SCIA ENGINEER

Installation Guide

Cloud Installation

All information in this document is subject to modification without prior notice. No part of this manual may be reproduced, stored in a database or retrieval system or published, in any form or in any way, electronically, mechanically, by print, photo print, microfilm or any other means without prior written permission from the publisher. SCIA is not responsible for any direct or indirect damage because of imperfections in the documentation and/or the software.

© Copyright 2024 SCIA nv. All rights reserved.

Table of Contents

Table of Contents **3**
Chapter 1: Introduction **5**
1.1. Welcome **5**
1.2. System requirements **6**
Hardware 6
Software 7
1.3. Technical description **8**
Internet access 8
Floating Protection 8
User identification, roles and activation 8
FAQs 8
Chapter 2: Create your account **9**
2.1. New Account **9**
2.2. Received Invitation **9**
Chapter 3: Installation of SCIA Engineer **10**
3.1. Installation of SCIA Engineer **10**
3.2. Starting SCIA Engineer **11**
Chapter 4: Licence settings dialog **12**
Chapter 5: SCIA Cloud Portal **16**
5.1. Dashboard **16**
5.2. Groups **17**
Creating a Group 17
Group details view 18
Add a member to a Group 18
Inviting a member to a Group 19
Inviting multiple users to a Group 19
5.3. Users **21**
Managing a User 21
5.4. Licenses **22**
License details 22
Usage 23
Chapter 6: Uninstalling SCIA Engineer **24**
6.1. Uninstalling with Add/Remove Programs in Windows **24**
6.2. Uninstalling without Add/Remove Programs in Windows **25**
Chapter 7: Troubleshoot **26**
7.1. License Error on SCIA Engineer start **26**
7.2. License Error on SCIA Engineer runtime **27**

7.3. Application/PC crash 28
7.4. Password issues 28
7.5. Supported SCIA Engineer versions with cloud protection 28
7.6. Will a dongle license still work with SCIA Engineer? 28
Contacts 29

Chapter 1: Introduction

1.1. Welcome

Welcome to the SCIA Engineer Installation Guide. SCIA Engineer is a structural analysis and design program running under Windows. It has a large range of applications: from the check of simple frames to the advanced design of complex projects in steel, concrete, wood, etc.

The program handles the calculation of 2D/3D frames, including the profile check and the connection check for steel constructions. Apart from frames, it is also possible to model and analyze plate structures, including advanced concrete calculations.

This manual describes the procedures for a correct installation of the application with a cloud license.

The final two chapters include the procedure for uninstalling the software (Chapter 6) and a guide for troubleshooting common issues. (Chapter 7).

1.2. System requirements

Hardware

	Minimum	Advised
Processor	Intel Core-i5 or AMD Ryzen 5 or similar	Intel Core-i7 or AMD Ryzen 7 or similar
Memory (RAM)	16 GB	32 GB, or more
Graphics Controller	256 MB, supporting OpenGL 2.1	4 GB, or more
Free disk space	5 GB	5 GB or more, SSD
Resolution	Full High Definition *	Full High Definition or more *

* 4K is supported for the new interface of SCIA Engineer 24

A 3D mouse is not supported.

Processor

For the processor two parameters are important: the number of cores and the clock frequency. When you perform a linear calculation, the number of cores is the main parameter that determines the speed of the calculation. In a nonlinear and eigenmode calculation, both the number of cores and the clock frequency are determining factors. Next to the previously mentioned calculation types, the design checks run multicore as well. We advise an Intel Core i7 or AMD Ryzen 7 with at least 2.4 GHz.

Memory (RAM)

SCIA Engineer, the solver and the Engineering Report are 3 separate processes that each require memory to perform their actions. Next to these processes, also Windows (min. 1.5 GB) and all other applications take some memory in use as well. To not run out of memory when performing memory demanding calculations, we advise to have at least 32 GB or more RAM in the computer.

Graphics controller

A minimum memory of 256MB and the support of OpenGL 2.1 is required to run SCIA Engineer. This means that SCIA can also be run with an onboard graphics card. For some models that are graphically more demanding, onboard graphic card may fail to render the structure. For this reason, we advise a dedicated GPU (Graphical Processing Unit). A low to mid end GPU should be adequate.

Hard Disk Drive (HDD)

Every hard disk with a free disk space of 5 GB can be used to run SCIA Engineer. This does not mean that the HDD is not important. The read/write speed of the HDD has an influence on the performance of SCIA Engineer. In order to increase performance, we recommend an SSD (Solid State Drive).
Some available SSD types are:

- (m)SATA: cheap, worst performance
- M.2: best price/quality ration
- PCIe: expensive, best performance

Note that it's recommended to keep 10% of free space to avoid issues such as reduced performance.

