

A light blue silhouette of a world map is centered in the background of the page.

CDEGS

SES Software
Network License Installation
Version 17.1, 2022

sestech.com



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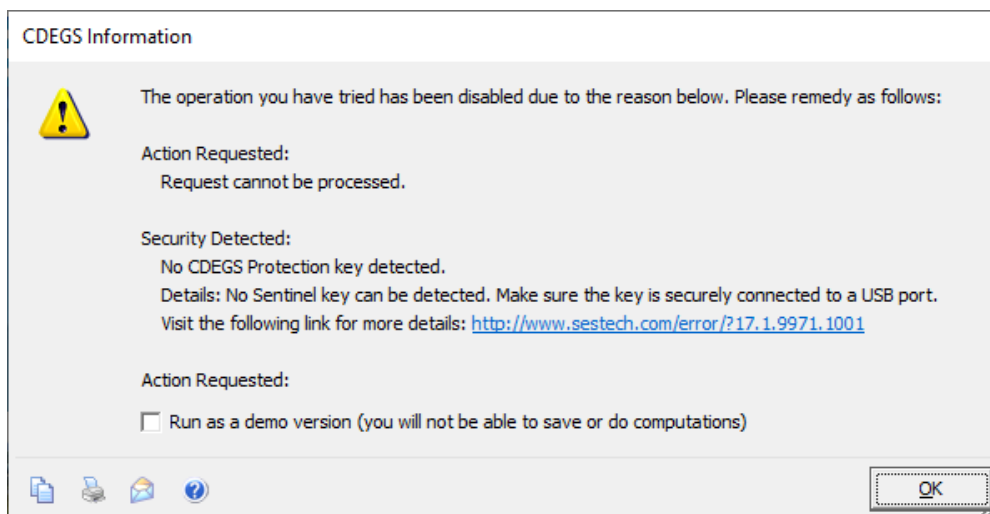
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Network License Management

1. Introduction

SES software packages require a license to operate. Two types of license management keys are available, namely, a software based one and a hardware based one, often called a dongle. In both cases, the keys and related tools must be installed on the target license server that will be distributing the network licenses to clients who have installed SES software packages on their PCs. The hardware key, when applicable, must also be plugged into a USB port of the server (or a reliable computer). Most SES software packages, tools and utilities will not function without the license management key and associated tools. If this license management kit (tools, hardware, or software key) is not accessible (e.g. due to the IP address of the server being specified incorrectly), or is missing or defective, the following message is displayed if there is an attempt to access a protected software package, software tool or utility from a client PC.



The rest of this document is divided into seven major sections dealing with the following topics. You can skip any of the sections if it does not apply to you. For example, if you have acquired the software package recently or if you are sure that the hardware network key is a Sentinel key, Sections 2 and 3 can be skipped entirely.

- [Section 2: Important Information before Proceeding with the Installation](#). This section presents a historical account about three types of USB hardware keys that were distributed by SES in the past. If you have the most recent Sentinel key type only, you can skip this section and Section 3. If you are not sure, read this section to determine what type of keys you have. If you have a NETHASP key, this

section shows you how to determine if this key is upgradable to a Sentinel key or not. If the key is not upgradable, contact SES and we will send you a new Sentinel key.

- [Section 3](#): **How to Upgrade the NETHASP Key to a Compatible Sentinel Key**. This section shows you how to upgrade your NETHASP key to a fully compatible Sentinel key.
- [Section 4](#): **Installing a Hardware-Based Network License Management Tool**. If your key is a hardware-based USB key, you must read this section. You can skip Section 5 if you do not own a software based network key.
- [Section 5](#): **Installing a Software-Based Network License Management Tool**. You must read this section if you have software-based network license keys.
- [Section 6](#): **Using SESLicenseManager to Activate and Update a Client License**. This section explains how to install, configure and enable licenses on the client PC. This client PC is also the location where an IT administrator has to be located to activate the server license manager.
- [Section 7](#): **Setting up the Network License Admin Control Center**. This section is dedicated to the settings, management and customizations of the network-licensing environment.
- [Section 8](#): **Important Support Information**. Finally, this section provides troubleshooting steps for resolving certain errors, as well as recommendations for protecting the license management key.

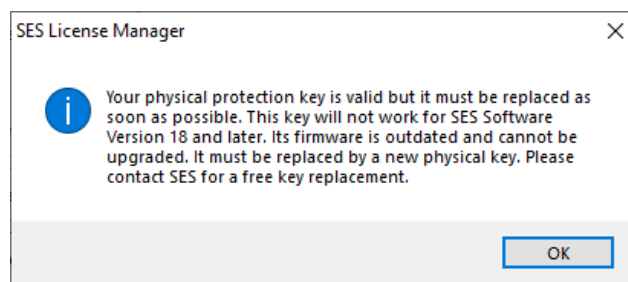
Installation of a Network License Management Tool

The following sections 2, 3, 4 and 5 provide explanations and the steps for setting up a network license key, often referred to as a Sentinel HL or SL key.

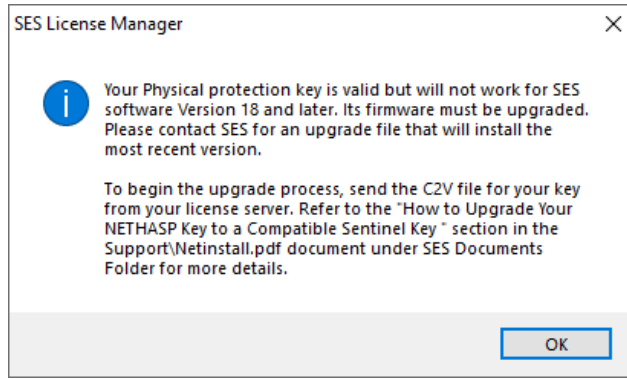
2. Important Information before Proceeding with the Installation

SES existing customers may have one or two different hardware-based network license keys, i.e., either HASP keys or Sentinel Keys. A HASP key is an older key manufactured by a company called Aladdin. A Sentinel key is a more recent key manufactured by Safenet. Both Aladdin and Safenet were recently purchased by the Thales Group.

Previous versions of SES Software are compatible with the HASP as well as the Sentinel keys (beginning with version 17.0). There are two types of HASP keys. An older type that is not upgradeable and a more recent one that can be upgraded to be fully compatible with the Sentinel keys. The older type will not work for SES software Version 18 and later. It must be replaced by a new Sentinel key. The newer HASP key firmware can be upgraded. SES will provide you with an upgrade file that will install the most recent (Vendor to Customer) V2C upgrade utility that will make the key fully compatible with the Sentinel HL key and future versions of the software. SESLicenseManager will detect the key and, if applicable, will ask you to follow the How to Upgrade Your NETHASP Key to a Compatible Sentinel Key section if you wish to receive the V2C upgrade file. If it is an older HASP key, it will advise you to replace it at your convenience because it will not work for SES software Version 18 and later. The installation process will ask you to contact SES for a free key replacement. Typically, one of the two following messages appears if you have a HASP key when you start SESLicenseManager.



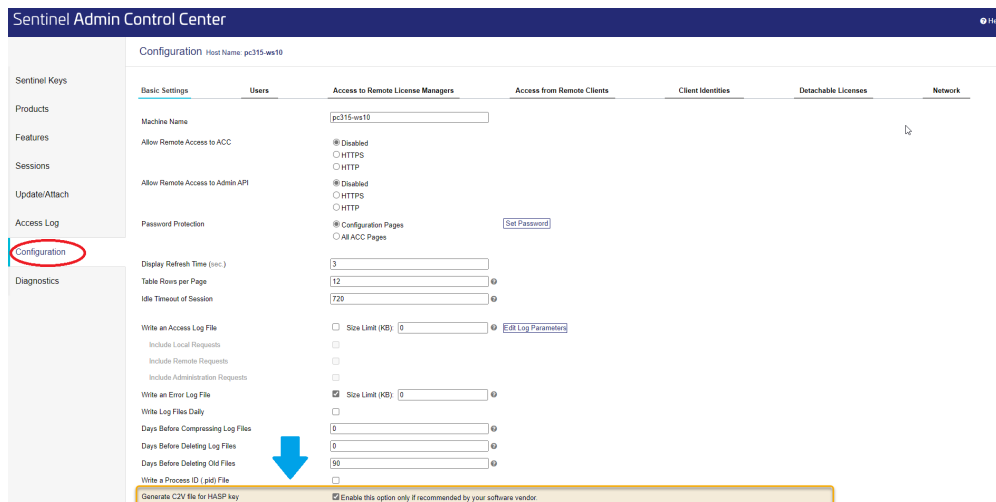
If your NETHASP key can be upgraded to a Sentinel license, the following message appears when starting SESLicenseManager.



