



SEL Configuration API Instruction Manual

Introduction

The SEL Configuration API is an application programming interface (API) that provides access to protection, security, and communications device configuration stored in the ACSELERATOR[®] Database and managed by Device Manager in ACSELERATOR QuickSet SEL-5030 Software.

The API is deployed as a representational state transfer (RESTful) web service running as a Windows service. The RESTful web service is a de facto standard that can be accessed by client applications by using most programming languages.

This instruction manual explains how to install and configure the API. Once the API is installed and configured, you can use the API Programmer's Reference and examples to learn how to access the API from your client application.

System Requirements

- The API must be installed on the same computer as the ACSELERATOR Database that it will service.
- The ACSELERATOR Database must be at a version compatible with the version of the API that you are installing. Contact Technical Support for version compatibility information. You can check the database version by selecting **Help > About** in QuickSet.
- The API is only supported on Windows 10 x64 and Windows Server 2016 x64 operating systems. .NET Framework 4.7.2 must be installed on the computer.

Installing the SEL Configuration API

Install the API by running the installer, which is available on the SEL website.

After completing the installation, verify that the API installed correctly by entering the following URL in a web browser that is running on the same computer:

`http://localhost:5231`

If the API is installed correctly, you will see the home page, as shown in *Figure 1*.

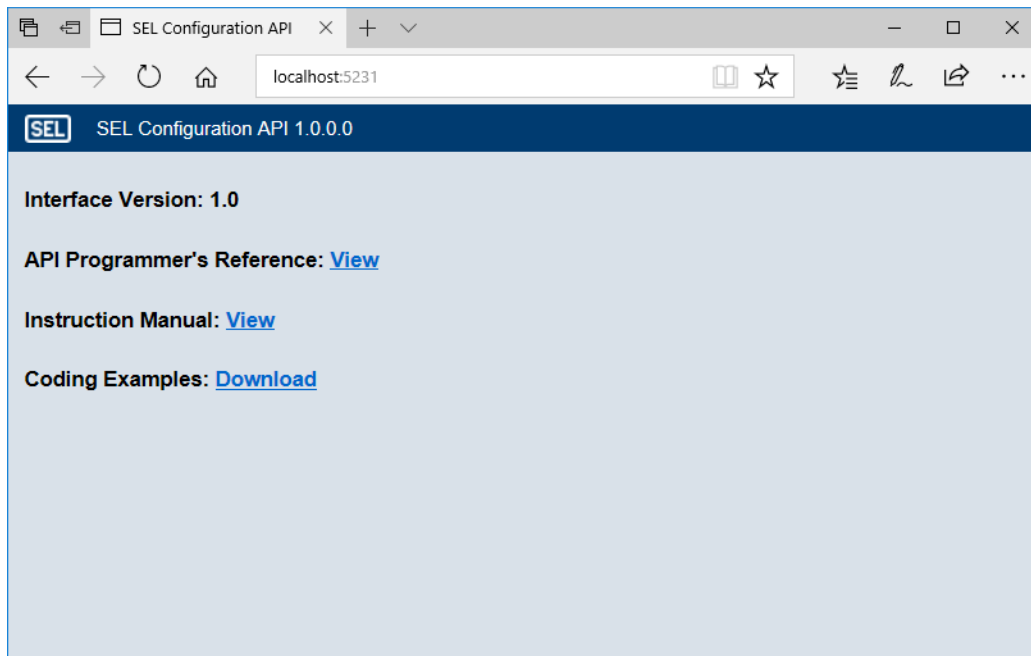


Figure 1 API Home Page

API Accessibility

When installed, the API uses the HTTP protocol and only accepts local connections from the same computer.

When configured with a certificate and an API license, the service uses the more secure HTTPS protocol and accepts remote connections from other computers.

Configuring the SEL Configuration API

Service Account

The API is installed to run under the Local Service account, as indicated in *Figure 2*. You can use the Services control panel applet to configure the service to run under a local or domain account.

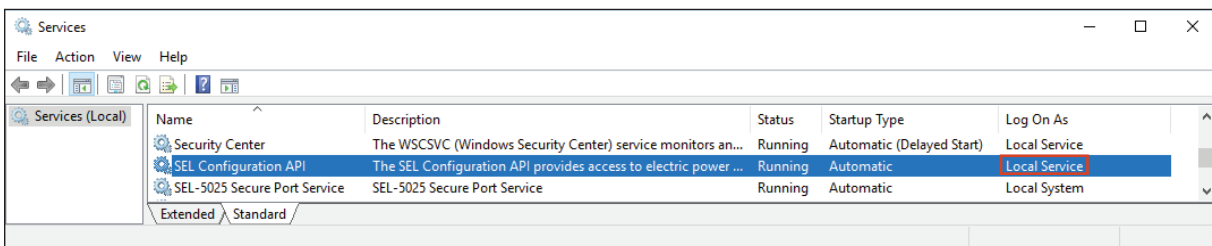


Figure 2 Services Control Panel

The service account must have the following permissions.

- Read and write access to the following folder and its subfolders:
%ProgramData%\SEL\SCA\Service
- Run As Service. You do not have to explicitly grant this permission because the operating system will do so when the service is started with the new account.

Restart the service after configuring the service account.

Service Configuration

Use the SEL Configuration API Setup utility to change the configuration of the API. This utility can be found under the SEL Applications folder in the Start menu.

