



HaloCAD

HaloCAD for TCAI

Installation and Usage Manual

Version 1.0

Copyright

© 2025-2026 Secude Solutions AG. All Rights Reserved.

This Secude-branded software and its corresponding documentation are the exclusive property of Secude Solutions AG of Luzern, Switzerland and are protected under the various copyright laws around the world and by various other intellectual property laws. The use of this software and/or its documentation and any copying thereof by end users is subject to the terms of a license agreement with Secude Solutions AG. The wrongful use or copying of this software and/or documentation subjects infringers to both criminal and civil liabilities.

ANY USE, COPYING, REPRODUCTION, ALTERATION, TRANSMISSION, OR TRANSLATION OF THESE MATERIALS, IN WHOLE OR IN PART, IN ANY FORM OR BY ANY MEANS, IS STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN PERMISSION OF SECUDE SOLUTIONS AG. IF THIS MATERIAL IS PROVIDED WITH SOFTWARE LICENSED BY SECUDE, THE INFORMATION HEREIN IS PROVIDED SUBJECT TO THE TERMS OF THE WARRANTY PROVIDED WITH THE PRODUCT LICENSE. IF THIS MATERIAL IS NOT PROVIDED WITH LICENSED SOFTWARE, THE INFORMATION HEREIN IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. IN EITHER CASE, THERE ARE NO OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR QUALITY. IN NO EVENT SHALL SECUDE SOLUTIONS AG OR ANY OF ITS AFFILIATES BE LIABLE FOR ANY DIRECT OR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR EXEMPLARY DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE MATERIALS AND/OR INFORMATION CONTAINED HEREIN. Some jurisdictions do not allow the exclusion of implied warranties, so the above exclusion may not apply to you.

Secude Solutions AG takes reasonable measures to ensure the quality of the data and other information produced herein. However, these materials may contain technical inaccuracies or typographical errors, and are not guaranteed to be error-free. Information may be changed or updated without notice. Secude Solutions AG has no obligation to update these materials based on changes to its products or services or those of third parties. Secude Solutions AG may also make improvements or changes to the products or services described in this information at any time without notice. Secude Solutions AG frequently releases new versions and updates to its software, and therefore images shown in this document may be slightly different from what you see on screen.

As with any security product, Secude Solutions AG highly recommends the back up of data as well as passwords on a regular basis. Secude Solutions AG is not responsible for the loss of passwords or data that cannot be retrieved based upon a user's failure to adhere to stringent backup and safe-keeping conventions.

Contact

Secude Solutions AG
Murbacherstrasse 19
6003 Luzern, Switzerland
Mail: info@secude.com

Support

Web: <https://support.secude.com>
Mail: support@secude.com

Table of Contents

1. INTRODUCTION.....	1
2. INSTALLING HALOCAD FOR TCAI.....	2
2.1. Prerequisites.....	2
2.2. Install the Add-on.....	2
2.2.1. Graphical Mode.....	2
2.2.2. Silent Mode.....	11
2.2.3. Via System Center Configuration Manager.....	12
2.3. Registry Settings.....	12
3. HOW DOES IT WORK?.....	14
4. CHECKING IN PROTECTED FILES INTO TEAMCENTER	16
5. TECHNICAL SUPPORT	18
6. APPENDIX	19
6.1. Third-Party Libraries	19
6.2. Uninstalling the HaloCAD for TCAI.....	20

Typographic Conventions

This guide uses the following typographic conventions to distinguish types of in-text information and icons to alert you to important information.

Convention	Description
Boldface type	<ul style="list-style-type: none">• Items you must select, such as menu options, command buttons, or items in a list.• Titles of sections, sub-sections, etc.
<i>Italic type</i>	<ul style="list-style-type: none">• To emphasize a word• Error messages• Table and Figure captions
Consolas Font	<ul style="list-style-type: none">• Package names• Filenames and directory names• XML element names and attribute names• Parameters• File type• Code examples <p>Example:</p> <pre>hesadm.exe start -user <domain\user> -pwd <password></pre>
Hyperlink	Provides quick and easy access to cross-referenced topics. Hyperlinks are highlighted in blue and underlined.
Admonitions	<div data-bbox="416 1171 1394 1279" style="border: 1px solid yellow; padding: 5px;"><p>Note Provides additional information relevant to the topic.</p></div> <div data-bbox="416 1335 1394 1518" style="border: 1px solid red; padding: 5px;"><p>Warning Contains information about circumstances, parameters, and so on that MUST be fulfilled. Failure to comply will have consequences for the current operation.</p></div> <div data-bbox="416 1574 1394 1682" style="border: 1px solid green; padding: 5px;"><p>Tip Contains useful information about the operation of the application.</p></div> <div data-bbox="416 1738 1394 1883" style="border: 1px solid blue; padding: 5px;"><p>Info Contains information, guidelines, or suggestions for performing tasks more effectively.</p></div>

1. Introduction

HaloCAD for TCAI is a lightweight application that uses Microsoft Purview Information Protection functionality to decrypt HaloCAD-protected CAD files during bulk loading operations in Teamcenter integration with Autodesk Inventor. This enables protected Inventor files to be scanned and processed by the TCAI Bulk Loader.

The Teamcenter Integration for Autodesk Inventor (TCAI) Bulk Loader utility allows administrators to automatically import large numbers of Inventor files into Teamcenter. However, when Inventor files are protected (encrypted), the Bulk Loader cannot recognize or process them directly.

By decrypting protected files during the loading process, HaloCAD for TCAI enables the Bulk Loader to scan and load these files into Teamcenter.

About this Manual

This manual walks you through the process of installing, configuring, and operating HaloCAD for TCAI.

Reference

All technical manuals are included with the product package you have purchased.

Administrators should first read the Technical Reference Manual to understand the add-on's architecture and learn about the prerequisites. They should also refer to the Release Notes to learn about the supported CAD applications before following the instructions in this document.

2. Installing HaloCAD for TCAI

This chapter describes how to install and configure HaloCAD for TCAI.

2.1. Prerequisites

The following sections are described in detail in the Technical Reference Manual.

1. Register an Application in Microsoft Entra ID - Public client/native
2. Office 365 Subscription Details
3. Recommended URLs, Addresses, and Ports for MPIP
4. Enable Support for TLS 1.2 at the Client Workstation for Microsoft Entra ID
5. Secure Installation (Recommended)

To ensure a secure installation, create an encrypted JSON file using the admin tool and share it without exposing tenant details. Place the encrypted file with the HaloCAD installer. The installer reads configuration data from the `hc.conf.enc` file and bypasses the "[Initialization](#)" screen, which would otherwise require Microsoft Entra ID application details. Note: A license key is not required for HaloCAD for TCAI.

2.2. Install the Add-on

You can install the add-on in the following modes:

1. Graphical Mode

Graphical mode installation is an interactive, graphical user interface-based method that is driven by a wizard.

2. Silent Mode

Silent-mode installation is a non-interactive method of installing the add-on using command lines.

3. Via System Center Configuration Manager

With System Center Configuration Manager (SCCM), the add-on is deployed on the targeted computers across your enterprise.