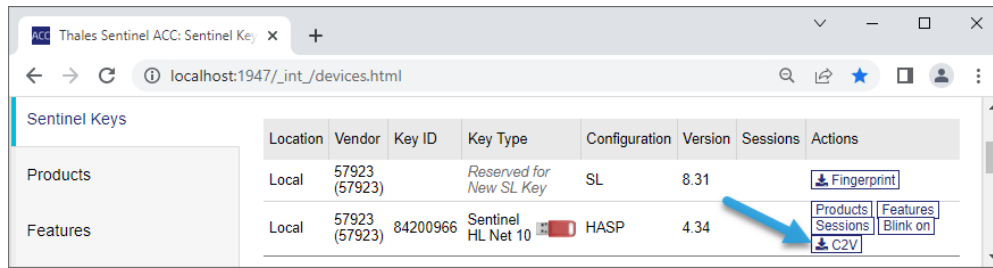
Regardless of your situation, i.e., whether you are an existing SES customer or a new customer, you must have a Sentinel HL key or you must have replaced or converted your existing NETHASP key to a Sentinel HL key before proceeding with the installation. To upgrade your compatible NETHASP key follow the procedures described in [Section 3](#). Otherwise, skip this section and go to [Section 4](#) to continue your installation.

3. How to Upgrade Your NETHASP Key to a Compatible Sentinel Key

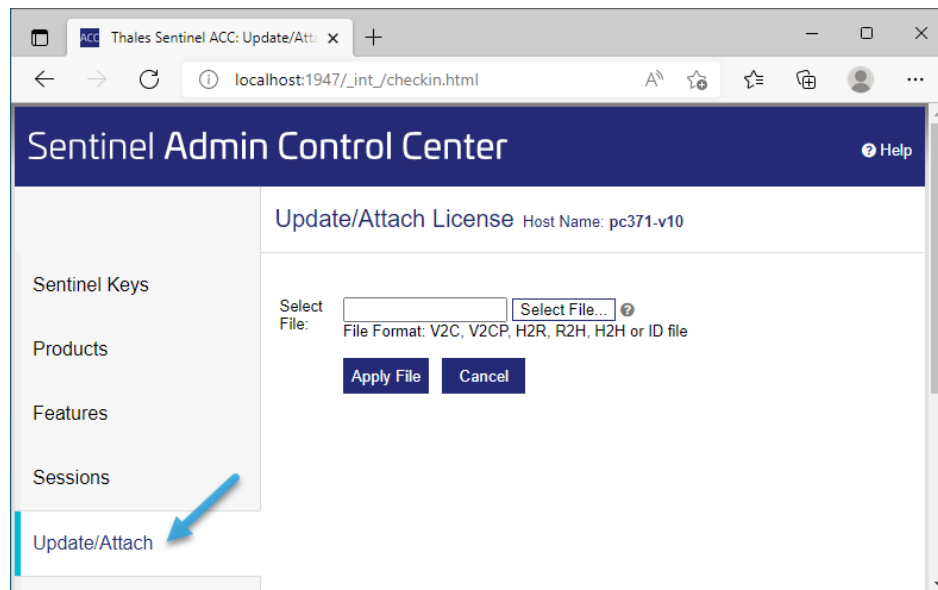
1. Go to <http://localhost:1947/int/config.html>, scroll down, select Configuration from the left panel then select Generate C2V file for HASP key by checking “**Enable this option only if recommended by your software vendor**”. Click **Submit** to apply the changes.



2. Go to <http://localhost:1947/int/devices.html> or click **Sentinel Keys** on the left menu of the same browser and locate SES key with Vendor 57923.
3. Click the highlighted **C2V** button to save your key's C2V file, and send us the file by [email](#). Note that depending on your settings you may not see some of the buttons shown in the screen below.



4. After receiving the C2V file of your key, SES will send you a license file to disable your current NetHasp license, and a V2C file to upgrade your key to a Sentinel one.
5. Click **Update/Attach** on the left menu to go to **Update/Attach** page and access the screen shown below.



6. Click **Select File** to select the V2C file that was sent by SES.
7. Click **Apply File**.

4. Installing a Hardware-Based Network License Management Tool

The network version of the license management key must be installed on the host server (or reliable computer) by a network administrator. This section describes the installation and configuration procedures for the server components of the software license management. It is not recommended to install SES software packages on the server. SES software packages are installed on the client (end-user) personal computer. The installation process requires administrative rights. It is done according to the standard SES Software installation procedure, which is the same for a network or standalone client. The only difference occurs at the end of the process where one has to select between accessing a local and a network license key.

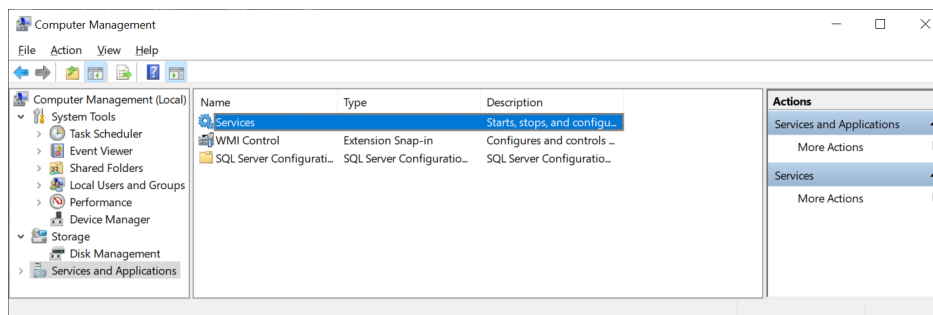
The server installation is quite simple, and comprises only the licensing components of the software, namely:

- A hardware license protection key and associated device driver.
- A service that establishes a bridge between the client applications and the hardware key.
- Management tools that allow you to customize the licensing environment.

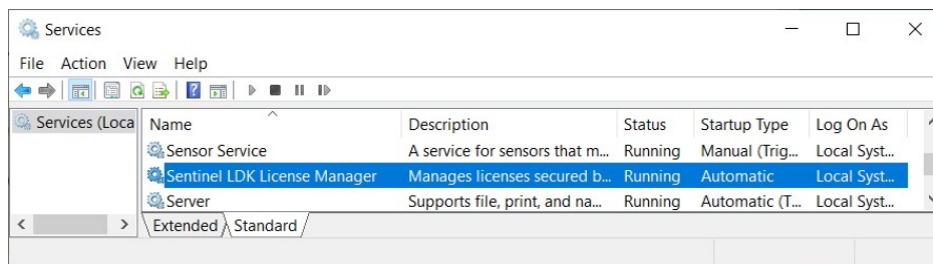
4.1 Single Network License Key Installation

For scenarios involving a single network license key, installing and configuring the network key is straightforward. The basic steps are as follows:

1. Select any server or computer on the network on which to install the license protection key, the *Sentinel LDK Run-time Environment* driver. We strongly recommend a network physical or virtual server, since this is less frequently rebooted, but any reliable computer works just as well. It is always advisable to have a dedicated CPU thread reserved to ensure timely response of this license server.
2. Install the *Sentinel LDK Run-time Environment* driver: run `HASPUserSetup.exe` from the **Tools\HASP\Install** folder on the SES Software distribution folder. Note that the HASP prefix in this executable is a legacy name that applies to Sentinel based keys and should not suggest that the converted key is still a HASP key.
3. Insert the red-colored SES USB dongle in the USB port on your license server. If you are using a virtual server, you may use a USB-over-IP device to mount the dongle on the server.
4. Please wait for the red LED on the USB dongle to light up.
5. Navigate to **Control Panel | Administrative Tools | Services**. On Windows 10, select **from your desktop Control Panel > System and Security > Windows Tools** and start **Computer Management**.



6. Select Services and make sure that the Sentinel LDK License Manager service is running as shown below.



7. Activate the network key from a client computer that has one or more SES Software packages already installed (see Section 6). You may go to the page http://localhost:1947/_int_/devices.html to determine if your key is now indeed, listed as a Sentinel network key. If so, it should list as a HASP or Sentinel HL Net key for the Vendor 57923, depending on the manufacturing date of the HASP key. Regardless of the name, all converted keys are now fully compatible with the Sentinel Key.

The installation method described above uses general broadcasting to allow the clients to discover the license server if a single server license key is installed. If you are configuring multiple network keys, then the IP address method should be used instead of broadcasting since you will want each client to be able to acquire a specific license that is available on the network. Broadcasting does not offer this level of control. Please see [Section 7](#) for help in doing that.

4.2 Multiple Network License Key Installation

To install more than one network key, repeat Steps 1 and 2 above for each key, using a different server for each key. Next, configure the clients to use those keys, as described in the section Using SESNetKey to Configure Network Keys. Refer to the following [Section 7](#) for more details on the available installation and configuration options when installing a network key.

5. Installing a Software-Based Network License Management Tool

As mentioned above, a network license key can work with either a hardware (Sentinel HL) key or a software-based (Sentinel SL) key. This section provides steps for setting up a software-based (Sentinel SL) key.

Note that it is not necessary to install SES Software on a license server, and that while the key setup process is straightforward for either key type, a few additional steps are required to set up a Sentinel SL key. As for the hardware-based license, it is always advisable to have a dedicated CPU thread reserved to ensure timely response of this license server. A hardware (Sentinel HL) key requires only the installation of

a driver on the host server, and then the connection of the key to a USB port. A Sentinel SL key, on the other hand, is a virtual key that resides in the secure storage area of the server. Therefore, a server **Fingerprint** file must be created for the server. The overall setup process is described below.