When first started, the utility displays the default configuration from the installation, as shown in *Figure 3*.

The screenshot shows the 'SEL Configuration API Setup' window with the 'Configuration' tab selected. The window contains the following fields and controls:

- Listening Port:** A text box containing '5231'. Below it, a description reads: 'The network port used to listen for incoming requests.'
- Authentication Token Timeout:** A text box containing '1440'. Below it, a description reads: 'The timeout value for authentication bearer tokens in minutes.'
- Enable API Metadata:** A checkbox that is checked. Below it, a description reads: 'Make API Metadata endpoints available to clients.'
- *PFX File:** A text box containing 'certificate.pfx' and a 'Browse...' button.
- *PFX Password:** A text box containing 'password' and a 'Show Password' checkbox that is checked. There is also a 'Clear' button next to the PFX File field.
- Certificate:** A box containing the following information:

Name: CN=testCert	Effective: 7/10/2019 3:09:11 PM
Issuer: CN=testCert	Expires: 7/11/2019 3:09:11 PM

At the bottom of the window, there are three buttons: 'Help', 'Apply', and 'Close'.

Figure 3 Default Configuration

Update the configuration as needed for your environment, and select **Apply** to save the new configuration. The API uses the new configuration after the API restarts. Note that your configuration may vary between a system used to develop and test an application and a production system.

Listening Port

The listening port is used to receive incoming requests. Ensure the assigned port is not in use by another application.

Default: 5231

Valid values: 1–65535

Authentication Token Timeout

The Authentication Token Timeout setting is the time-out value (in minutes) for authentication bearer token returned by the service when an application logs in to the API. Your client application must provide the token on subsequent API requests.

The API reports an authentication error if an expired token is provided on a request, requiring that the client application logs in again.

Adjust the token expiration time-out to suit the needs of your application.

Default: 1440 minutes (24 hours)

Valid values: 1–525,600 minutes (365 days)

Enable API Metadata

The Enable API Metadata configuration setting makes API metadata endpoints available to clients. These endpoints provide development and testing features that are disabled by default to prevent their misuse in a production environment. See the API Programmer's Reference for more information on using these endpoints.

Default: False

Valid values: False, True

PFX File

The PFX File setting can be used to configure a PKCS #12 certificate file, which allows the API to use the HTTPS protocol and accept connections from other computers.

Work with your Information Services department to determine your requirements, and obtain a certificate if needed.

Default: Not configured

Valid values: File path and password for a valid PKCS #12 certificate file (see *Figure 4*). PFX files with an empty password are not supported.

The screenshot shows a configuration window for the PFX File. At the top, there are two input fields: 'PFX File' containing 'certificate.pfx' and 'PFX Password' containing a series of dots. To the right of the password field is a 'Show Password' checkbox. Below these fields is a text label: 'The PKCS #12 file for use in HTTPS connections.' Underneath this label is a rounded rectangle containing the following information:

Certificate	
Name: CN=testCert	Effective: 7/10/2019 3:09:11 PM
Issuer: CN=testCert	Expires: 7/11/2019 3:09:11 PM

At the bottom of the window are three buttons: 'Help', 'Apply', and 'Close'.

Figure 4 Specify Certificate

Licensing the SEL Configuration API

A license is required to use the API remotely from other computers. To purchase an SEL Configuration API SEL-5231 Software license file, contact your local SEL sales representative. Once you have purchased a license, perform the following steps as necessary for software licensing:

- *Internet Activate* on page 5
- *Internet Deactivate* on page 6
- *Manual Activate* on page 8
- *Manual Deactivate* on page 12

Internet Activate

- Step 1. Open the SEL Configuration API Setup utility.
- Step 2. Select the **Licensing** tab.
- Step 3. From the Licensing tab, select **Internet Activate**.

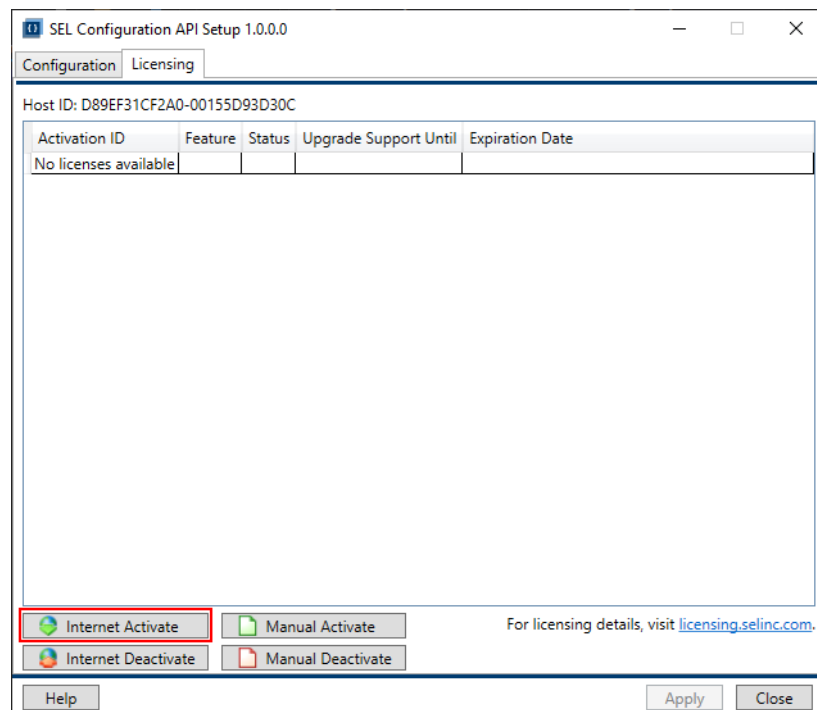


Figure 5 Internet Activate

- Step 4. At the Enter Activation ID window, enter the Activation ID you received when you purchased your license.

