs and another way to deliver the access code certificate could be arranged by contacting your local sales office.*

Q What is an access code?

A An access code is a unique password to log into a GE Healthcare Life Sciences eLicense file collection portal. Every access code is associated with one or multiple activation IDs. One activation ID is used to collect one or more copies of the same type of eLicense file (Fig 7).

The access code is provided in an email and or letter to the purchaser according to the shipping and email information provided in the order. If the user information is not provided in the order, the access code delivery may be delayed or fail.

Important Note: You must keep your access code information in a secure place. This is critical for future support for your software usage.

Fig 7. Relationship between an access code and an activation ID, as shown in the eLicense file collection portal.

Q **What is an activation ID?**

A An activation ID is the specific ID that is unique for collecting one or more copies of a same type of eLicense file. An activation ID belongs to a unique parent access code.

To collect several eLicense files associated with several activation ID, the user could use the access code to log into the eLicense file collection database. A list of activation IDs belonging to the parent access code will be available for eLicense file collection (Fig 7).

To collect one or more copies of a same type of eLicense file associated with a unique activation ID, the user can use the activation ID to log into the eLicense file collection database. Other activation IDs belonging to the parent access code will not be available for eLicense collection when a single activation ID is used to log on the elicense website (Fig 8). Use the parent access code (see previous section) to view all available activation IDs.
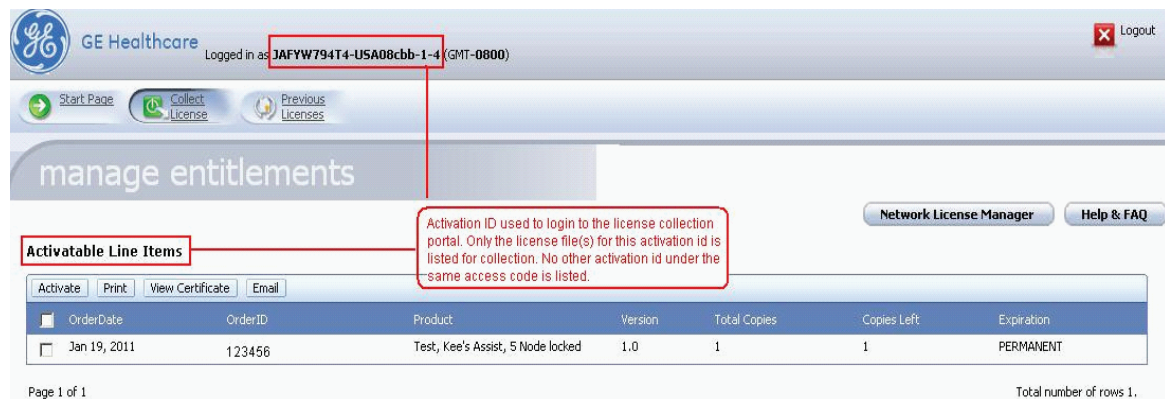

Fig 8. Using a specific activation ID to log into the in the eLicense file collection portal.

Q **How do I collect an eLicense file?**

A To collect an eLicense file[1], you need the following information:

1. access code or activation ID to login to an eLicense portal (given in the access code email and certificate[2])

2. the machine ID or physical address of the computer (host id) where the eLicense file will be hosted on. The physical address must be a permanent physical address from your local area network. Any wireless or remote access physical address should not be used.

To facilitate our support of your software usage, provide your organizational address and email address when collecting the eLicense file.

[1] *Note that for software installation on a GE Healthcare instrument, this is usually performed by a service engineer.*

[2] *eLicense file collection portal address:*
    http://elicensing.gelifesciences.com/

You can access a step by step instruction for your eLicense file on our website for pdf article number 28960702.

Q **How do I ensure that my eLicense file will grant me access to my software?**

A To ensure that your eLicense file will grant you access to the relevant software, ensure that:

1. The physical address in the eLicense file is the same as the physical address of the computer that is hosting the eLicense file. Refer to the license collection instruction or consult technical support to help you check this.

2. The eLicense file is saved in the directory (folder) recommended by the software.

3. The number of users specified in the concurrent eLicense file is not exceeded at the time you are trying to access the software.

4. The eLicense file is still valid at the date of software access (only necessary if it is not a permanent eLicense file).

Q **Can I use an eLicense file temporarily, independent of the license server or permanently on another license server or computer other than that specified in the file?**

A Yes. An eLicense file with permanent time validity (in other words, not time limited like a demo eLicense file) can be used on another host (server or computer) with some simple task requests. For permanent concurrent eLicense files, temporary borrowing to use the eLicense file independent of the eLicense server is possible. For both concurrent and node-locked licenses, permanent shifting of the eLicense file to another computer host can be done by requesting a Rehost service.

Borrowing:

If you have a concurrent eLicense file and you would like to use the file outside of the license server, you could request a temporary license "Borrowing".

Rehosting:

If you would like to move the eLicense file permanently to another license server or computer, you will need to make a request to your local technical support team to perform a license "Rehost". You will be asked to provide your access code and original and new computer host ID information. Your local technical support team will guide you on the request. There may be a maximum number of rehosts allowed, depending on the software application and the type of eLicense product you have purchased.

If the eLicense product or software that you are using is no longer commercially available, you may only be able to rehost your eLicense file during the period of support specified in sales policy for the software. You may be eligible for a free-of-charge upgrade to the newer version of the software, depending on the sales policy for the software. Consult your local sales manager or technical support person for the most updated sales policy for your software.

Q How can I borrow a concurrent eLicense file?