5.1 Driver Installation

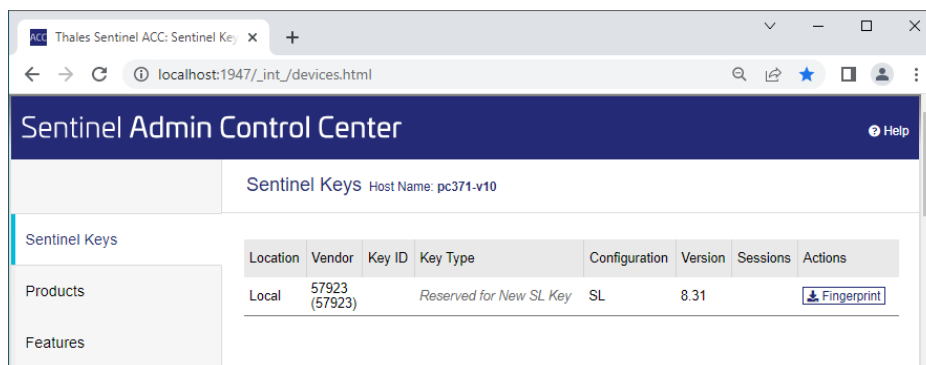
In order to setup a Sentinel SL key, the specific driver must be installed as well. If the driver was not made available to you yet, contact SES to get the specific driver (a zip file), extract all files if so prompted, and then run the command file, usually: InstallHaspDriver.bat.

5.2 Generating a Fingerprint and Updating the License Key

A Fingerprint of the server is created as a C2V (Customer to Vendor) file via the Sentinel Admin Control Center. This fingerprint file is sent to SES, which then provides a V2C (Vendor to Customer) file used to update the license for the Sentinel SL key.

1. Create the Fingerprint

Go to access the Sentinel Admin Control Center. If the Control Center is unreachable, the most likely cause is that the Run-time Environment is not installed. In this case, ensure that the driver installation was completed.



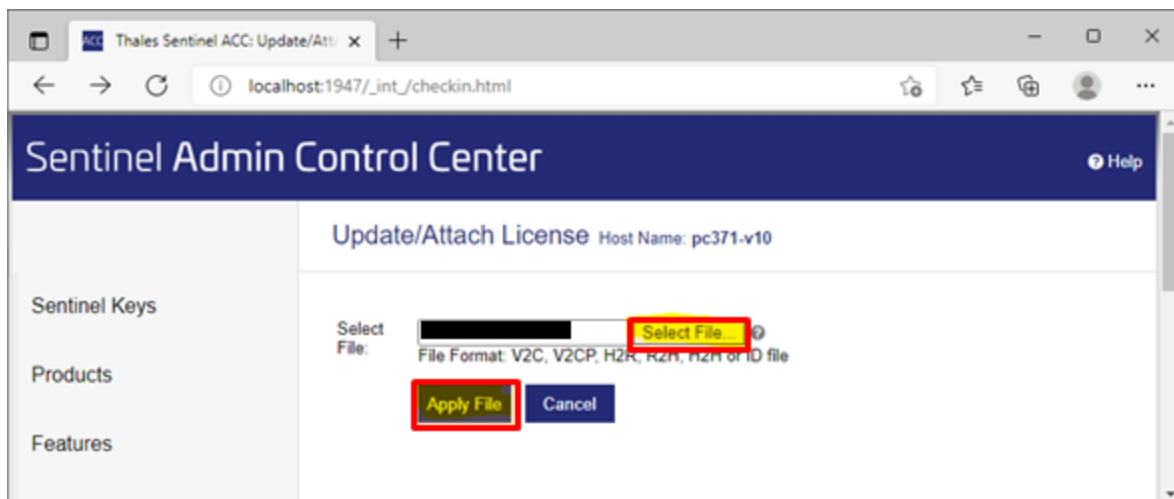
Note that only fingerprints created for Vendor 57923, as shown above, work for SES Software.

Click the **Fingerprint** button. A C2V file (Fingerprint_57923.c2v) will be generated. Email this C2V file to SES.

2. Receive the V2C file from SES and Apply Sentinel License Update

Upon receiving the C2V file, SES will provide a V2C file via email. From the Update/Attach License tab of the Control Center, click Select File to browse to the location of the V2C file, then Apply File

to update the license for the key.



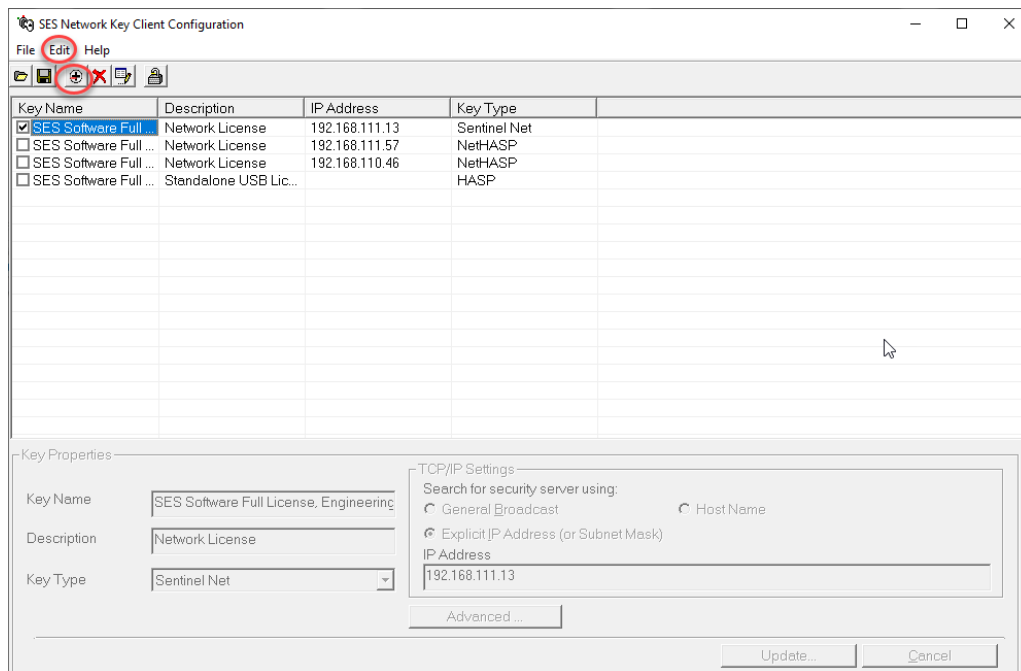
3. Moving the License Key to another Server

Before moving the license key to another server, deleting or formatting a license server hard drive, inform SES to receive instructions on how to transfer your Sentinel software-based license to a new license server. Otherwise, fees may apply to generate a new Sentinel license.

5.3 Client PC Setup

For each client PC that requires a software-based license from the host server, SES Software version 17.1 (or higher) must be installed, and TCP and UDP ports 1947 must be open between the PC and the host server. In addition, the Sentinel SL key must be activated on each client PC. This activation step is done on the client PC, using the SESLicenseManager application described in [Section 7](#).

A brief summary of the steps described in [Section 7](#), applicable to software-based license keys is given hereafter for your convenience. To proceed, launch SESLicenseManager. The main screen will show the Sentinel SL Key information. Otherwise, ensure that port 1947 is open between the client PC and the host server, and run the SESNetKey utility from the Desktop\SES Software xx.x\System folder, where xx.x is the version number of SES Software. You should see the following screen.




1. If you do not see this new license key server in the list proceed to Step 2, otherwise select that key by checking it.
2. Click the **Edit | Add** menu item, or click the Add button (+) on the toolbar.
3. In the **Key Properties** panel, enter CDEGS (or any other unique name) as the **Key Name**, enter Sentinel SL as the **Description** and select Sentinel Net as the **Key Type**, enter the **IP address** of the server as the IP Address, and then click the **Add** button.
4. Click the **File | Save** menu item to save, and then close SESNetKey.

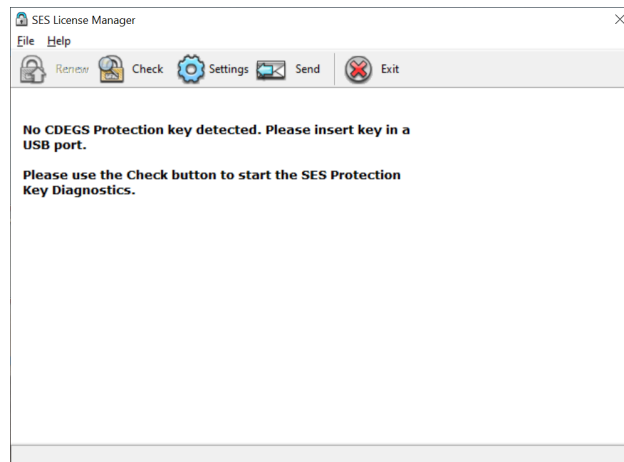
If the main screen of SESLicenseManager shows the Sentinel SL Key Information, click **Renew**. The SES Protection Key Activation wizard appears. Select **I have already received a license file**, and then the **Browse** button. Navigate to the location of the license file (.lic), select it, and then click **Next** to complete the process.