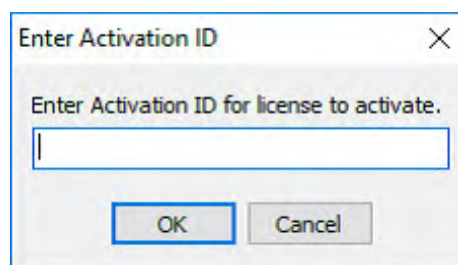


Figure 6 Enter Activation ID

Step 5. Select **OK**. When you successfully activate your license, the License Information window displays your active license information.

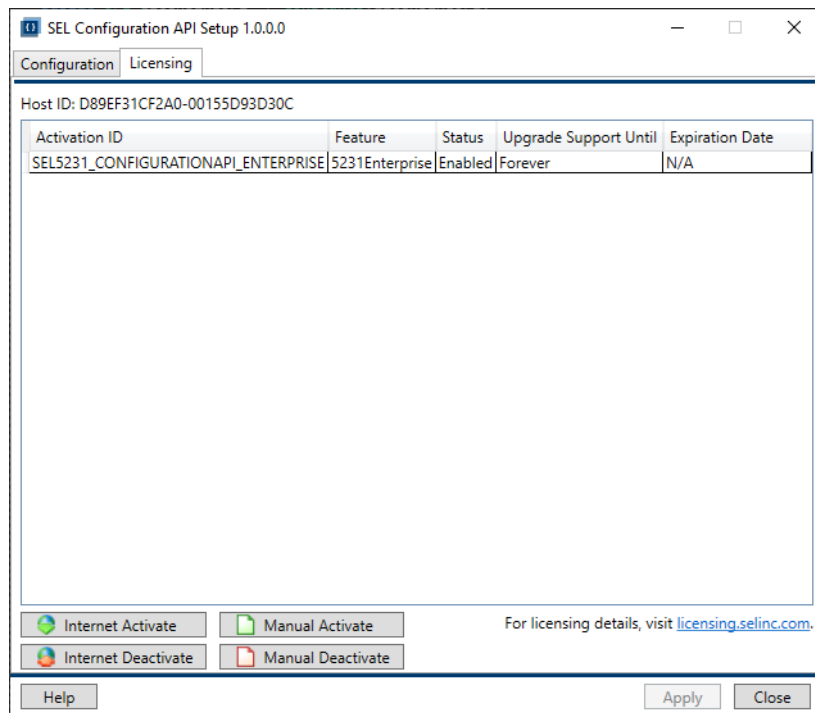


Figure 7 Available Licenses

Internet Deactivate

- Step 1. Open the SEL Configuration API Setup utility.
- Step 2. Select the **Licensing** tab.
- Step 3. From the Licensing tab, select **Internet Deactivate**.

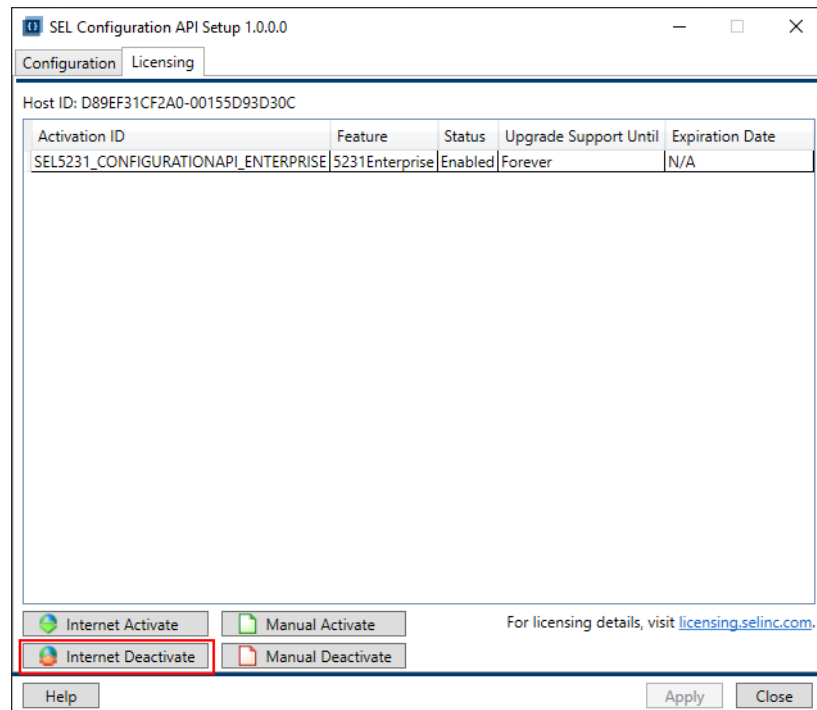


Figure 8 Internet Deactivate

- Step 4. From the Enter Activation ID window, enter the Activation ID you intend to deactivate.