Software

Supported Windows OS	Windows Server 2019 (64 bit) Windows 10 (64 bit) Windows 11 (64 bit)
API link with Revit (http://www.scia.net/revit)	SCIA Engineer 24 is compatible with: Revit 2024, Revit 2023
API link with Tekla	SCIA Engineer 24 is compatible with: Tekla Structures 2023 Tekla Structures 2022
IFC	SCIA Engineer 24 is compatible with: IFC version 2x3 IFC4 (only import)
SDNF	SCIA Engineer 24 is compatible with: SDNF version 2.0 (only import) SDNF version 3.0 (only import)

1.3. Technical description

Internet access

To be able to use Cloud license, SCIA Engineer will access multiple services at:

- https://entitlement.scia.net/*

Floating Protection

When using the new Cloud protection, then all commercial modules & editions, that are available in your license, are available from a Cloud License Server.

When SCIA Engineer is started, then it will retrieve the list of available modules from the Cloud License Server and automatically use all modules that are available for the user. The user has then the possibility to unselect some of these available modules. Unselected modules remain on the Cloud License Server and can be used by another user. This setup is remembered on the user device and is used every time SCIA Engineer is used on this device under this Windows user account.

When SCIA Engineer is closed gracefully (the user closes the application manually), then it will return the used modules back to the Cloud License Server.

Practically this means that:

- Internet access is always needed whilst SCIA Engineer is started and exited.
  The amount of data transfer during this operation is minimal – even a connection to the hotspot on a cell phone would be enough.
  The retrieval of the list of available modules may take on average about 15 seconds but is highly dependent on the number of modules in your license and workload on the Cloud License Server.
- Licenses are dynamically retrieved and returned to the Cloud License Server, so this means that they can be easily shared between multiple users

User identification, roles and activation

To be able to use the cloud protection services in SCIA Engineer, each user will have to identify himself by using her/his personal credentials, being her/his email address and a secure password.

Both are inputted in the Login dialog of SCIA Engineer in order to allow SCIA Engineer to use the Cloud License Server. If the login dialog does not pop-up automatically on SCIA Engineer start, you can start it by running DukeLogin.exe file in SCIA Engineer installation directory.

The administration of the users is done in the SCIA License Portal at https://entitlement.scia.net/orgadmin. Administration is possible for commercially sold licences. For Student and Trial licenses, the licence is personal and cannot be managed via this portal.

You can login to the SCIA License Portal by using your personal credentials.

FAQs

Overview of CLS communications
All communication from Cloud License Server is encrypted using TLS over SSL:

- TLS 1.2 is supported using secure ciphers
- SSL certificates are based on 2048-bit keys

Chapter 2: Create your account

This chapter describes the procedure to create and/or activate your SCIA Engineer Account.

2.1. New Account

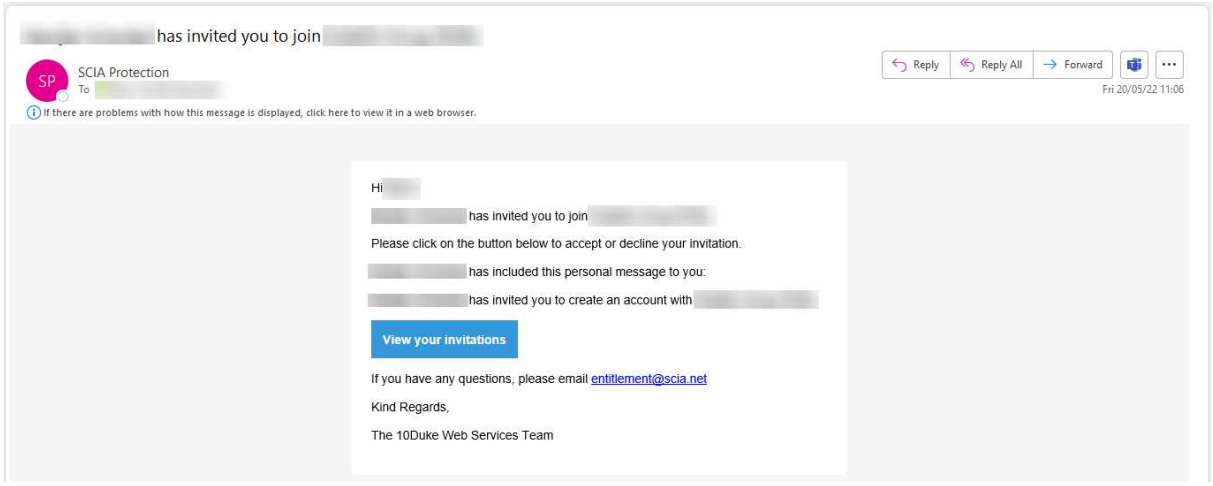
If you are new to SCIA Engineer, you have 3 ways to get access to SCIA Engineer:

1. Contact our office or reseller or contact us online and get a full license of SCIA Engineer. Your account will be automatically created for you.
2. If you want to try on your own, you can request a Trial license via our website www.scia.net. Your account will be created for you.
3. If you are a student, you can request a Student License via our website www.scia.net. Your account will be created for you.