Activating and Updating a Client License Management Key

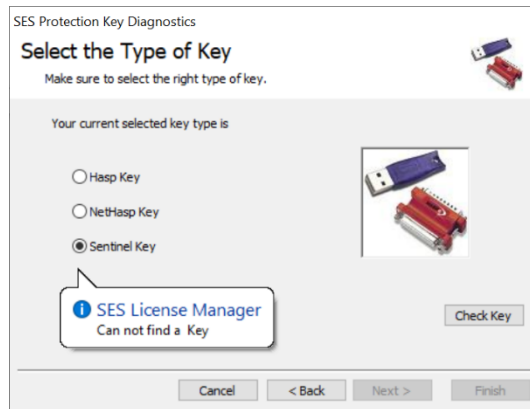
6. Using SESLicenseManager to Activate and Update a Client License

To protect SES users against the theft or loss of their license management keys, SES has introduced a timed license key, which, if stolen or lost, becomes ineffective after a short period. It is easy to maintain. Simply reinitialize it with the supplied SESLicenseManager tool. The procedure for activating and updating the protection key is described below. Please close all SES Software programs prior to updating your license management key. Make sure that you are running this procedure on the computer where the physical or virtual key is installed. Before you start, make sure the network key is setup properly. You will need a license file from SES (or a link to such a file) or the username and password of your support account.

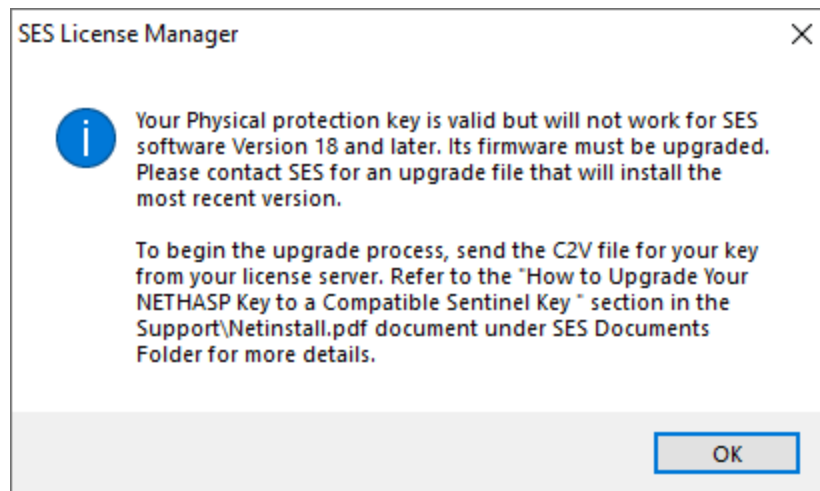
1. Click the **SES Software xx.x** icon on your desktop  where xx.x is the version number of SES Software.
2. Once you have opened the SES Software folder, click the **System** folder.
3. In the **System** folder, click on **SESLicenseManager**.
4. If you get the screen shown below, click the **Check** button. Otherwise, you should see one of the screens shown at [Item 7](#).



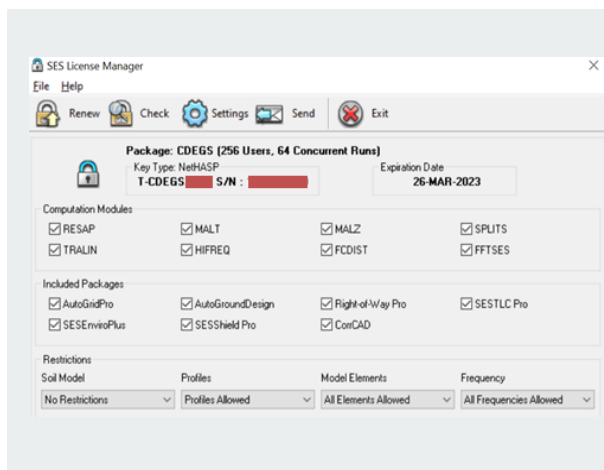
5. Select **Sentinel Key** and follow the wizard instructions.



6. If no Sentinel keys can be found as shown in the screen above and one of the NETHASP keys is compatible with a Sentinel key, you will be invited to upgrade your NETHASP key as shown in the following message screen (and as explained already in [Section 3](#)).



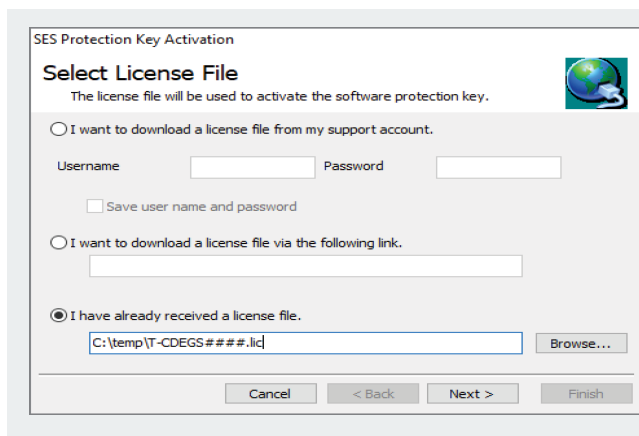
7. You will then see one of the two screens that follow:



The screen on the left shows a CDEGS package. The **Computation Modules** panel displays which modules are enabled by your software license protection key. The **Included Packages** panel displays the software packages included in your key.

- The type of soil model that is allowed in the software package(s) is indicated at the left side of the Restrictions section, etc.
- The remaining panels show the type of license key detected and its expiration date.

- If you are presented with the screen above and you wish to activate or update the license terms, select **File | Activate License**, or click the Renew button on the toolbar to open the **SES Protection Key Activation Wizard**. The **Select License File** screen appears if a license protection key is detected, as shown below.
- Alternatively, you may be presented immediately with the **Select License File** screen:

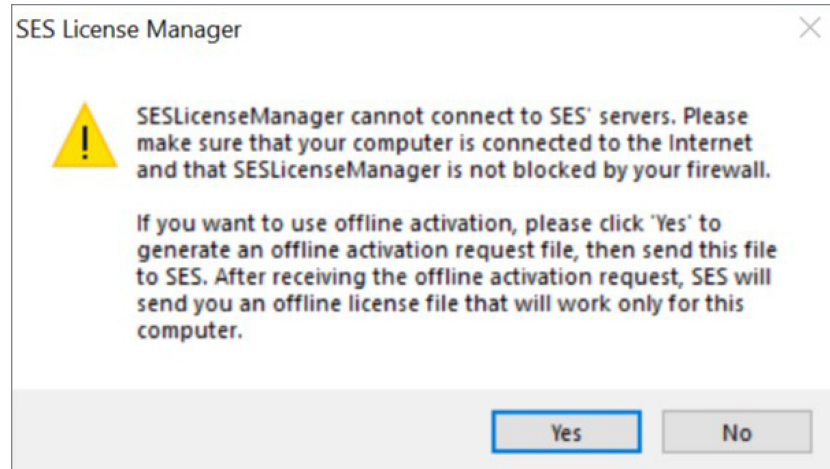


The **Select License File** screen allows you to select a license file to activate or update the license key. There are three options:

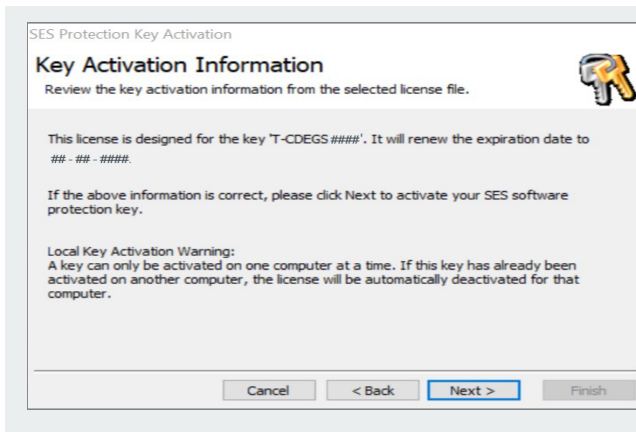
1. If you are under support, you can use your username and password to download your license file automatically.
2. You may also use a temporary link provided by SES to download a license file.
3. You can select a license file that has been provided by SES via email or other delivery methods.

- Often, you will already have a license file. In this case, you should choose the last option, i.e., “**I have already received a license file**”, and click the Browse button to go to the directory where you have placed the license file to select it. It is a file named T- CDEGS####.lic, where #### represents the ID number of your key. If you do not have a license file, but have a link from SES or your support account username and password, then use these instead. Click on **Next**.
- SESLicenseManager must connect to SES's server over the internet while activating or updating the license key. The software will attempt to communicate with SES via the internet. The Sentinel Run-time Environment uses port 1947 for communications. Please ensure that port is open and that the program itself is allowed through the firewall. If this process fails or if internal policies do

not allow you to open this port, you will be offered the option to use offline activation with the following message, during the latter part of the activation process.