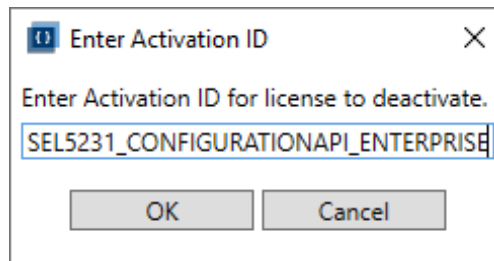


Figure 9 Verify Activation ID

- Step 5. Select **OK**. When you successfully deactivate your license, the License Information window no longer displays your active license for the deactivated Activation ID.

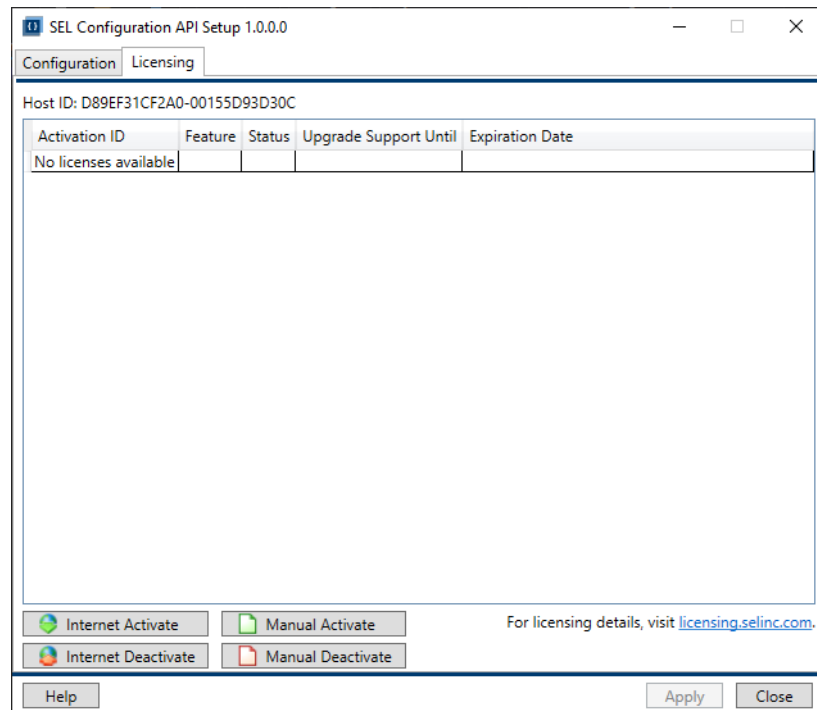


Figure 10 No Licenses Available

Step 6. Select **Close**.

Manual Activate

- Step 1. Open the SEL Configuration API Setup utility.
- Step 2. Select the **Licensing** tab.
- Step 3. From the Licensing tab, select **Manual Activate**.

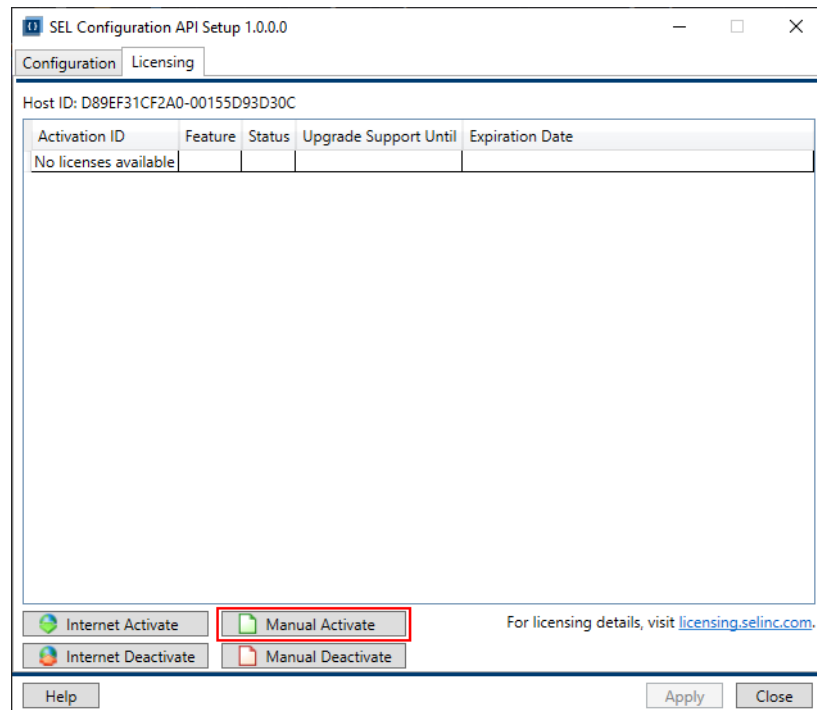


Figure 11 Manual Activate

- Step 4. From the Manual Activate window, select **Generate Capability Request File**.