2.2.1. Graphical Mode

Before you begin

The following prerequisites must be met:

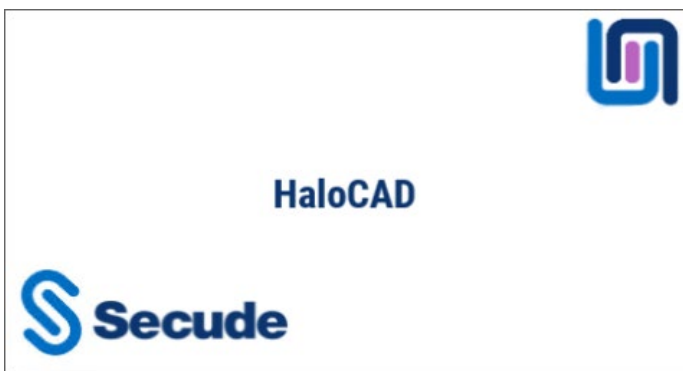
1. A user who installs HaloCAD for TCAI must have administrator rights.

2. Ensure that your Microsoft Entra tenant details are ready when the installation UI requests them. As an alternative, you can use `hc.conf.enc` for a secure and automated installation.

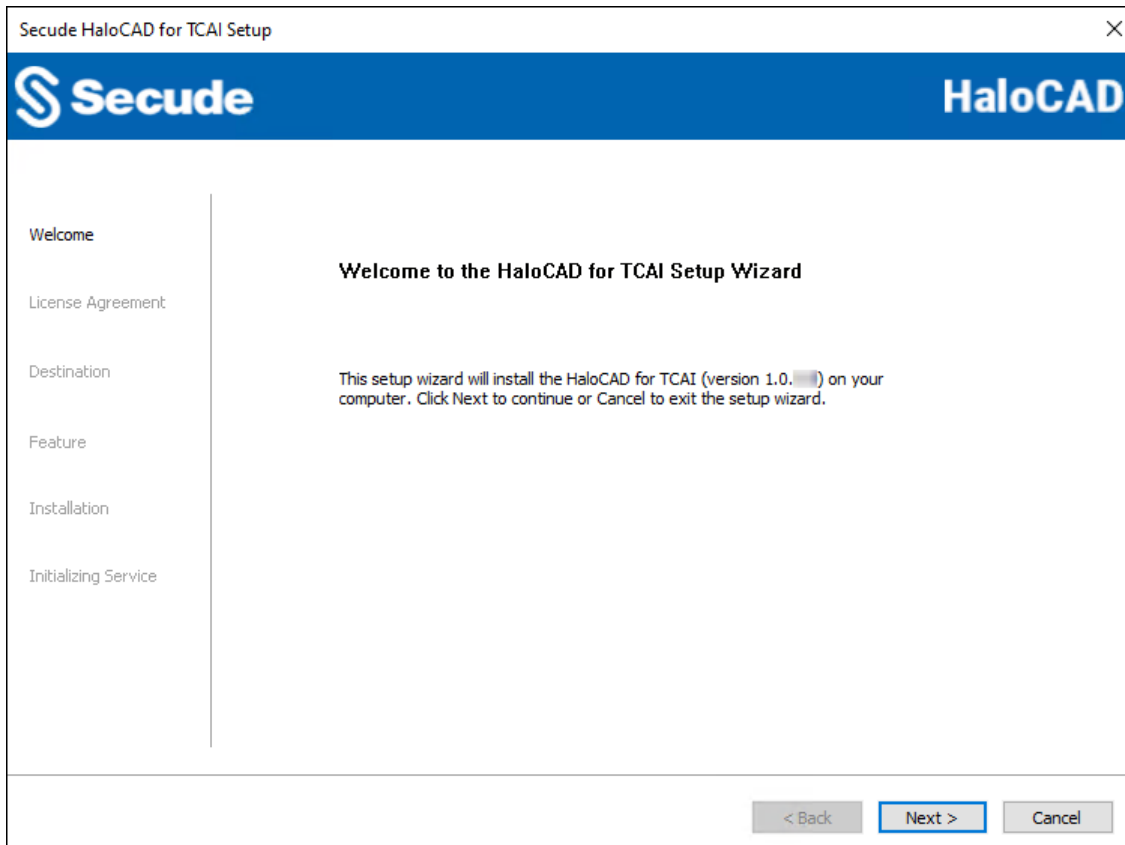
Installation Procedure

Install the HaloCAD for TCAI using the GUI-based setup program provided in the installation package.

1. Double-click the installer `HaLoCAD_TCAI_Shield_Setup.exe` file.
2. Depending on your Windows security settings, a prompt may appear stating, "Do you want to allow the following program to make changes to this computer?" If this warning appears, click **Yes** to continue with the installation.
3. When the installer starts, the **Startup** dialog appears, followed by the **Welcome** dialog.