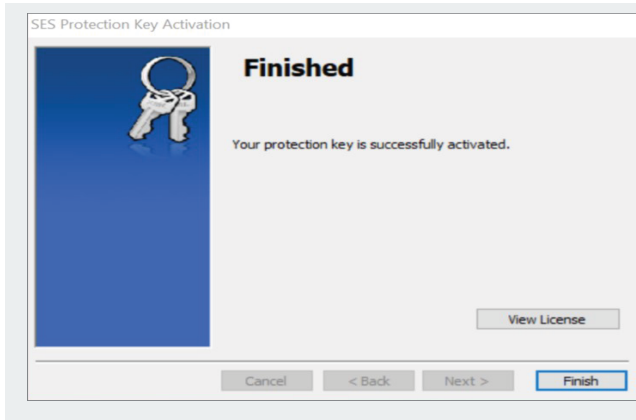
10. If you want to use offline activation, please send SES the offline activation file by answering “Yes” and following the wizard.
11. After receiving the offline activation request, SES will send you an offline license file that will work only for the computer that generated the offline activation request. Follow the ensuing instructions to obtain an offline license file dedicated to the computer you are activating and start the activation process again with the offline license file, when you receive it.



The **Key Activation Information** screen shows the information in your selected license file. If the license file only contains expiration data, it will display only the new expiration date.

The example shown here is for CDEGS key **T-CDEGS####** and assumes that the SES Protection Key Activation wizard was launched to reactivate the key until the given date.

12. Read the information on the **Key Activation Information** screen. If you see anything wrong, then contact SES. Click on **Next**.



Once your license key is activated, the message “Your protection key is successfully activated” will be shown in the Finished step when the license file has been accepted.

You may use the **View License** button to examine the license information. At this point simply click on the **Finish** button and the window will close. The software is now ready to be used.

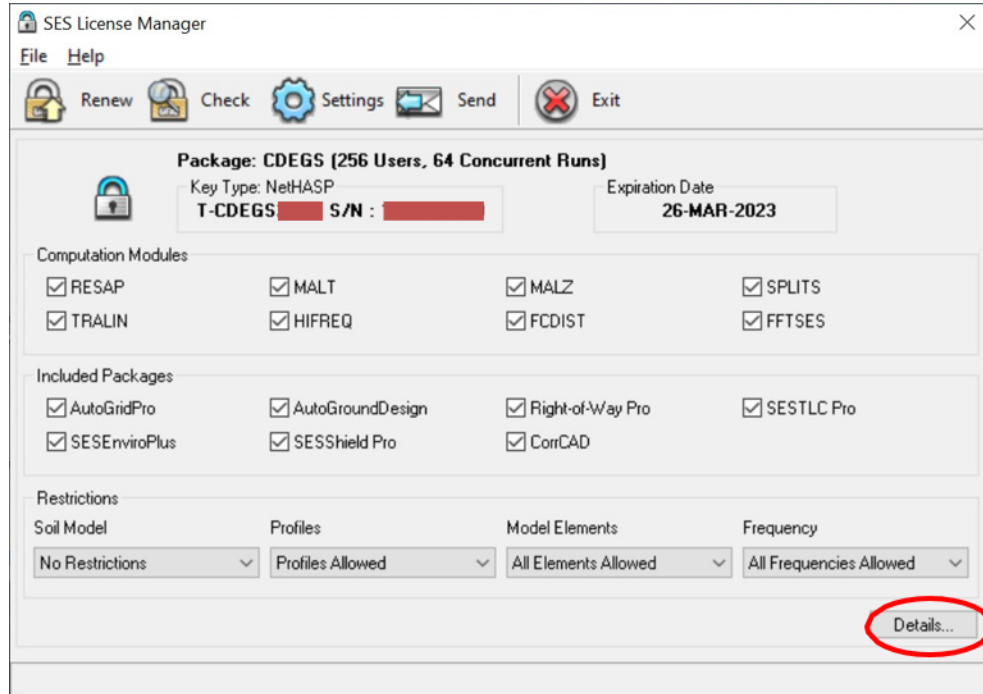
6.1 Automatic Installation

By default, SESLicenseManager will automatically send the activation report file *KeyVerify.dat* to SES by email. Under certain circumstances (e.g., firewall settings, absence of an email account, etc.), the file is not sent. If this occurs, a notification will typically appear on your screen requesting that you email the activation report to SES manually at keysupport@sestech.com. The file, *KeyVerify.dat*, is found in the SES Documents Folder, which can be accessed by clicking the **Desktop\SES Software xx.x\Programs Folders\Documents Folder**, where xx.x is the version number of SES Software.

You may also notice other files in this folder, for example *KeyDiagnostics.dat*, which is a diagnostic report that is sent to SES when the **Send** button is clicked from the SESLicenseManager main screen. *KeyOARquest.dat* contains the offline activation request that would be generated and sent to SES if off-line activation was requested.

6.2 Checking the Installation

Once the installation is completed, SESLicenseManager will display the following screen.



Clicking the **Details...** button brings the following information screen that has 5 tabs. Clicking these tabs brings the following screens.

SES License Information













SES License Information

Software Package : CorrCAD (40 Users, 20 Concurrent Runs)

Key Type : NetHASP
T-CDEGS S/N: [REDACTED] Expiration Date: 11-NOV-2022

Software Packages | Computation Modules | Interface Modules | Tools | Restrictions

Included Packages

<input type="checkbox"/>	 AutoGrid Pro	<input type="checkbox"/>	 AutoGroundDesign	<input type="checkbox"/>	 AutoGround
<input checked="" type="checkbox"/>	 CorrCAD	<input type="checkbox"/>	 MultiGround	<input type="checkbox"/>	 MultiGroundZ
<input type="checkbox"/>	 MultiLines	<input type="checkbox"/>	 MultiFields	<input type="checkbox"/>	 Right-of-Way Pro
<input type="checkbox"/>	 SESEnviroPlus	<input type="checkbox"/>	 SESTLC Pro	<input type="checkbox"/>	 SESShield Pro

Close

SES License Information









SES License Information

Software Package : CorrCAD (40 Users, 20 Concurrent Runs)

Key Type : NetHASP
T-CDEGS S/N: [REDACTED] Expiration Date: 11-NOV-2022

Software Packages | Computation Modules | Interface Modules | Tools | Restrictions

Included Computation Modules

<input checked="" type="checkbox"/>	 RESAP	<input type="checkbox"/>	 MALT	<input checked="" type="checkbox"/>	 MALZ	<input type="checkbox"/>	 FCDIST
<input type="checkbox"/>	 SPLITS	<input type="checkbox"/>	 TRALIN	<input checked="" type="checkbox"/>	 HIFREQ	<input type="checkbox"/>	 FFTSES

Close

SES License Information









SES License Information

Software Package : CorrCAD (40 Users, 20 Concurrent Runs)

Key Type : NetHASP
 T-CDEGS S/N: [REDACTED] Expiration Date: 11-NOV-2022

Software Packages Computation Modules **Interface Modules** Tools Restrictions

Included Interface Modules

<input checked="" type="checkbox"/>		CDEGS	<input type="checkbox"/>		ROWCAD	<input checked="" type="checkbox"/>		SESCAD	<input type="checkbox"/>		SESFcdist
<input type="checkbox"/>		SESFFT	<input checked="" type="checkbox"/>		SESResap	<input type="checkbox"/>		SEStralin	<input type="checkbox"/>		SESCircuitSimulator

Close

SES License Information




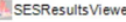
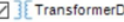



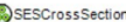




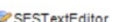





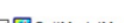











SES License Information

Software Package : CorrCAD (40 Users, 20 Concurrent Runs)

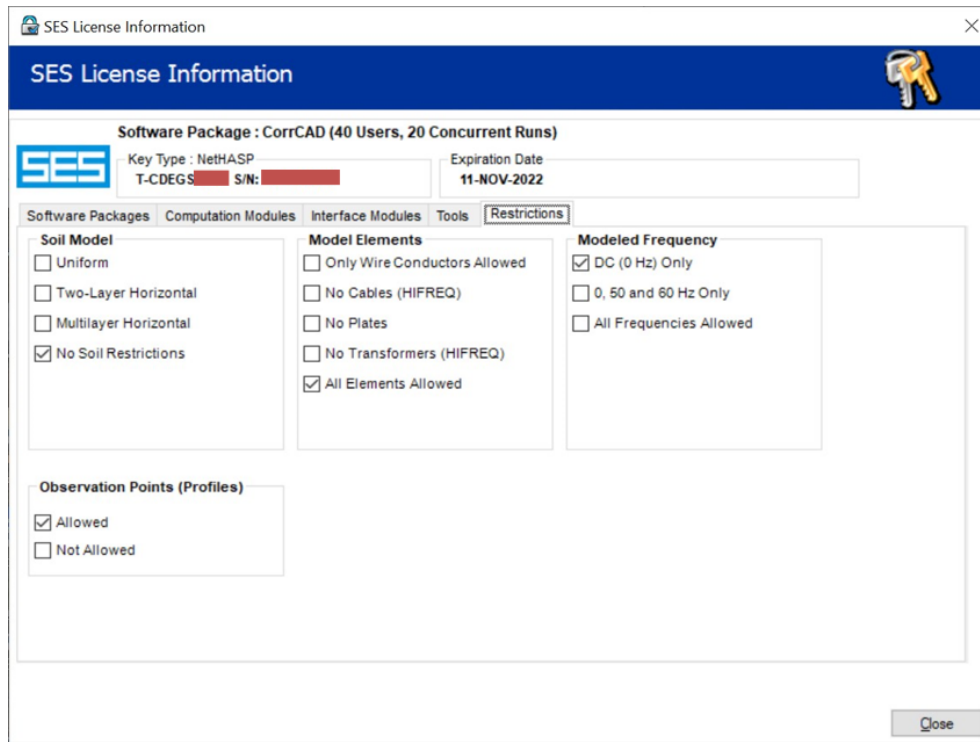
Key Type : NetHASP
 T-CDEGS S/N: [REDACTED] Expiration Date: 11-NOV-2022