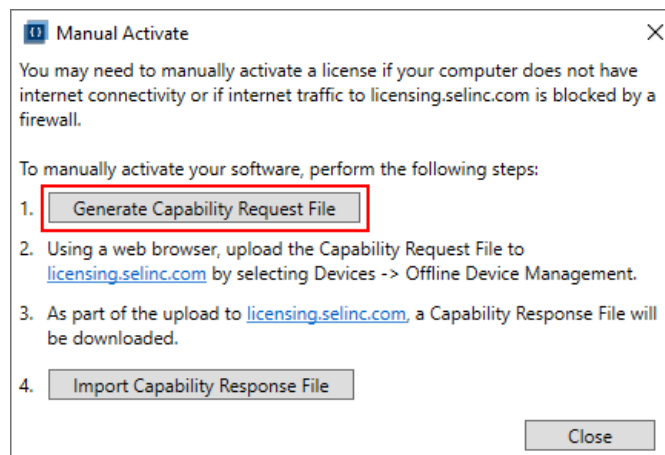


Figure 12 Generate Capability Request File for Manual Activation

- Step 5. Save the Capability Request File to a thumb drive or a network drive that can be accessed by a separate computer that has internet access, or email the Capability Request File to SEL.
- Step 6. At the Enter Activation ID prompt, enter the Activation ID you received when you purchased your license and select **OK**.
- Step 7. Select **OK** on the confirmation message that indicates the file was successfully created.
- Step 8. From a computer that has internet access, go to licensing.selinc.com and log in with the Activation ID you are activating.

Figure 13 Log In With Activation ID

Step 9. From the License & Delivery Portal page, select the **Devices** tab and select **Offline Device Management**.

Step 10. From the Offline Device Management page, select **Browse** and the Capability Request File generated in *Step 4*.

Step 11. Select **Upload**.

Figure 14 Upload Capability Request

Step 12. Select the link highlighted in *Figure 15* to download the Capability Response File.

here to download the new license.' The 'here' link is highlighted with a red box. The rest of the page is identical to Figure 14, showing the 'OFFLINE DEVICE MANAGEMENT' section with the 'Generate license' radio button selected and the 'Upload' button at the bottom."/>

Figure 15 Link to Download Capability Response File

Step 13. Select **Save**.



Figure 16 Save the Request File

Step 14. With the Capability Response File saved in *Step 13*, return to the computer where the SEL Configuration API license is being activated.

Step 15. From the Manual Activate form, select **Import Capability Response File**.

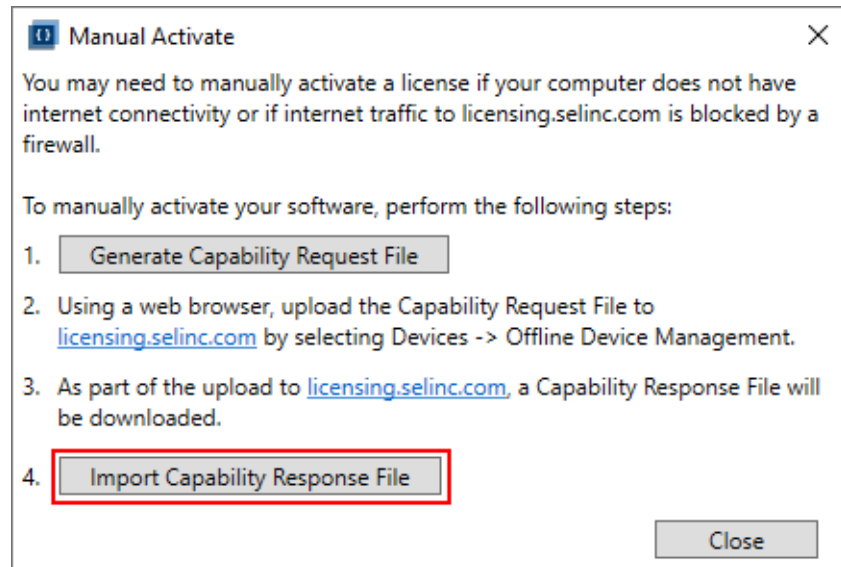


Figure 17 Import Capability Response File

Step 16. Navigate to the location of the Capability Response File created in *Step 13* and select **Open**.

Step 17. Select **OK** on the confirmation message that indicates the file was successfully imported.

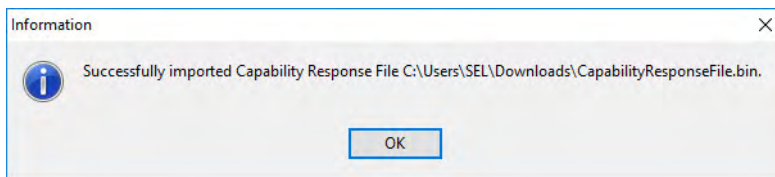


Figure 18 Confirmation Message

Step 18. Select **Close** on the Manual Activate form. The License Information screen now displays the activated license for SEL Configuration API.