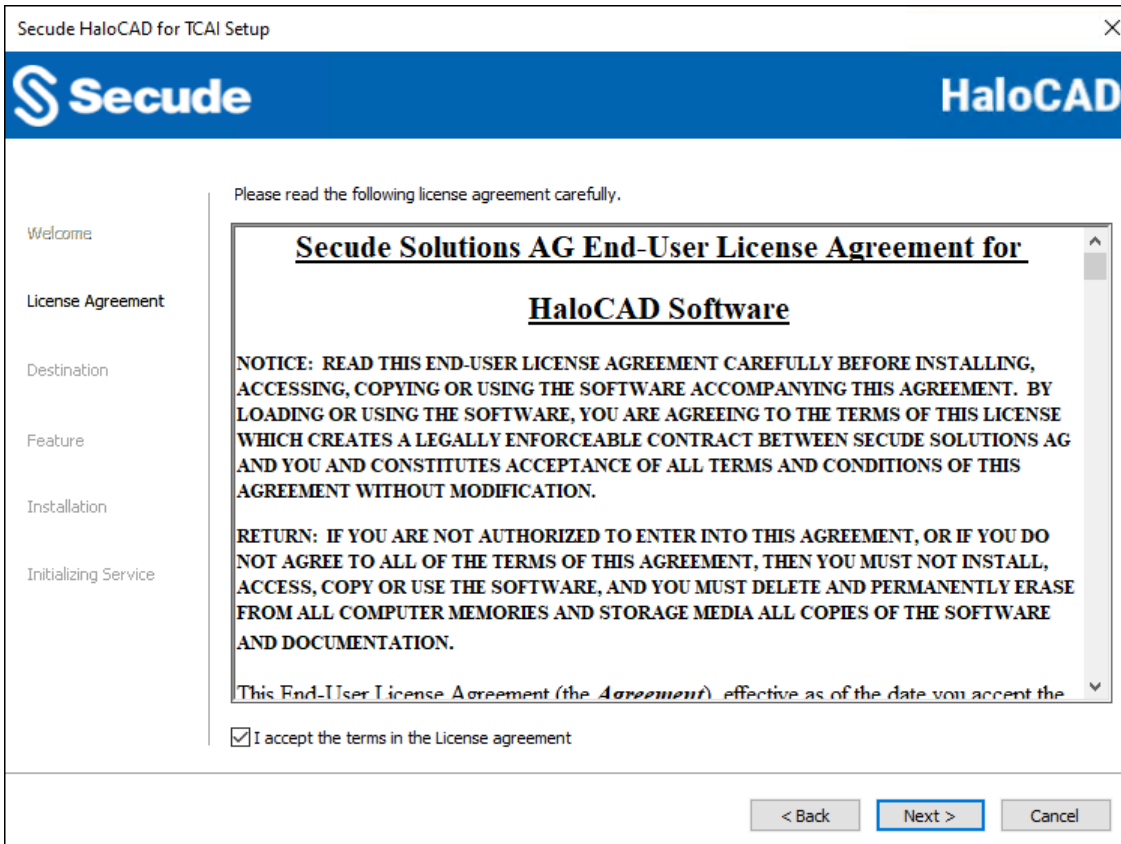


Startup dialog



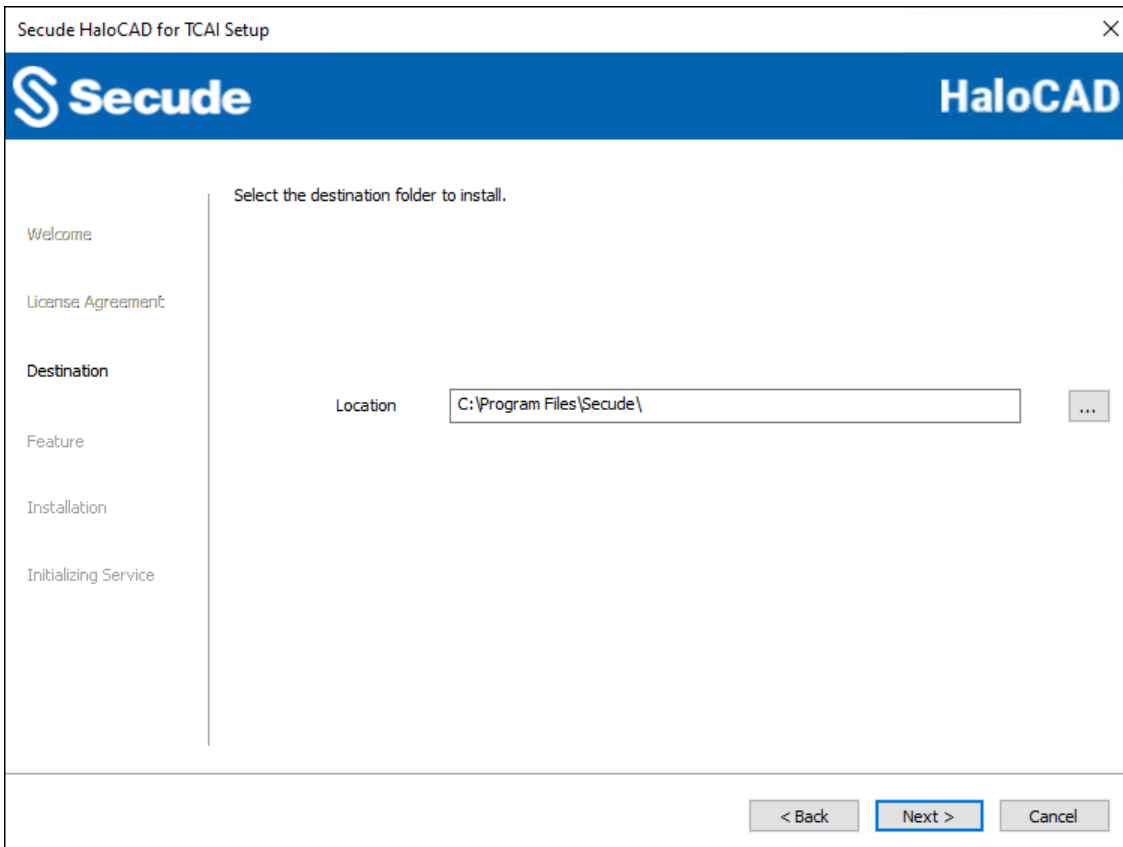
Welcome dialog

4. Click **Next** to continue the installation.
5. The **End-User License Agreement (EULA)** dialog appears.



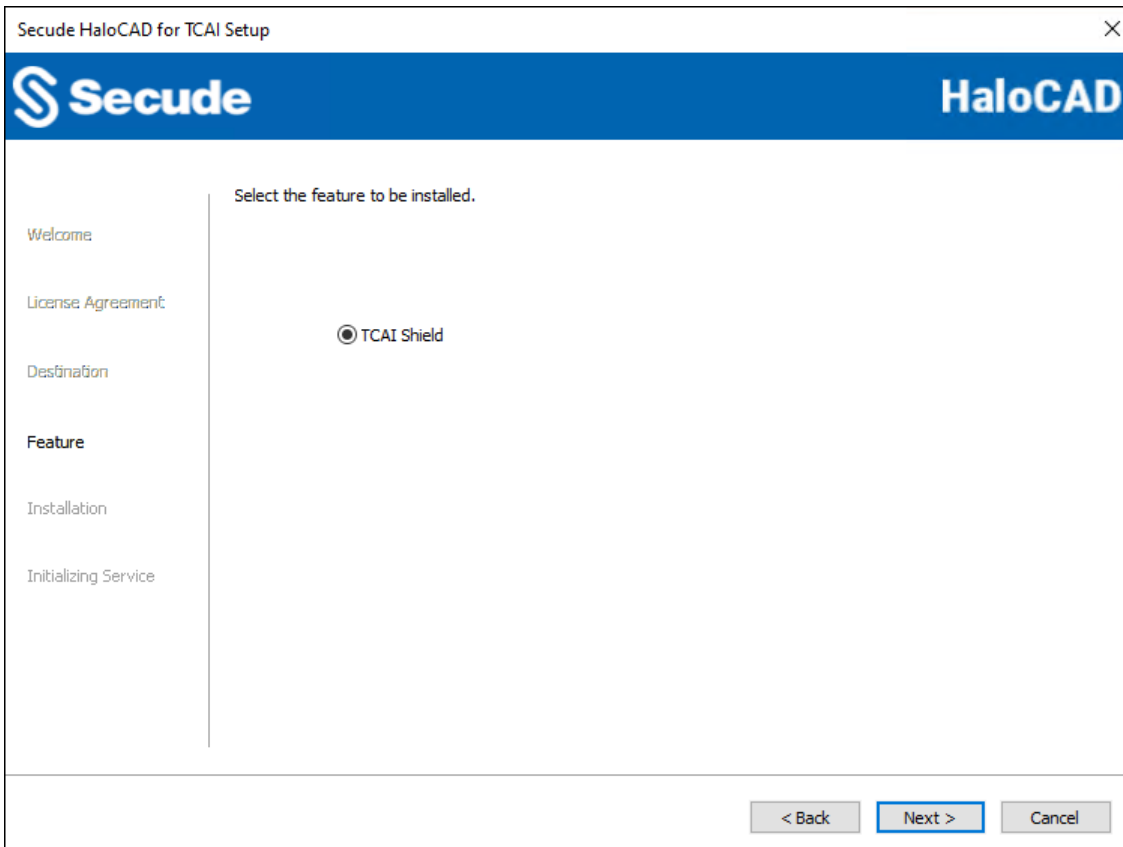
End-User License Agreement dialog

6. Read the **End-User License Agreement**. If you agree, select **I accept the terms in the License Agreement**, and click **Next** to continue.
7. The destination folder selection dialog appears:



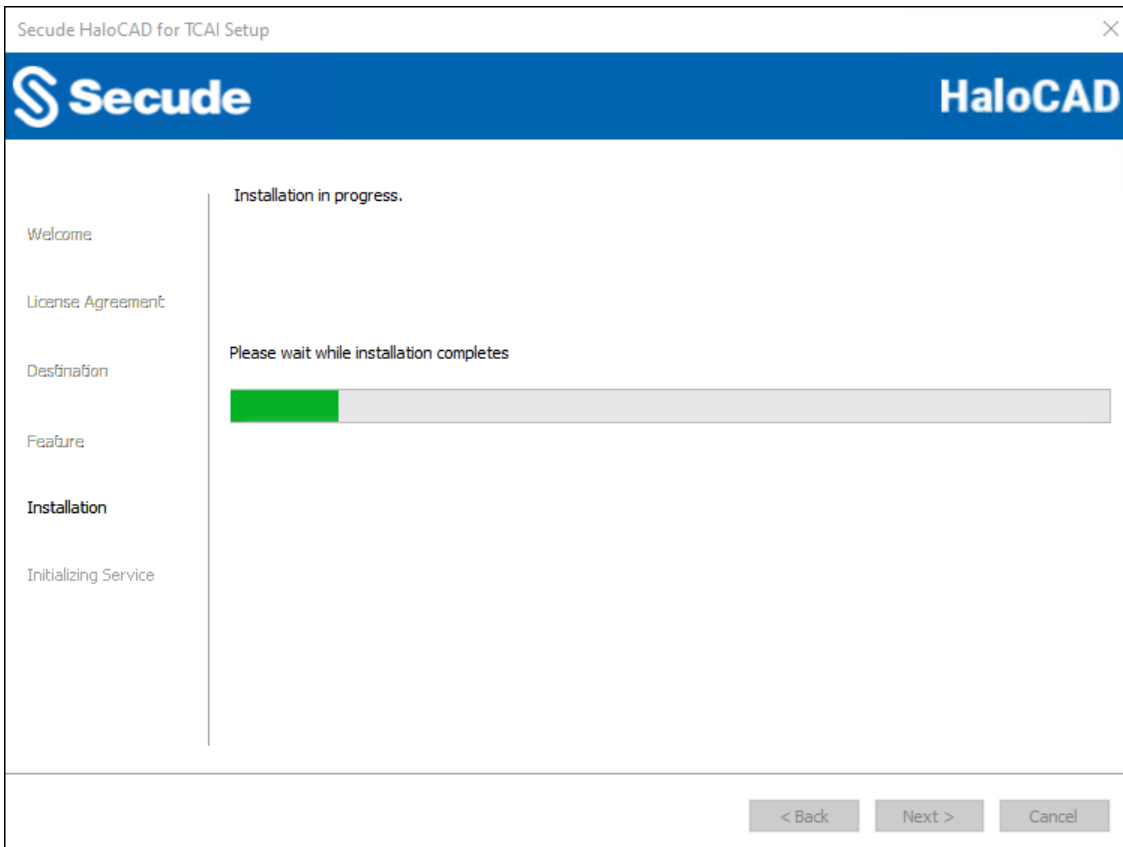
Destination folder selection dialog

8. By default, application files are stored in the program files directory (C:\Program Files\Secude\). If you would like to choose an alternate location, click the **Browse** button and select your location preference. When you are finished, click **Next**.
9. The feature selection dialog appears.



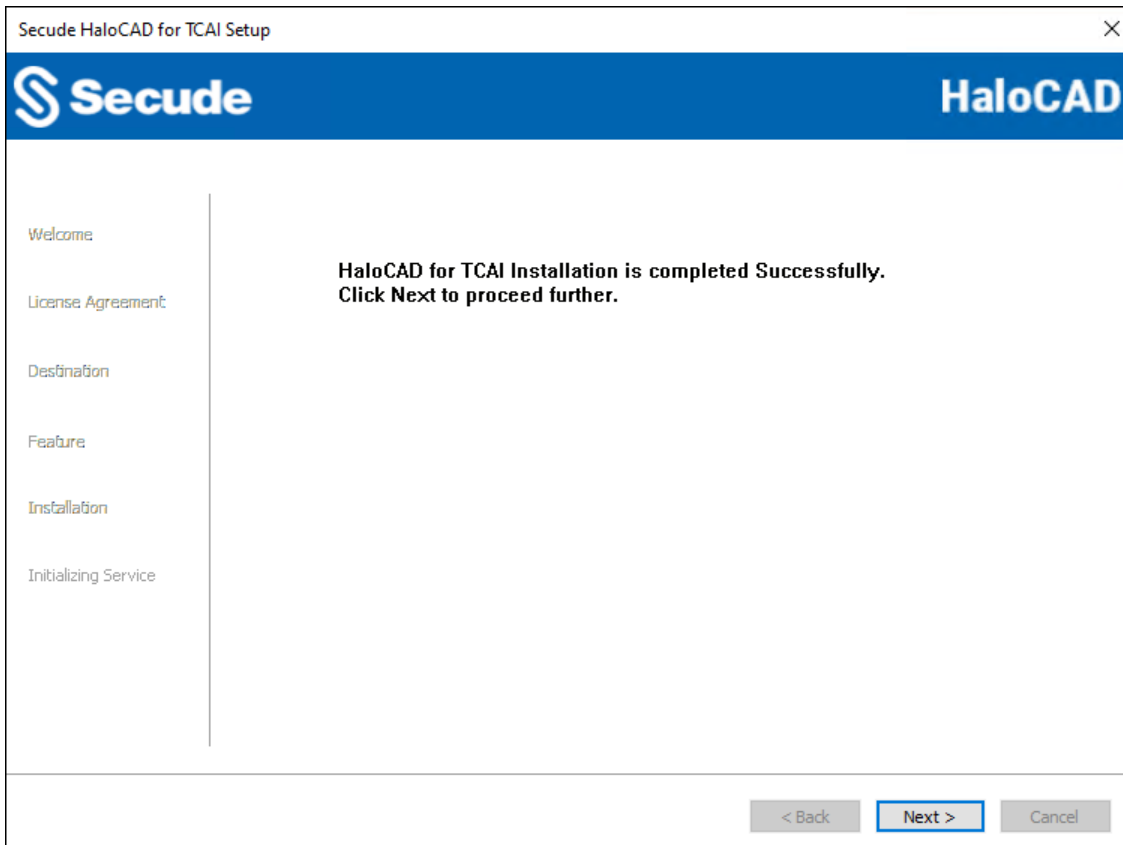
Feature selection dialog

10. The **TCAI Shield** option is selected by default.
11. To review or modify any installation settings, click **Back** to return to the previous screens. If you are ready to proceed, click **Next** to begin installing the application.
12. The installation begins, and the progress is displayed in the dialog.