Software Packages Computation Modules Interface Modules **Tools** Restrictions

Included Tools

<input checked="" type="checkbox"/>		AutoTransient	<input checked="" type="checkbox"/>		CETU	<input checked="" type="checkbox"/>		SESAmpacity	<input checked="" type="checkbox"/>		SESResultsViewer	<input checked="" type="checkbox"/>		TransformerDataEditor
<input checked="" type="checkbox"/>		GRServer	<input checked="" type="checkbox"/>		GRSplits	<input checked="" type="checkbox"/>		SESLibrary	<input checked="" type="checkbox"/>		SESCrossSection	<input checked="" type="checkbox"/>		SESThreshold
<input checked="" type="checkbox"/>		SESBat	<input checked="" type="checkbox"/>		SESGSE	<input type="checkbox"/>		GRSPLITS-3D	<input checked="" type="checkbox"/>		SESTextEditor	<input checked="" type="checkbox"/>		SESEnviroPlot
<input checked="" type="checkbox"/>		SESScript	<input checked="" type="checkbox"/>		SESCurveFit	<input checked="" type="checkbox"/>		SESeBundle	<input checked="" type="checkbox"/>		SESConverter	<input checked="" type="checkbox"/>		SoilModelManager
<input type="checkbox"/>		SESShield	<input checked="" type="checkbox"/>		GraRep	<input type="checkbox"/>		SESImpedance	<input checked="" type="checkbox"/>		SESPlotViewer	<input checked="" type="checkbox"/>		SESystemViewer
<input type="checkbox"/>		SESTransient	<input checked="" type="checkbox"/>		FFT21Data	<input checked="" type="checkbox"/>		TransposIT	<input checked="" type="checkbox"/>		SoilTransfer	<input checked="" type="checkbox"/>		SESConductorDatabase
<input checked="" type="checkbox"/>		SICLCommand												

Close



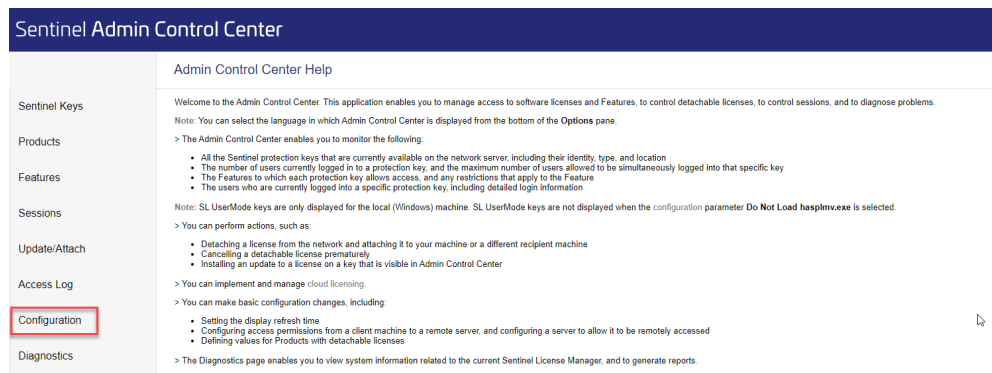
You need to verify that all information is accurate and corresponds to the software packages you ordered from SES.

Administration of a Sentinel Network Key

7. Setting Up the Network License Admin Control Center

The Sentinel Admin Control Center is the best location to administer, configure and personalize the network license environment. If you run into problems, consult [Section 8](#) for possible solutions.

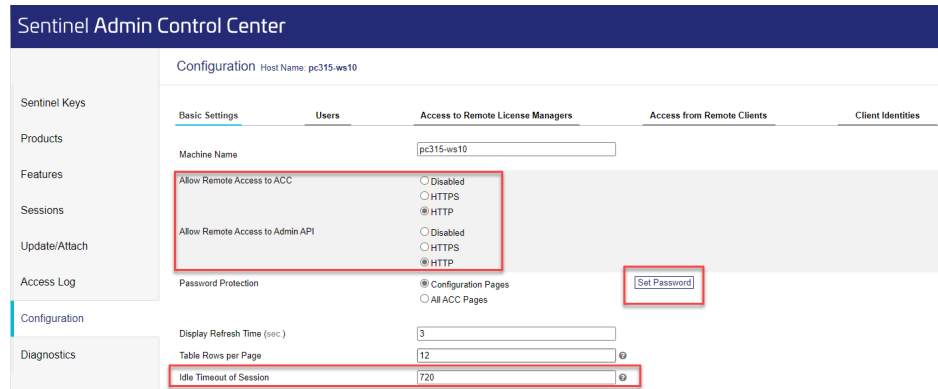
Access to Sentinel Admin Control Center requires the installation of the Sentinel LDK Run-Time Environment HASPUserSetup.exe tool. The HASP prefix in this tool is a legacy identification and is not related to older NETHASP keys. The driver is installed at the same time the run-time environment is installed. For example, the Sentinel Admin Control Center allows you to check which clients are currently connected to the License server and using SES software products. This can be accessed by going to <http://localhost:1947> in any browser as shown below.



However, it is better to configure the Admin Control Center so that it allows access to its pages from client computers as well. To do this:

1. In the Admin Control Center shown above, select Configuration from the left-side menu. This will open the configuration page.
2. On the **Basic Settings** page, select the **Allow Remote Access to ACC** and select **HTTP** or **HTTPS**. This will make the settings available for remote configuration. If needed, you may protect access to the Admin Control Center pages with a password, then, click the Set Password button to set a password. The default password is an empty string. If you forget your password, simply delete the hasplm.ini file, which is located in the `%CommonProgramFiles(x86)%\Aladdin Shared\HASP` folder, and then, restart the Sentinel LDK License Manager service.
3. In the **Idle Timeout of Session** section, type in the value you want. The default value, 720 minutes, is too long. It is better to modify it to a shorter period, such as 10 minutes. Note that the timeout of SES Software is defined in the Time-out limit value under the General section in the

SESSecur.ini file, which is located in the **SES Software Documents** folder (which can be opened in Windows Explorer by clicking on **Desktop\SES Software xx.x\Programs Folders\Documents Folder**), where xx.x is the version number of SES Software. The default value is 600 seconds.

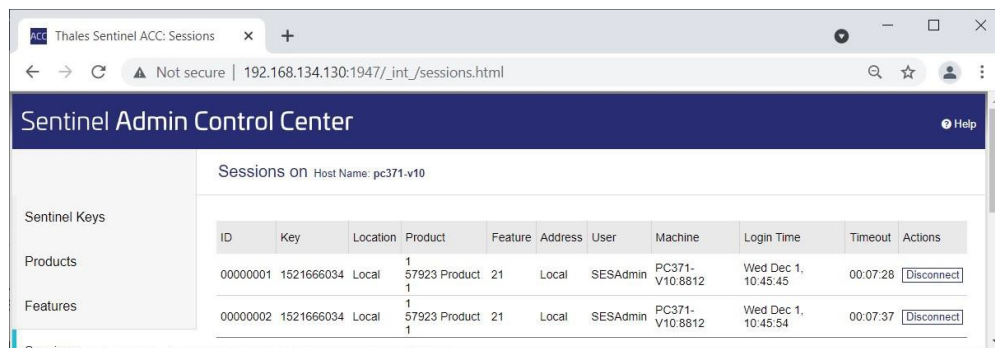


4. Scroll down to the end of the browser page and click **Submit** to apply the changes.

Now you can access the Admin Control Center from any computer in the local network. To open the Admin Control Center from your computer, launch your web browser and open the following URL in it:

http://<License_Manager_Name_or_Address>:1947

Name and **Address** represents the target licensing computer name or IP address. The sessions' page will show which clients are using licenses. You can view session data and terminate sessions.



The **Sentinel LDK License Manager** uses port 1947 for communications. So please ensure that the port is open and that the program itself is allowed through the firewall. If the broadcast search fails, follow the section below to use SESNetKey to specify the license server IP manually.