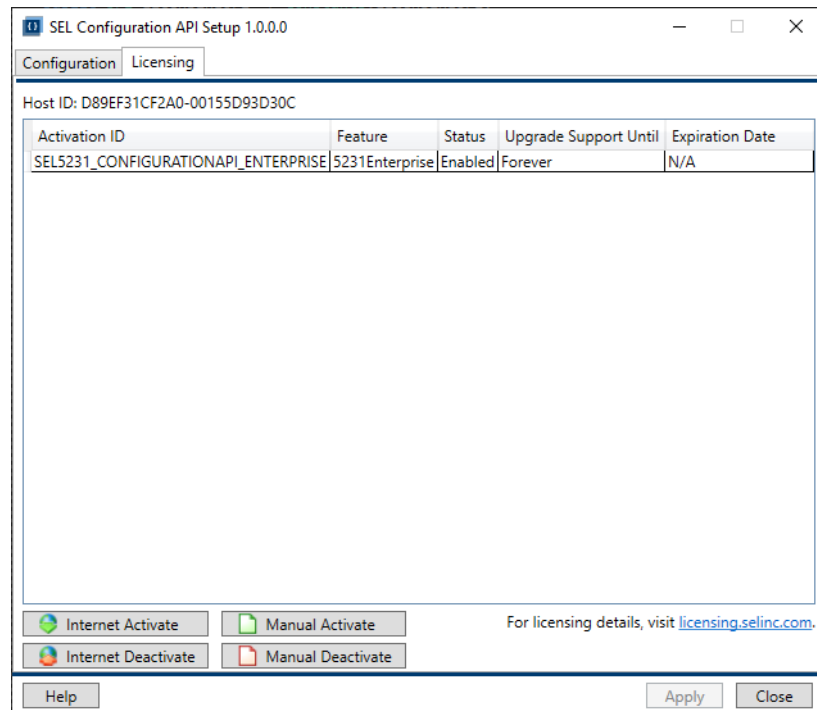


Figure 19 Activated License

Step 19. Select **Close**.

Manual Deactivate

- Step 1. Open the SEL Configuration API Setup utility.
- Step 2. Select the **Licensing** tab.
- Step 3. From the Licensing tab, select **Manual Deactivate**.

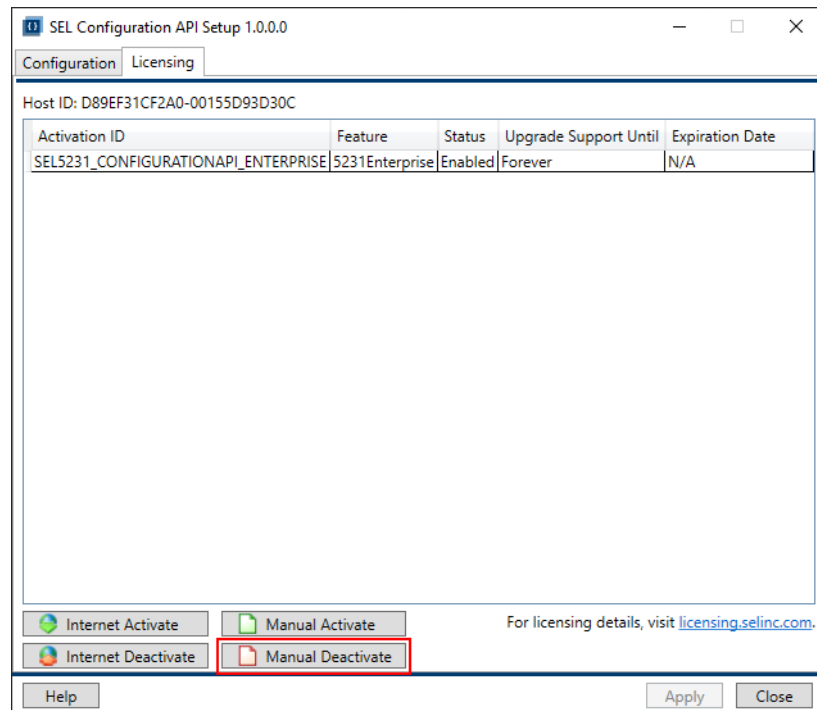


Figure 20 Manual Deactivate

- Step 4. From the Manual Deactivate screen, select **Generate Capability Request File**.

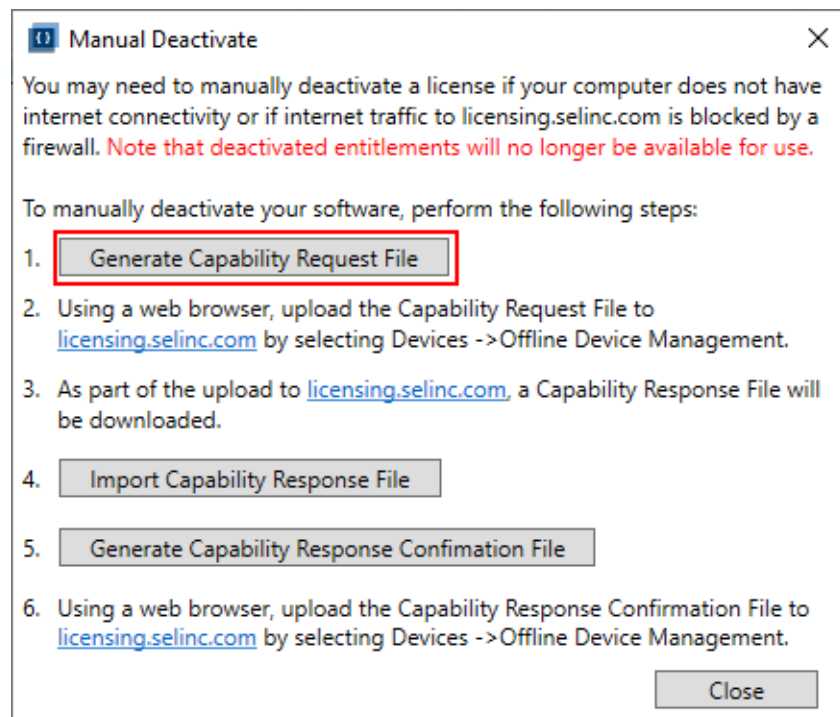


Figure 21 Generate Capability Request File for Manual Deactivation

- Step 5. Save the Capability Request File to a thumb drive or a network drive that can be accessed by a separate computer that has internet access, or email the Capability Request File to SEL.