If you do already have an account on entitlement.scia.net and you request a new license via one of the ways described above, the new license will be automatically associated with your existing account based on your email address used in the request.

2.2. Received Invitation

An organizational administrator can invite you to use organizational license. You will receive an email invitation from entitlement@scia.net which will contain a link to Accept the invite and complete your account registration.



Chapter 3: Installation of SCIA Engineer

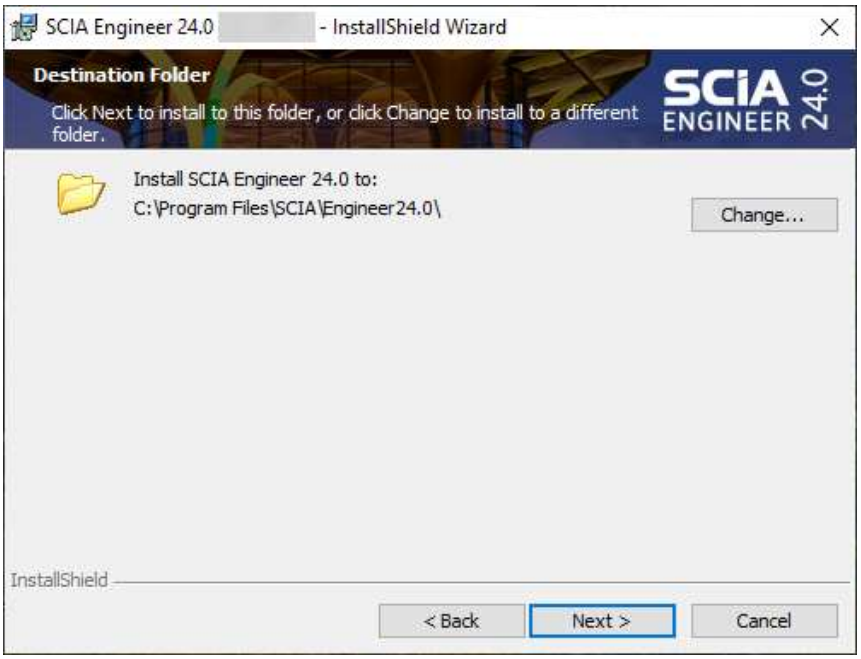
This chapter describes the procedure to install a cloud version of SCIA Engineer.

3.1. Installation of SCIA Engineer

1. You can start the installation using the web setup:

https://www.scia.net/en/scia-engineer/downloads

2. In the dialog box which appears, select the language for installation. The language chosen for installation is also the default language that will be used for the help files of SCIA Engineer.
3. The Welcome screen for installation appears. Press [Next] to continue.
4. In the dialog Choose Destination Location, the folder where the files will be installed can be specified. By default, the destination folder is created in Program Files. It is advised to use this default location.