Installation progress dialog

13. When the installation is complete, a message appears confirming that the add-on has been successfully installed. Click **Next** to proceed.



Installation completed dialog

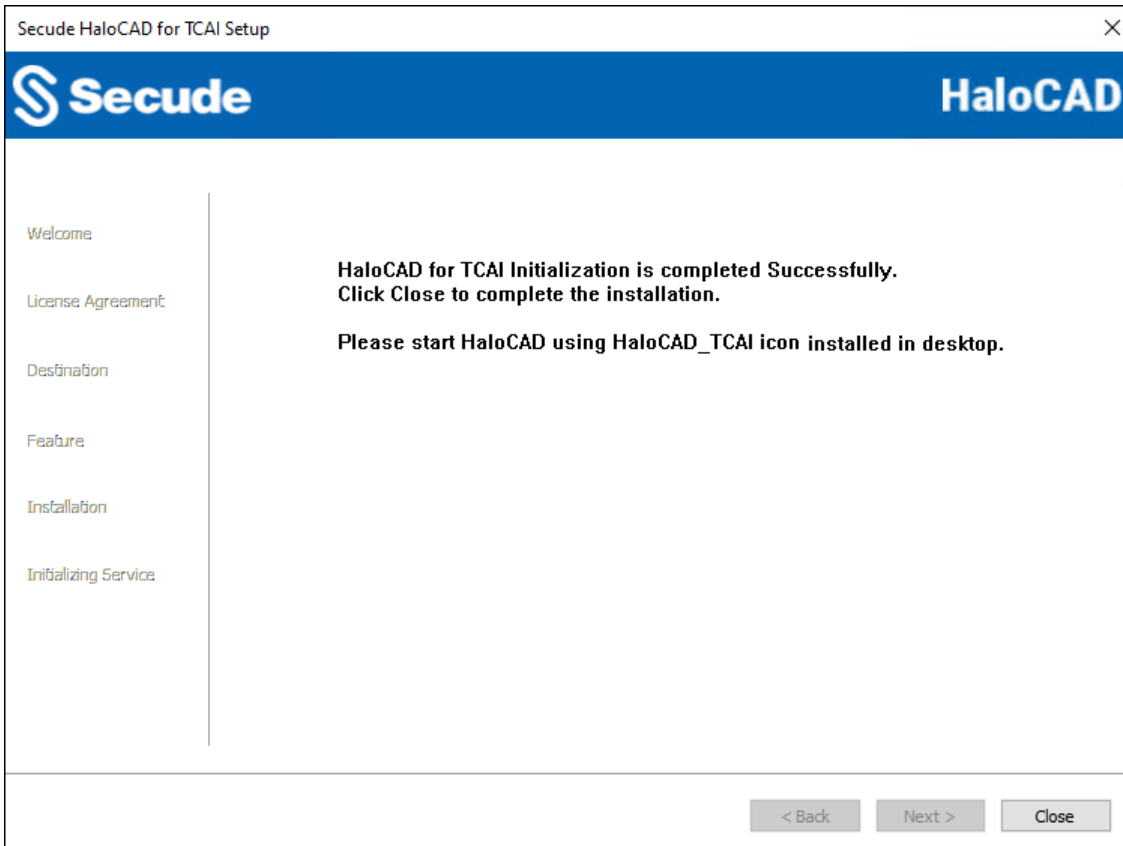
14. The initialization dialog appears. To prevent connectivity issues, ensure that the correct Microsoft Entra ID application details are entered on the screen. Note: If the `hc.conf.enc` file is included with the installer, this initialization screen is skipped and only the completion dialog is shown. The initialization screen appears only when the `hc.conf.enc` file is not present in the installer folder.

Initialization dialog

- a. **Application ID:** Enter the unique identifier of your registered application. For example, v6ca776-c74e-437d-98ef-662ecb5751tt
- b. **Redirect URI:** Enter the URI that was provided when registering the native application in the Azure portal. For example, https://localhost
- c. **Tenant ID:** If the registered application is **Single tenant**, you need to enter the globally unique identifier of your tenant if not, you can leave it empty. For example, 9c1cfc28-1ec6-44ea-bec6-e3492ef0cd16.
- d. **Cloud Type: Commercial** is selected by default. Based on your Azure subscription and configuration, select the required cloud type from the list: Commercial, Custom, Germany, US_DoD, US_GCC, US_GCC_High, US_Sec, US_Nat, or China_01. If you select **Custom**, enter the appropriate URLs in the **Protection Cloud URL** (for example, https://api.aadrm.com) and **Policy Cloud URL** (for example, https://dataservice.protection.outlook.com) fields.
- e. **Enable Federal Information Processing Standards (FIPS) Mode:** Enable this option to use encryption algorithms that comply with FIPS standards. When enabled, MPIP uses only FIPS-compliant encryption algorithms, and when disabled, it uses standard encryption algorithms. If this option was not enabled during installation, it can later be enabled through a registry entry. For more details, please refer to the section "[Registry Settings](#)".


f. Click **Next**.

15. Once the initialization is completed, you will get the success message as shown below.

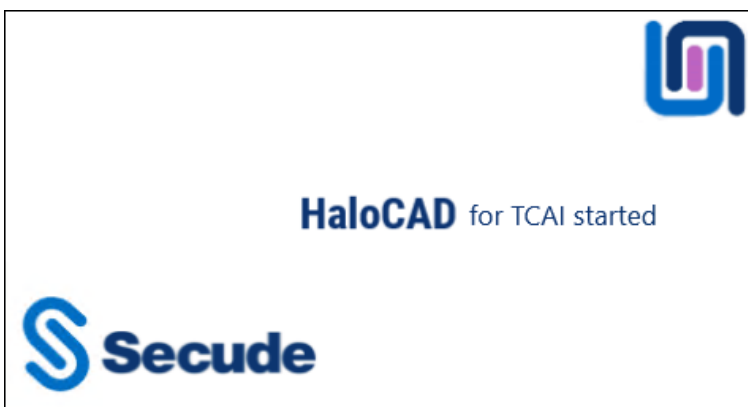


Initialization completed dialog

16. Click **Close** to close the installation wizard.

17. After the installation, a shortcut icon  is created on the desktop. It is also loaded on the startup menu.

18. To launch the application, double-click the HaloCAD_TCAI icon or navigate to **All apps > HaloCAD_TCAI** from the **Start** menu. The startup dialog appears, as shown below.



TCAI Startup dialog

Note: HaloCAD for TCAI starts automatically after a system restart or new login session. If it is already running, double-clicking the **HaloCAD_TCAI** icon displays the message *"HaloCAD for TCAI already running."*

2.2.2. Silent Mode

In addition to the graphical mode, HaloCAD for TCAI can be installed in silent mode, which does not display a user interface and requires no user interaction. This provides a convenient way to streamline the installation by executing the command once.