- Step 6. Verify that the value populated in the Enter Activation ID window is the Activation ID that you intend to deactivate. select **OK**.
- Step 7. Select **OK** on the confirmation message that indicates the file was successfully created.
- Step 8. From a computer that has internet access, go to licensing.selinc.com and sign in with the Activation ID you are deactivating.
- Step 9. From the License & Delivery Portal page, select the **Devices** tab and select **Offline Device Management**.
- Step 10. From the Upload Capability Request page, select **Browse** and select the Capability Request File generated in *Step 4*. Select **Upload**.
- Step 11. Select the link highlighted in *Figure 22* to download the Capability Response file.

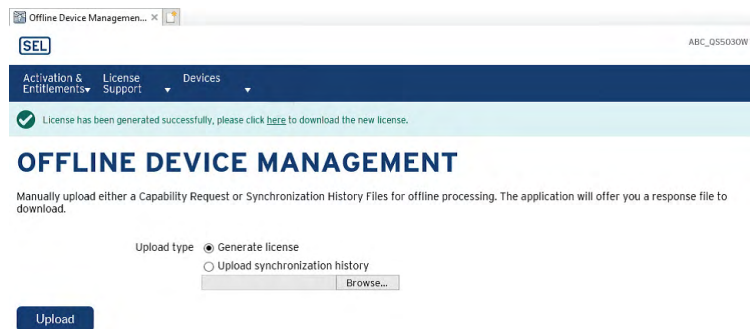


Figure 22 Link to Download Capability Response File

- Step 12. Select **Save** on the message similar to *Figure 23*.



Figure 23 Save the Capability Request File

- Step 13. With the Capability Response File saved in *Step 12*, return to the computer where the SEL Configuration API license is being deactivated.
- Step 14. From the Manual Deactivate form, select **Import Capability Response File**.

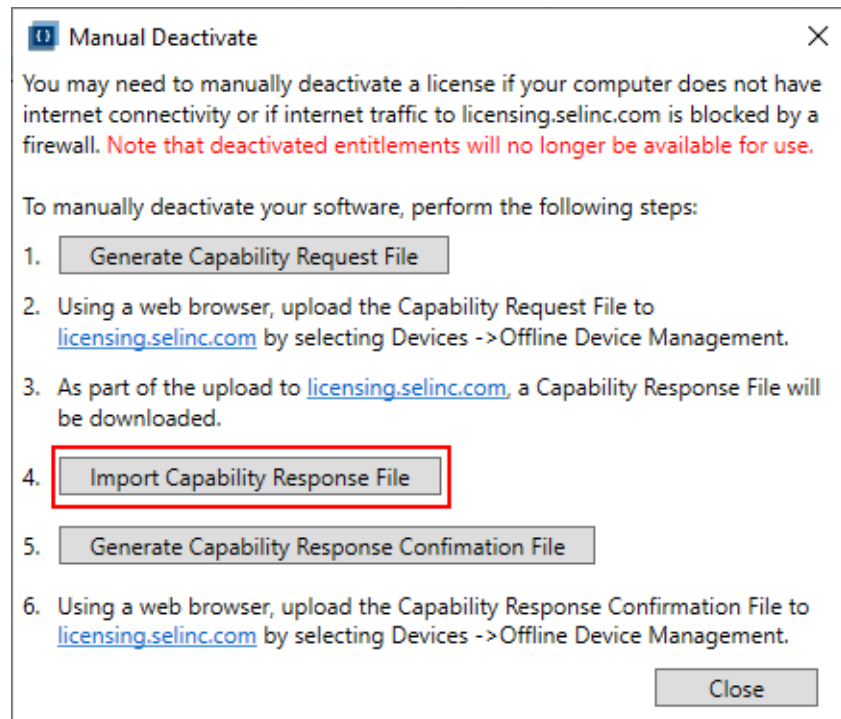


Figure 24 Import Capability Response File

Step 15. Browse to the location of the Capability Response File created in *Step 12* and select **Open**.

Step 16. Select **OK** on the confirmation message that indicates the file was successfully imported.

Step 17. From the Manual Deactivate screen, select **Generate Capability Response Confirmation File**.