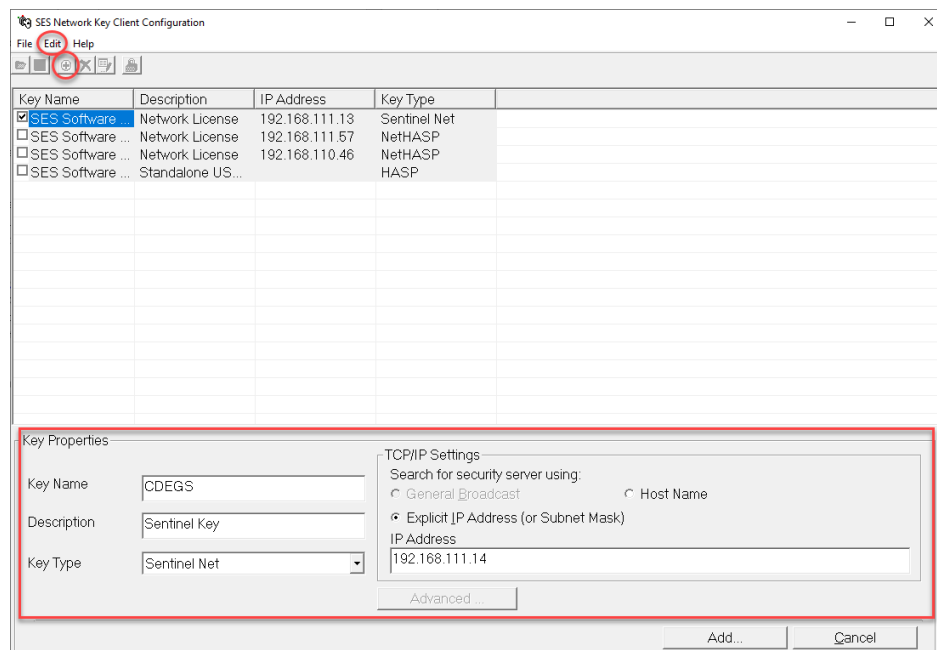
7.1 Using SESNetKey to Configure Network Keys

The utility *SESNetKey* that is installed with all SES Software packages builds a valid configuration file that enables the clients to communicate efficiently with the license management keys. For a Sentinel license, this configuration file is called *hasp_57923.ini*. Note that *SESNetKey* allows you to do two things:

1. Build a configuration file (*SESNetKey.ini*) that contains the network address of the servers to which the keys are connected and other information that helps identify the license keys uniquely. This file must be created on one client PC and cannot be created from the license server that does not include an installation of SES software.
2. Once the configuration file is distributed to the clients and placed in their **SES Software Documents** folder, it allows the clients to select which of the keys to use from this point forward. It does that by generating a suitable *hasp_57923.ini* configuration file according to users' choice, and placing the file *hasp_57923.ini* in the %LocalAppData%/SafeNet Sentinel/Sentinel LDK folder.

The following steps show how to run the *SESNetKey* utility to specify the IP address of the license manager servers.

1. Run *SESNetKey* from the Desktop\SES Software xx.x\System folder, where xx.x is the version number of SES Software.



2. Click the **Edit | Add** menu item, or click the **Add** button on the toolbar (+).
3. In the **Key Properties** panel, enter CDEGS (or any other unique name) as the **Key Name**, select *Sentinel Net* as the **Key Type**, enter the IP address of the server as the **IP Address**, and then click the **Add** button.

4. If you have multiple license manager servers, repeat Steps 2 and 3 for each server.
5. Click the **File | Save** menu item to save, and then close *SESNetKey*.

This procedure requires that SES Software be installed on the PC where these steps is carried out. Consult the **Installation Guide** for help on how to do that. In the current version of the software, it is only possible to access a single hardware key at a given time. When more than one key are installed on the network, the user must select the key that should be queried when the SES programs perform a license check. It is important to notify users that they have to use the *SESNetKey* utility at least once, to specify the initial key that they want to use. Otherwise, the software may not run correctly.

The above steps are sufficient to configure a client computer to use one or more keys located on servers with specific IP addresses. It should be repeated on every client computer. A simpler method is to distribute the file *SESNetKey.ini* and *SES Secur.ini* created by those steps to all other clients. This file is located in the **SES Software Documents** folder (typically *C:\Users\Public\Documents\SES Software\17.1*).

To configure a client computer when a *SESNetKey.ini* file is available:

1. Copy the *SESNetKey.ini* file to the target client PC **SES Software Documents** folder (You can open it from client PC **Desktop\SES Software xx.x\Programs Folders\Documents Folder**), where xx.x is the version number of SES Software.
2. Run *SESNetKey* from **Desktop\SES Software xx.x\System**, where xx.x is the version number of SES Software.
3. Select the appropriate license key server in the list and save the configuration using the Save option from the File menu.
4. Exit *SESNetKey* using the **Exit** option from the **File** menu.

SES Software will be configured to use the network license server. If you have more than one network license server, and you need to be able to switch between servers, you may wish to create a shortcut to the *SESNetKey* utility for convenience. Consult the *SESNetKey*'s on-line help for details on how to use the utility.

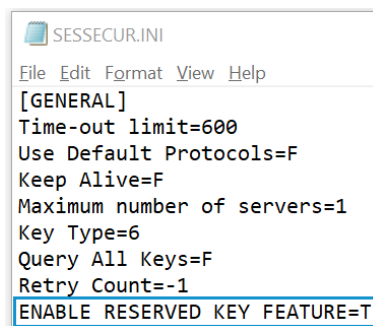
In the current version of the Sentinel Net key, it is not recommended to install more than one SES hardware key in any server or workstation.

7.2 Using SESLicenseManager to Configure Concurrent Runs

If you have a network license for N users (with $N > 1$), you may use SESLicenseManager to enable one user to run up to $2N$ computation modules concurrently on a single machine. This operation is referred to as reserving the license. When a user reserves the license, the seats that are reserved are not available to other users of SES Software using that same network license, until the license is *restored*.

It is important to make sure that no one else is using the network key when you use SESLicenseManager to reserve the license, since this operation will terminate the active sessions of all other users that are using that key.

To enable the Concurrent Runs Configuration feature in SESLicenseManager, you must add the line `ENABLE RESERVED KEY FEATURE=T` to the settings in the `SESSECUR.INI` file under the `[GENERAL]` section, as shown in the following example:



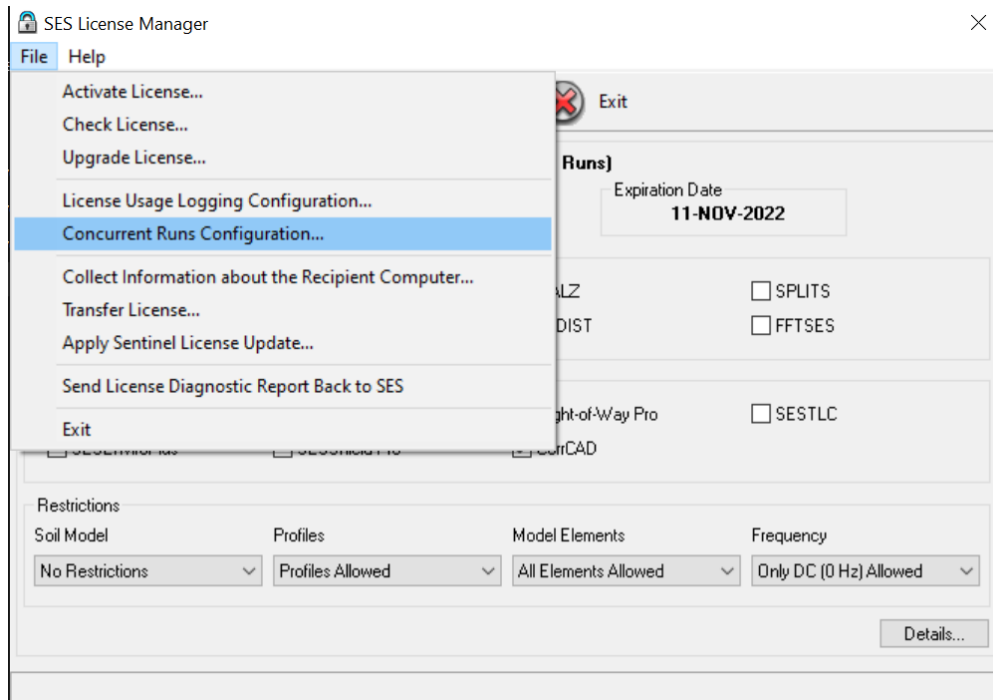
```
SESSECUR.INI
File Edit Format View Help
[GENERAL]
Time-out limit=600
Use Default Protocols=F
Keep Alive=F
Maximum number of servers=1
Key Type=6
Query All Keys=F
Retry Count=-1
ENABLE RESERVED KEY FEATURE=T
```

The settings file can be found in the SES Software documents folder:

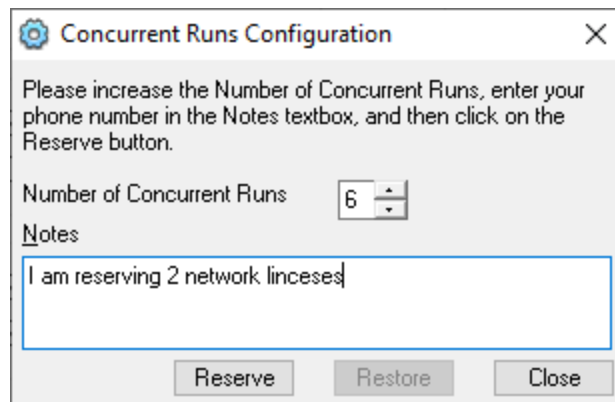
`C:\Users\Public\Documents\SES Software\17.1`

When you are no longer using this feature, you should remove the line from the settings file, or set its value to 'F', for better performance of the network licenses.