1. Open the Command Prompt with elevated rights (Run as Administrator).
2. Navigate to the installer directory.
3. To know the list of options available in silent mode, follow the steps given below:

Type HaloCAD_TCAI_Shield_Setup.exe -help

Press Enter

Output

...

```
HaloCAD_TCAI_Shield_Setup.exe [-install [-tcaishield] [-dir <destination_directory>]
[<ApplicationID> <Redirect URI> <TenantID/Name> <Cloud Type
("Commercial"|"Custom"|"Germany"|"US_DoD"|"US_GCC"|"US_GCC_High"|"US_Sec"|"US_Nat"|"C
hina_01"|")>
[(if Custom) <Protection Cloud Url> <Policy Cloud Url>] [-enablefipsmode
<true|false>]
```

For Silent Mode Installation if ENC file already exists in the same location

```
HaloCAD_TCAI_Shield_Setup.exe [-install [-tcashield] [-dir <destination_directory>]
[-enablefipsmode <true|false>]]
```

```
HaloCAD_TCAI_Shield_Setup.exe [-uninstall -silent <true|false>]
```

4. The following command illustrates how to install the add-on using the Azure application details.

```
HaloCAD_TCAI_Shield_Setup.exe -install -tcaishield -dir "C:\Program Files\Secude"
v6ca776-c74e-437d-98ef-662ecb5751tt https://localhost 9c1cfc28-1ec6-44ea-bec6-
e3492ef0cd16 Commercial -enablefipsmode true
```

5. The example below shows how to install the add-on using the hc.conf.enc file located in the same installation location as mentioned.

```
HaloCAD_TCAI_Shield_Setup.exe -install -tcaishield -dir "C:\Program Files\Secude" -
enablefipsmode true
```

6. Press Enter.
7. Installation is completed.

2.2.3. Via System Center Configuration Manager

Microsoft System Center Configuration Manager (SCCM) is an administrative tool that allows organizations to deploy operating systems and applications to Windows users efficiently and cost-effectively across their environment.

Using SCCM, the HaloCAD add-on can be deployed silently and automatically to specific target computers throughout the enterprise.

Before You Begin

1. Ensure that you have reviewed the prerequisites described in the Graphical Mode section.
2. We recommend adhering to best practices when creating a deployment procedure.
3. For guidance on preparing your environment, refer to the official Microsoft online documentation.

Deployment Using SCCM

This guide assumes that an SCCM environment is already configured. After configuration, you can use the silent mode commands described in the Silent Mode section to deploy the add-on.

2.3. Registry Settings

HaloCAD stores configuration settings in the Windows registry. This section describes the registry entries that can be configured. Do not modify any other settings.

Prerequisite: Make sure to back up the registry before making any changes, in case you need to restore it later.

Modify the Registry

To modify a registry value:

1. Open **Registry Editor**.
2. Navigate to: HKEY_LOCAL_MACHINE\SOFTWARE\Secude\HaloCAD for TCAI
3. Locate the registry key that you want to update.
4. Modify the value as required.

Name	Default Value	Type	Description
log_enable	on	REG_SZ	Defines the status of the log. <ul style="list-style-type: none"> • On = Log file will be generated in the default location • Off = Log file will not be generated

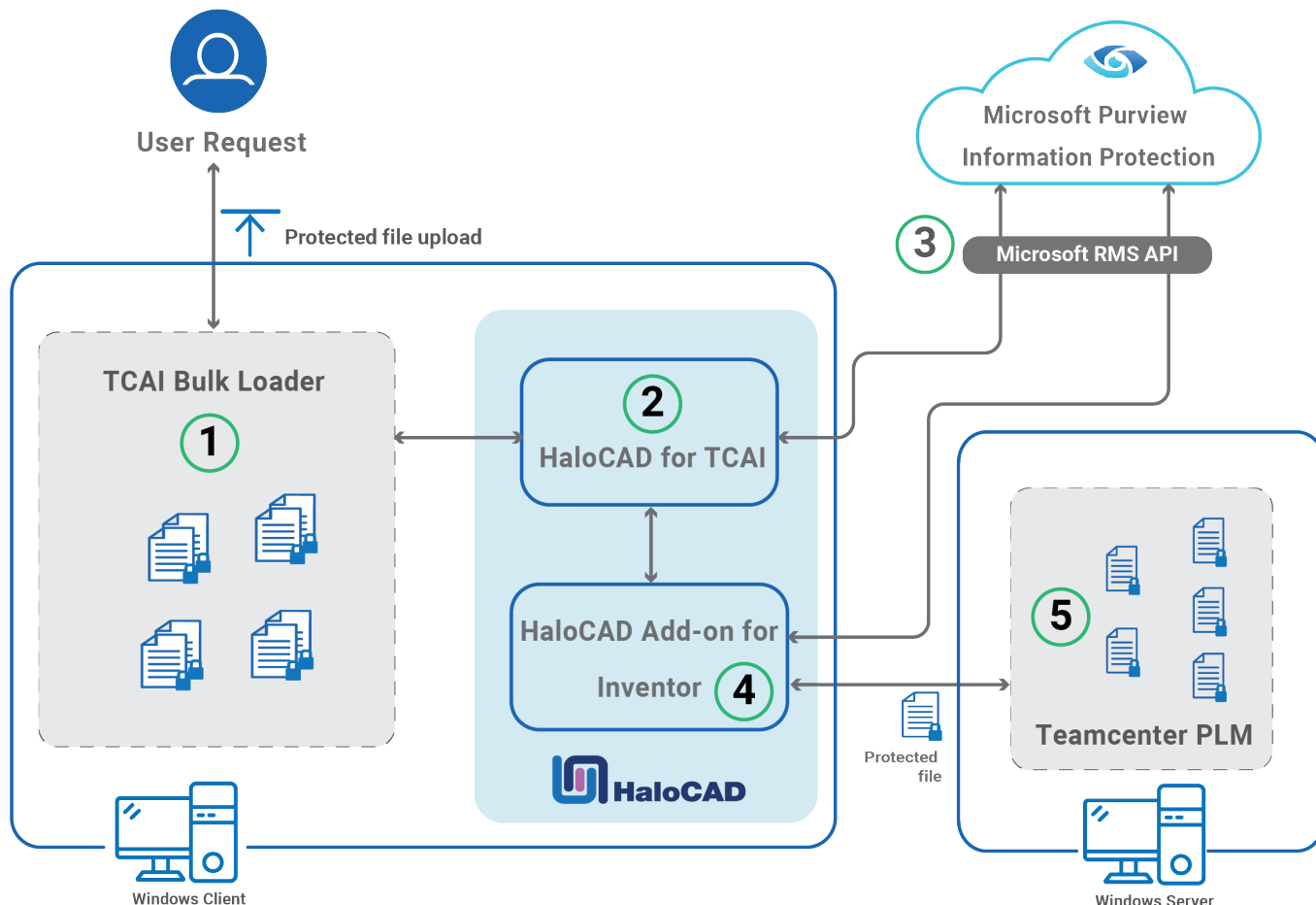
Secude

Name	Default Value	Type	Description
			<ul style="list-style-type: none"> Clean = Log files will be deleted. This parameter deletes only the logs and does not modify the log_enable to "Clean" from "on/off".
log_level	3	REG_SZ	<p>Log level information is logged in the ha1ocad.log file.</p> <ul style="list-style-type: none"> Log level: 1: Error and Info Log level: 2: Error, Warning, and Info Log level: 3: Error, Warning, and Info Log level: 4: Error, Warning, Info, and Debug
log_purge	7	REG_SZ	It indicates removing files older than a defined time frame. By default, the log files older than 7 days will be deleted.
log_rollover	100	REG_SZ	Defines the log rollover time, i.e., a new log file will be generated based on the specified minute(s). By default, a new log file will be generated every 100 minutes.
mipallowpii	false	REG_SZ	<p>Enable or disable the visibility of Personally Identifiable Information (PII) such as Email names and IP addresses in the MIP SDK logs.</p> <ul style="list-style-type: none"> true—PII will be visible in clear text in the MIP SDK logs. false (default)—PII will be masked with asterisks in the MIP SDK logs. This helps to protect the PII's confidentiality.
enable_fips	false	REG_SZ	<p>Enable or Disable FIPS Mode</p> <ol style="list-style-type: none"> true: MPIP uses only FIPS-compliant encryption algorithms. false: MPIP uses standard encryption algorithms.