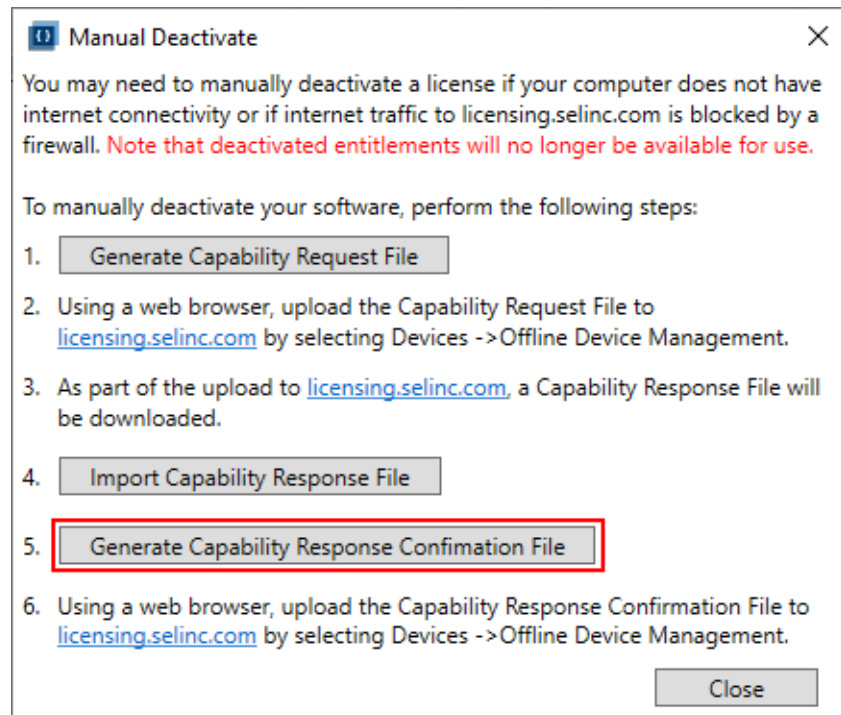


Figure 25 Generate Capability Response Confirmation File

- Step 18. Provide a name and location for the Capability Response Confirmation File and select **Save**.
- Step 19. Select **OK** on the confirmation message that indicates the file was successfully created. Do not close the Manual Deactivate form.
- Step 20. From a computer that has internet access, go to licensing.selinc.com and log in with the Activation ID you are deactivating.
- Step 21. From the License & Delivery Portal page, select the **Devices** tab and select **Offline Device Management**.
- Step 22. From the Upload Capability Request page, select **Browse**, select the Capability Response Confirmation File generated in *Step 18*, and select **Upload**. After you upload the confirmation file, the FlexNet software generates another response file. This additional response file is not required and does not need to be downloaded.
- Step 23. Select **Close** on the Manual Deactivate form. The Activation ID that was deactivated no longer shows in the License Information screen.

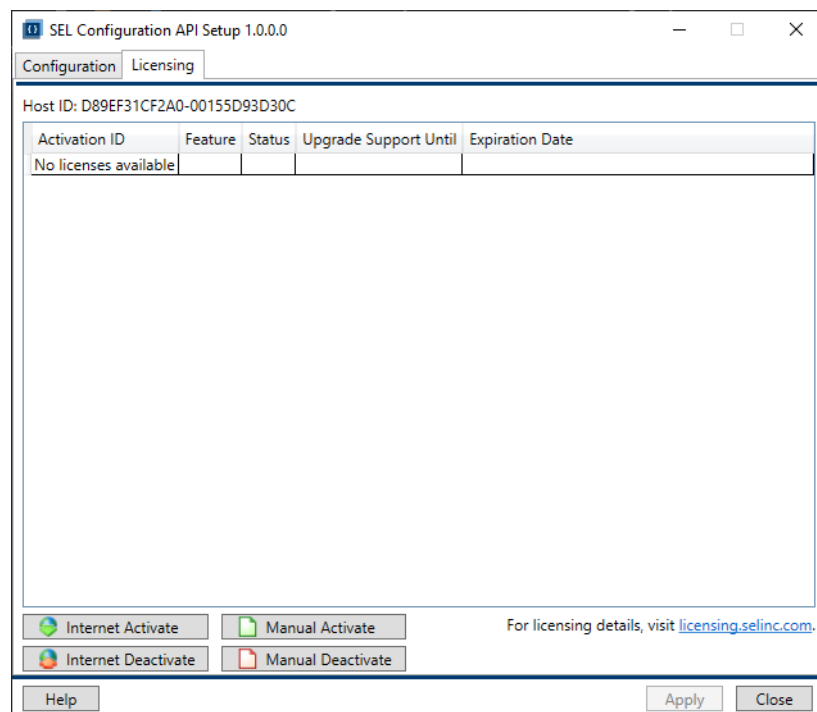


Figure 26 Deactivated Activation ID

- Step 24. Select **Close**.

Appendix A: Software and Manual Versions

Software

The date code at the bottom of each page of this manual reflects the creation or revision date.

Table 1 lists the software versions, description of modifications, and the date code corresponding to the software version. The table lists the most recent software version first.

Table 1 Software Revision History

Software Version Number	Summary of Revisions	Manual Date Code
1.1.x.x	<ul style="list-style-type: none"> ➤ Added read-only access to the custom attributes of devices and folders. ➤ Added the Asset Node Merge operation that updates existing assets and adds missing assets from an asset inventory. ➤ Added support for managing device permissions. The Right Post operation grants a specific device permission to a user group. The Rights Delete operation revokes a set of device permissions. ➤ Added support for using HTTPS localhost connections without requiring a license entitlement. ➤ Added the ability to use the internet to activate licenses. ➤ Corrected an issue where passing a null value as a device password should have resulted in the password not being changed but instead resulted in setting the password to an empty string. 	20200127
1.0.x.x	<ul style="list-style-type: none"> ➤ Initial version. 	20190906

Instruction Manual

The date code at the bottom of each page of this manual reflects the creation or revision date.

Table 2 lists the instruction manual versions and revision descriptions. The most recent instruction manual version is listed first.

Table 2 Instruction Manual Revision History

Date Code	Summary of Revisions
20200127	Appendix A <ul style="list-style-type: none"> ➤ Updated for version number 1.1.x.x.
20190906	<ul style="list-style-type: none"> ➤ Initial version.

Technical Support

We appreciate your interest in SEL products and services. If you have questions or comments, please contact us at:

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Notes

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