A All GE Healthcare Life Sciences concurrent eLicenses allow the user to temporarily borrow a permanent concurrent license in order to use it independently of the license server. The borrowing is restricted to a limited time period, usually 48 h. Borrowing is done through a tool that is accessible from the GE Healthcare license server called LMTOOLS.

To access the LMTOOLS to start Borrowing, follow the steps listed below:

1. Go to Windows START/All Programs and search for GE Healthcare folder (Fig 9A)

2. In the GE Healthcare folder, select GE Healthcare Software Licensing Server

3. Under this subfolder, select the License server Admin application- this is LMTOOLS

4. In LMTOOLS, select the Borrowing tab at the far right hand side and follow the three steps for borrowing (Fig 9A).
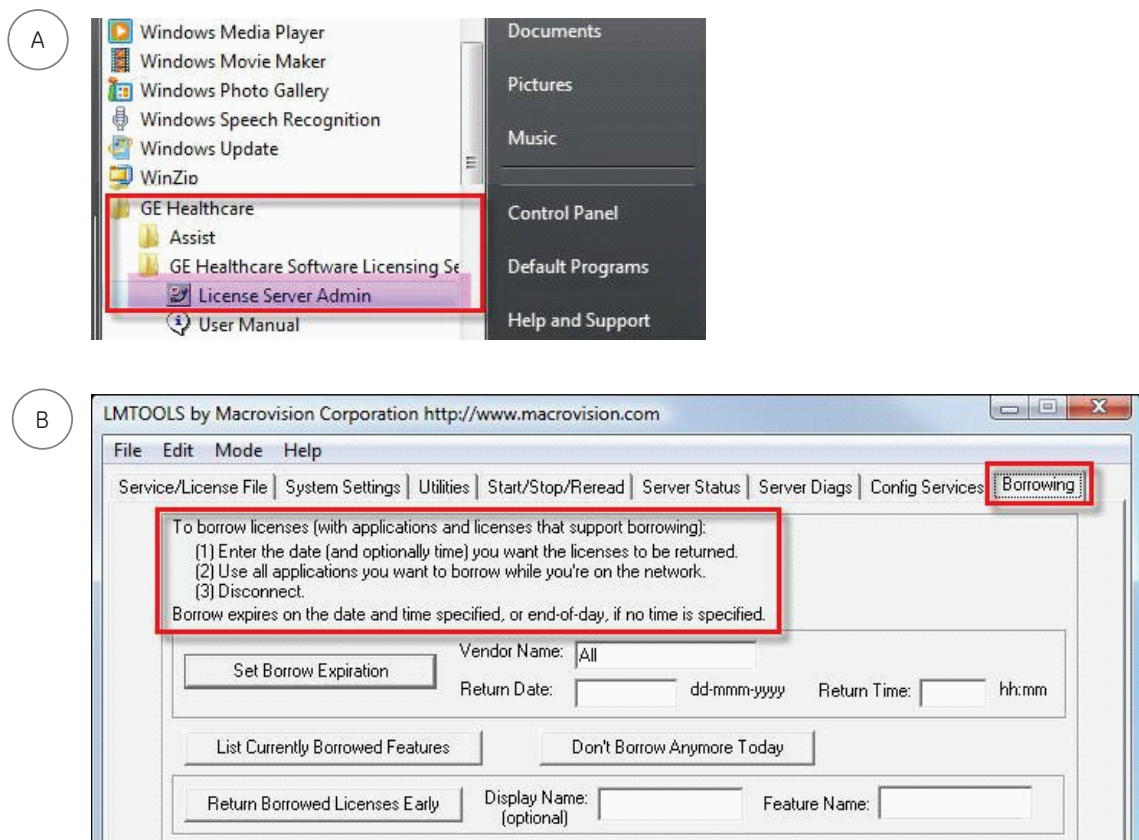

Fig 9. How to start Borrowing a permanent concurrent eLicense using LM Tools.

Q Does the license server require special settings for the Windows firewall and eLicense file?

A The procedure below describes how to enable the Windows firewall for the GE Healthcare licensing system communication. This should be used when a firewall is activated on the computer where the GE Healthcare license server is installed.

The solution is to declare two ports to use in the eLicense file and then open the ports in the firewall. Here we use ports 27000 and 27001. We recommend using ports in the range 27000-27009.

Assign two TCP/IP ports in the eLicense file

1. Stop the license server in LMTOOLS or in the Services application.

2. Open up your eLicense file for editing using Word Pad or Note Pad.

3. Locate SERVER line and VENDOR line and add text as seen here in **bold**
   SERVER this_host host id[1] **27000** VENDOR gehealth **port=27001** USE_SERVER

4. Save the changes to the eLicense file as .lic

5. Start the license server again in LMTOOLS or in the Services application.

Note this change must be done in all eLicense files that this server uses. If you have made a mistake and need to recover your original eLicense file, you can always obtain the file again using your access code in the eLicense file collection portal.

[1]   *This is a unique host id code.*

Open two TCP/IP ports in the firewall (example here if for Windows Vista)

1. Open the firewall dialog via: Start -> Control Panel -> Windows firewall

2. Click the link called "Allow a program through Windows Firewall".

3. Go to the General tab, and make sure that the option "On (recommended)" is selected. If not, enable it (this will enable the firewall).

4. Go to the Exceptions tab at the top

5. To add a TCP/IP port in your exception list click Add port (near the bottom). Add two ports as follows:

6. Click **OK** in the firewall dialog to accept the settings.

Port 1

Port 2

This completes the firewall setup. For Windows 7 operating systems, instructions for opening a port can be found on the Windows website:

http://windows.microsoft.com/en-US/windows7/Open-a-port-in-Windows-Firewall

For local office contact information, visit
www.gelifesciences.com/contact

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