Registry value

3. How does it work?

At a high level, HaloCAD workflow involves the following steps:



HaloCAD for TCAI

1. The TCAI Bulk Loader is launched, and a folder containing protected Autodesk Inventor files is selected.
2. HaloCAD for TCAI starts automatically.
3. The selected folder is scanned, and each file is read. If a protected file is detected, HaloCAD establishes a connection with Microsoft Purview Information Protection (MPIP) to read the labeled file. The labeled files are then decrypted automatically in the background.
4. During the process, the protected files are opened automatically in the Inventor application.
5. The protected files are checked into Teamcenter.

Log files and User Reset

- After you log in to the HaloCAD session and complete authentication through the **Microsoft Sign-In Assistant**, you can access the following log files:
 - HaloCAD logs at %AppData%\Roaming\Secude\HaloCAD\tcai\halocad.log
 - MIP SDK logs at %AppData%\Roaming\Secude\HaloCAD\tcai\mip\logs\mip_sdk.miplog
- To clear cached credentials, select **Show hidden icons** on the taskbar, right-click the **Secude** icon, and then select **User Reset**.

4. Checking in Protected Files into Teamcenter

Prerequisites: Ensure that the following components are installed and configured:

1. TCAI Bulk Loader
2. HaloCAD Add-on for Inventor
3. HaloCAD for TCAI

Procedure: Check In Protected Files

1. Start the Bulk Loader

- a. Double-click the **TCAI Bulk Loader** icon on the desktop.
- b. **Autodesk Inventor** and the TCAI application start automatically.
- c. Enter your credentials and click **Login**.
- d. When the Bulk Loader starts, HaloCAD for TCAI loads and displays the message: *"Protected files can be loaded."*
- e. Click **OK**.

2. Select the Folder

- a. In the **Bulk Loader** window, click the ellipsis (...) next to the folder field.
- b. In the **Browse for Folder** dialog box, select the required folder that contains the protected Inventor files.
- c. Click **Find Inventor Files**.

Note:

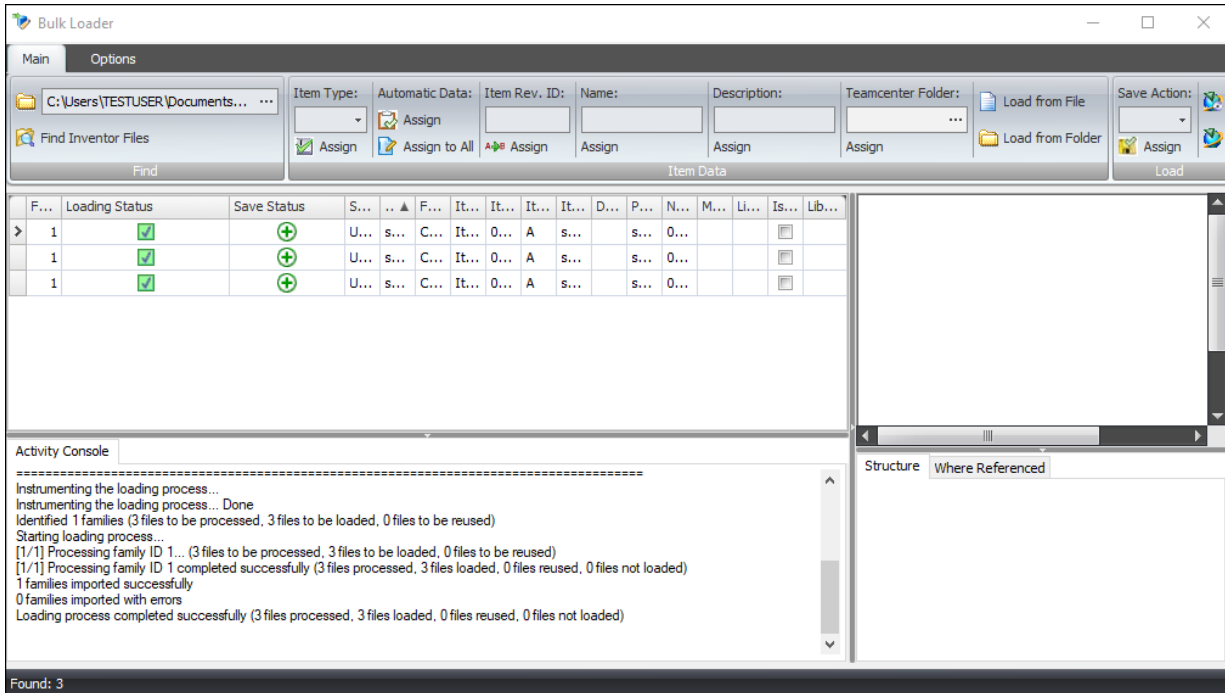
To read labeled files, HaloCAD for TCAI requires a connection to the **Microsoft Entra ID** tenant through the **Microsoft Sign-In Assistant**. When prompted, click **OK** and follow the on-screen instructions to complete authentication. The user credentials are cached.

- d. After successful authentication, the **Bulk Loader** scans the selected folder. Wait for the scanning process to complete.
- e. When the scan is complete, the list of detected files is displayed.
- f. Under **Automatic Data**, click **Assign to All** to apply the value to all files in the list automatically.
- g. When prompted with the message *"Automatic data will be assigned to all the unassigned elements in grid. Do you want to continue?"*, click **Yes**.

3. Load Files into Teamcenter

- a. Click **Validate** and then click **Start Loading** in the toolbar.

- b. When prompted with the message: *“To allow bulk loading, it is necessary to clear the cache folder. Do you want to continue?”*, click **Yes**.
- c. The loading process begins, and the list of files to be processed appears in the Inventor application window.
- d. If auxiliary files (e.g., PDFs) are configured in Teamcenter, they are generated automatically.



Bulk Loader processing files

Results

- In the **Autodesk Inventor** application, a message appears indicating successful completion: *“Loading process completed successfully.”* The message displays the following information:
 - Number of files processed
 - Files loaded
 - Files reused
 - Files not loaded
 - Click **OK** to close the message.
- In the **Bulk Loader** window, the **Loading Status** of the files is displayed as success. The **Activity Console** displays the successful completion of the processed files.
- In the **Teamcenter** console, the protected files appear as successfully checked in. The files remain protected because **HaloCAD for PLM** is not installed or configured.