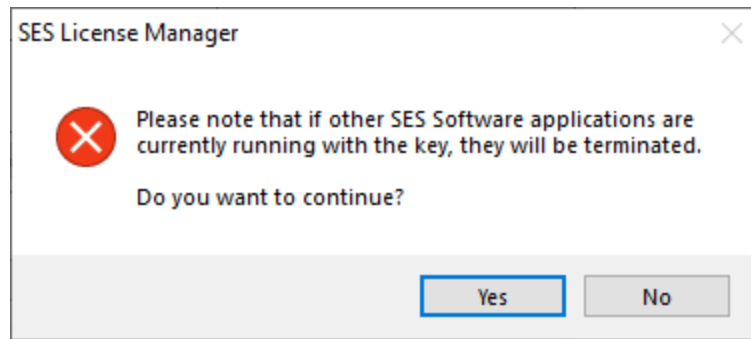
1. Run SESLicenseManager from the **Desktop\SES Software xx.x\System**.
2. Click the **File** menu, and click the **Concurrent Runs Configuration** menu item.



3. Click the arrows to increase the Number of **Concurrent Runs**, enter your phone number (or any information allowing other users of the network key to identify you) in the **Notes** textbox, and then click on the **Reserve** button.



4. Click **Yes** when the “Please note that if other SES Software applications are currently running with the key, they will be terminated” warning message shows.



After reserving the license, you can use SESBat to run multiple concurrent runs. To do this, increase the **Number of Concurrent Runs** in the **Batch Options** tab of SESBat, and then start the runs. Once the concurrent runs are completed, you should use SESLicenseManager again to release the licenses you reserved so that other users can use the key. To release the license:

1. Run SESLicenseManager from the **Desktop\SES Software xx.x\System**.
2. Click the **File** menu, and click the **Concurrent Runs Configuration** menu item.
3. Click on the **Restore** button to release the reserved licenses.

The **Restore** command can be used by any SES Software user on the network when the license is reserved, not only the user who reserved the license. Again, you should make sure that no one else is using the network key when you use SESLicenseManager to restore the license, since this operation will terminate the active sessions of all other users that are using that key. In particular, one should contact the user who reserved the license before clicking the **Restore** button because all concurrent runs will be terminated once you release the reserved license.

8. Important Support Information

8.1 Possible Problems and Solutions

If you run into problems or if you get error messages, you should proceed as recommended in the following.

1. **Antivirus or Antimalware**

If during the installation, one or more programs (e.g., SESLicenseManager.exe) are quarantined by an antivirus or antimalware utility on your computer, you need to temporarily disable it or follow up

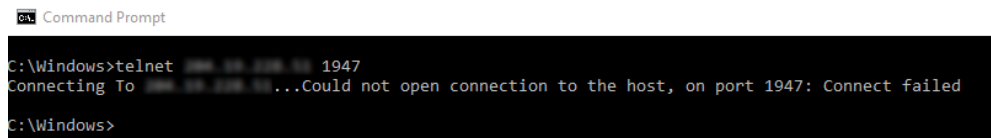
with that utility to restore the SES Software-related quarantined programs, as well as whitelist the programs folder (e.g., c:\Program Files (x86)\SES Software\17.1).

2. Checking connection from Client PC to Port 1947 on the server

To verify that the connection between the client PC and the license server on your network is valid, use the TELNET command as shown below in a Windows Command Prompt:

TELNET [IP] [PORT]

- [IP] is the IP address of the license server. It is important that you use exactly the same IP address that has been configured in SESNetKey.
- [PORT] is 1947



```
Command Prompt
C:\Windows>telnet 192.168.1.100 1947
Connecting To 192.168.1.100 ...Could not open connection to the host, on port 1947: Connect failed
C:\Windows>
```

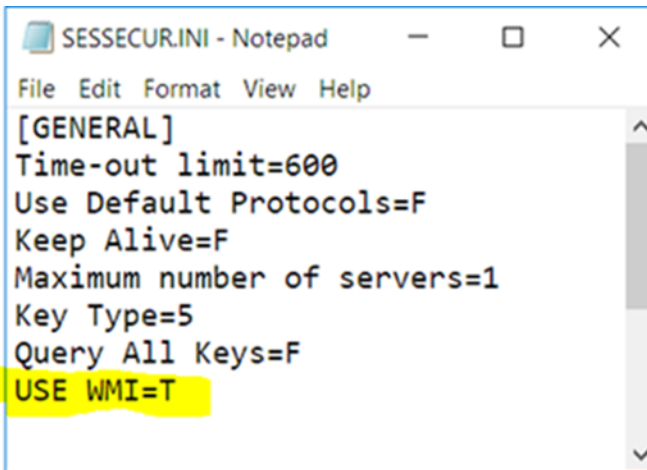
If the port is blocked, TELNET will report “Could not open connection to the host, on port 1947: Connect failed”.

NOTE: **Telnet Client** may not be installed in the **Command Window**. In this case, it can be installed with administrative privileges from **Control Panel > Programs > Programs and Features > Turn Windows features on or off**.

3. Programs and activation not working but license is recognized (change from API to WMI method)

- a. Close all SES applications on the Client PC.
- b. Browse to the SES Software documents folder via the folder shortcut, **SES Software 17.1 > Program Folders > Documents Folder**, on the desktop (e.g., %Public%\Documents\SES Software\17.1).

- c. Locate the **SESSECUR.INI** file in this folder and open it in Notepad or similar tools.



```
SESSECUR.INI - Notepad
File Edit Format View Help
[GENERAL]
Time-out limit=600
Use Default Protocols=F
Keep Alive=F
Maximum number of servers=1
Key Type=5
Query All Keys=F
USE WMI=T
```

- d. Add the following line to the [GENERAL] section of the file (see screenshot above): **USE WMI=T**
- e. If the line `AutoActivate=T` exists, change it to `AutoActivate=F` to disable the automatic activation.
- f. Restart SESLicenseManager.

4. The license cannot be found

Carry out this typical checklist:

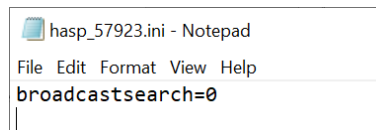
- Confirm that Key Type and IP address entered in SESNetKey are correct on the Client PC. For a network license, use either the NETHASP or SENTINEL NET key type, depending on which network key you have.
- Check the firewall settings to ensure that Port 1947 for TCP and UDP protocols are open between your computer and the license server; see section [Checking connection from workstation for Port 1947](#) to diagnose.
- For the SENTINEL NET key type, the license server should have, at least, Sentinel Runtime V8.31 installed. The setup program can be found in a Client PC in the SES Software documents folder via the program shortcut, **SES Software 17.1 > Program Folders > Documents Folder**, under the subfolder, **Setup.9978\Tools\HASP\Install**. Alternatively, it can be downloaded from <https://www.sestech.com/public/haspusersetup.exe>. Run HASPUSERSETUP.EXE and follow the dialogs to complete the installation.
- For the SENTINEL NET key type, check that, the license server has the correct key installed, it is functioning properly, and it is identified with the vendor ID, 57923. See the Sentinel Keys panel in Sentinel Admin Control Center: <http://localhost:1947/int/devices.html>.

- e. Confirm that the correct service is running on the license server:
 - For the NETHASP key type, the HASP Loader service should be running in order to perform the upgrade on the key. It is okay for the Sentinel LDK License Manager service to be running as well.
 - For the SENTINEL NET key type, the Sentinel LDK License Manager service should be running.

5. Disabling the NETHASP key after having upgraded to a SENTINEL NET key

Run SESNetKey utility from the desktop shortcut, **SES Software > System > SESNetKey**, to change your key to NetHASP license first.

- a. Click the **Edit | Modify** menu item, or click **Modify** button on the toolbar.
- b. Change the **Key Type** to **NetHASP**.
- c. Click the **File | Save** menu item to save, and then close **SESNetKey**.
- d. Locate **hasp_57923.ini** under the path, **%localappdata%\SafeNet Sentinel\Sentinel LDK**, and open the settings file in Notepad.
- e. Make sure that it only contains one line: **broadcastsearch=0**. This will prevent any SENTINEL NET key type from being found through broadcasting.
- f. Save the settings file and close Notepad.



- g. Apply the license file T-CDEGxxxx-DisableNetHASP.lic that was sent to you to disable your current NetHASP license:
 - Save the new activation license file that was sent to you to a temporary location on your computer.
 - Start **SESLicenseManager**, from **SES Software > System > SESLicenseManager**.
 - Click **OK** if any warning message appears, the **SES Protection Key Activation wizard** may appear automatically; if not, on the **File** menu, click **Activate License**, or click the **Renew** button on the toolbar. The **SES Protection Key Activation wizard** will appear.
 - Select **I have already received a license file**, and click the **Browse...** button to locate the license file that you have saved.
 - Click **Next**, and follow the instructions in the wizard to complete the license renewal process.

8.2 Protecting the License Key

Any new license management key, whether software-based or hardware-based, as shipped, is valid for a limited time only. The long-term license file to renew the license key will be sent a few days later by email.

It is very important to secure the license management key at all times, and highly recommended to have it insured. SES offers an insurance service that protects your investment and, in case of loss or theft, ensures the prompt replacement of your key. If you have an active support service, then you automatically have this insurance. If you have any questions, please contact SES.

It is imperative to communicate with SES prior to transferring a software-based license key to another server or returning to SES a hardware-based license key for any reason (upgrade, replacement, etc.), and to use an approved courier service, such as Federal Express or UPS, for the shipment.



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