5. Technical Support

Before contacting Technical Support, ensure that you have the following information available.

Providing this information helps the support team investigate and resolve your issue more efficiently.

- Full contact details
- Product build version
- Date, time, and description of the error (include screenshots, if possible)
- Details of any third-party software used with the product
- Any additional information required to reproduce the issue

Contact Technical Support

Secude provides technical support through email support@secude.com. When contacting Technical Support by email, include your company details, a detailed description of the issue, and the relevant log files (if available). A support representative will respond to your inquiry.

Additional Resources

Visit the Secude website <https://secude.com> to learn about upcoming events, press releases, and to download white papers.

Documentation Feedback

Secude values your feedback and continuously strives to improve product documentation. To provide feedback, send an email to: documentation@secude.com

Include the following details in your feedback:

- Product name and version
- Documentation topic
- Description of the suggestion or error

The technical documentation team reviews all feedback and incorporates relevant updates in future documentation releases.

6. Appendix

This section provides supplemental information.

6.1. Third-Party Libraries

Third-party software/code is included or bundled with Secude's products according to its appropriate license. Secude conducts testing to make sure the third-party products are compatible with and perform as intended with Secude applications.

The third-party libraries and dependencies used by HaloCAD for TCAI are shown in the table below.

Library	Version	Source Code	License Link
Mhook	2.5.1	https://github.com/apriorit/mhook	https://github.com/apriorit/mhook#license
Boost	1.75.0	-	-
Protobuf Library	3.15.6	https://github.com/protocolbuffers/protobuf	https://github.com/protocolbuffers/protobuf/blob/master/LICENSE
OpenSSL	3.4.1	https://github.com/openssl	https://github.com/openssl/openssl/blob/master/LICENSE.txt
Rapidxml	1.13	https://sourceforge.net/projects/rapidxml/files/latest/download	http://rapidxml.sourceforge.net/license.txt
tbb	2021.6.0	https://github.com/oneapi-src/oneTBB	https://github.com/dwaddington/tbb-2018/blob/tbb_2018/LICENSE
MSAL	4.72.1	https://github.com/AzureAD/microsoft-authentication-library-for-dotnet	https://github.com/AzureAD/microsoft-authentication-library-for-dotnet/blob/master/LICENSE
ConfuserEx	1.0.0.0	https://github.com/yck1509/ConfuserEx	https://github.com/yck1509/ConfuserEx/blob/master/LICENSE
WTL	10.0.10320	https://www.nuget.org/packages/wtl/10.0.10320	https://opensource.org/licenses/cpl1.0.txt

Secude

Library	Version	Source Code	License Link
MIP SDK	1.18.103	https://learn.microsoft.com/en-us/information-protection/develop/version-release-history	https://docs.microsoft.com/en-us/information-protection/develop/

Third-party libraries

6.2. Uninstalling the HaloCAD for TCAI

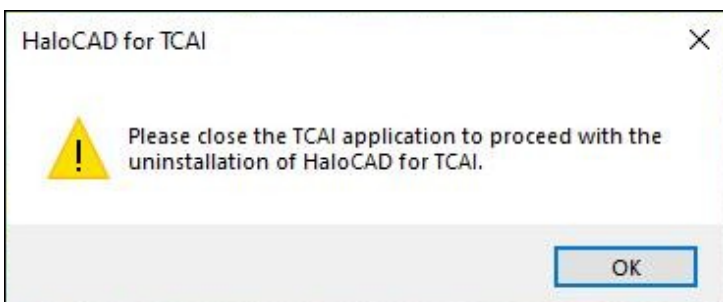
When you no longer use HaloCAD for TCAI, you may uninstall the application. Uninstalling removes all files and registry settings that were added to your computer during the initial installation.

Installer Version Requirement

When uninstalling the HaloCAD add-on, use the installer for the currently installed version, whether you run it by double-clicking the installer or from the command line. Using a different installer version may result in errors.

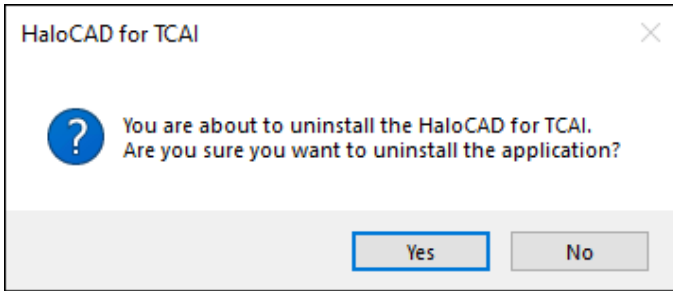
Method #1

1. Click **Start** menu > go to **Control Panel > Programs > Programs and Features > Uninstall a Program** > select **HaloCAD for TCAI** application from the list > right-click and select **Uninstall** option or double-click on the installer `HaLoCAD_TCAI_Shield_Setup.exe` file.
2. Depending on your Windows security settings, you may get a security warning as "*Do you want to allow the following program to make changes to this computer?*". If you get this security warning, click the **Yes** button to confirm that you want to uninstall the add-on.
3. The HaloCAD installer first checks whether the TCAI application is running in the current user session. If detected, the installer displays a notification prompting you to close the application before continuing the uninstallation.



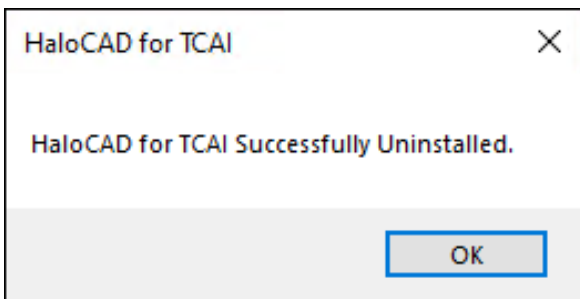
Uninstall Message #1

4. Click **OK** and close the TCAI application.
5. Redo [step 1](#), and the following confirmation message appears.



Uninstall Message #2

6. Click **Yes** to confirm the uninstallation of HaloCAD from your computer.



Uninstall Message #3

7. The HaloCAD component has been successfully uninstalled. Click **OK** to close the dialog box.

Method #2

The following example shows how to uninstall HaloCAD for TCAI from the command line.

1. Open a command prompt.
2. Navigate to the directory of the add-on installer.

Example: HaloCAD_TCAI_Shield_Setup.exe -uninstall -silent true

3. The uninstalling process is complete.



www.secude.com

About Secude

Secude, a trusted Microsoft and Siemens Digital Industries Software partner, is a global leader in Zero Trust data protection and data governance.

Our solutions extend Microsoft Purview Information Protection (MPIP) to secure sensitive files—including CAD and PLM assets—from the moment of creation. By embedding persistent protection and access controls directly into design and engineering data, we help enterprises prevent Intellectual Property (IP) theft, data leakage, reputational damage, and compliance risks. With operations in Europe, North America, and Asia, Secude supports global manufacturers, defense contractors, and AEC firms in implementing robust IT security strategies across the product lifecycle and digital supply chain.