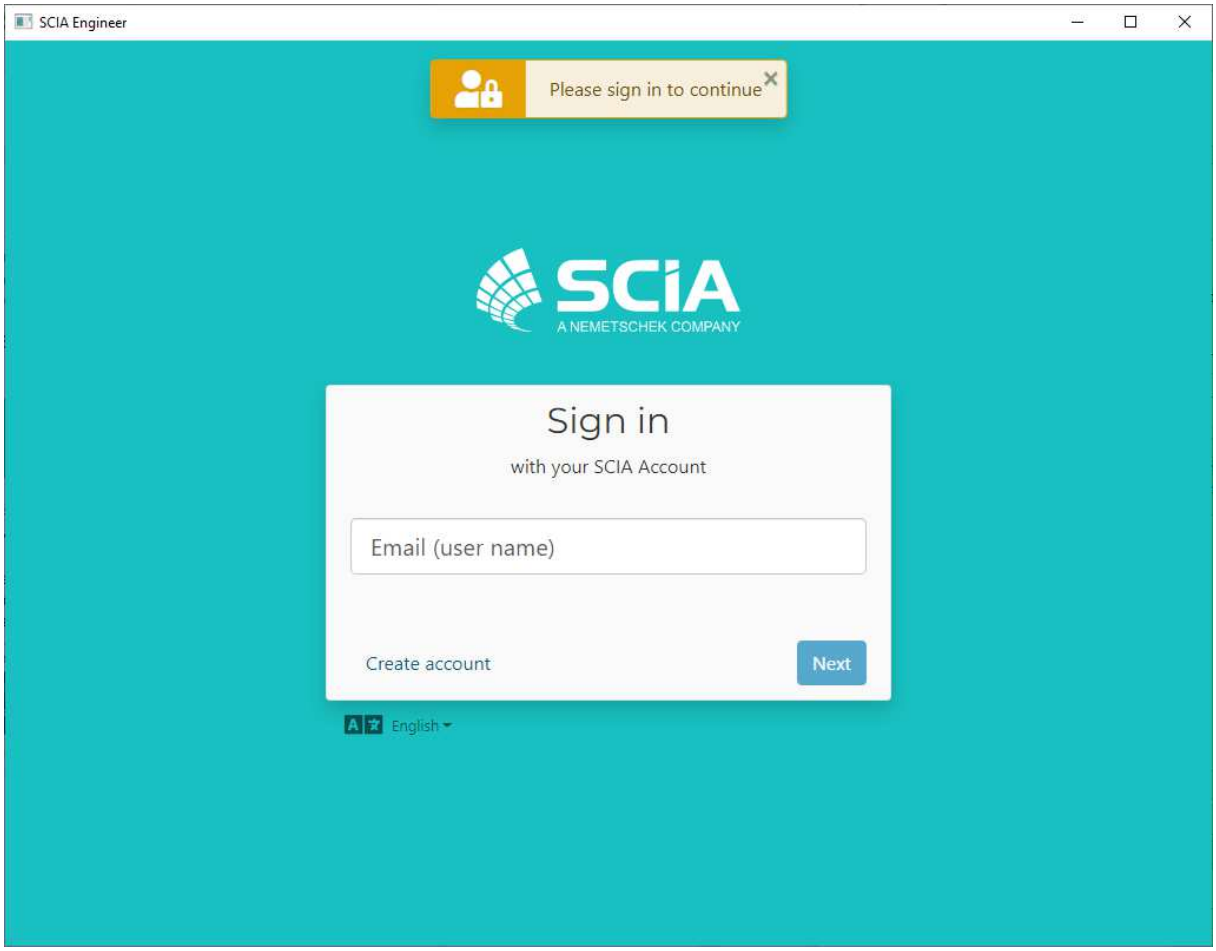


Press [Next] to continue.

5. Select the type of installation. A typical installation installs the standard version of SCIA Engineer. With the 'custom' installation the user can set the parts of the software (add-ons and languages) to be installed. Press [Next] to continue.
6. Select the languages to be installed. Press [Next] to continue.
7. Now you can choose if you want to install shortcuts for SCIA Engineer and/or SCIA Concrete Section. Press [Next] to continue.
8. Press [Install] to start the installation.
9. After installation, the message appears that SCIA Engineer has been installed successfully. Press [Finish] to end the installation procedure.

3.2. Starting SCIA Engineer

When you first start SCIA Engineer, you will be automatically prompt to login:



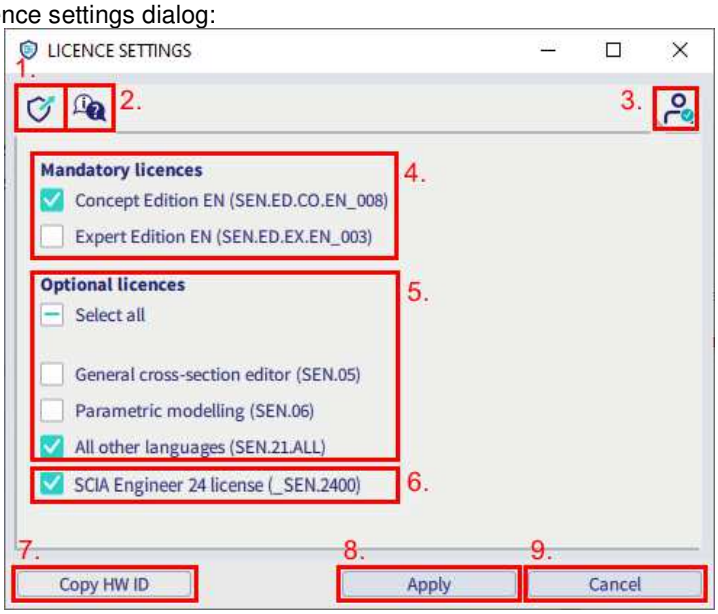
Next time you start SCIA Engineer, you will be already logged in.

ⓘ	If you were not prompt to login on start, you are probably still using old Cloud Protection. Run DukeLogin.exe file in your installation folder to login. Then SCIA Engineer will automatically start using new Cloud Protection.

Chapter 4: Licence settings dialog

In SCIA Engineer you can access the Licence settings via the icon at the top right side:

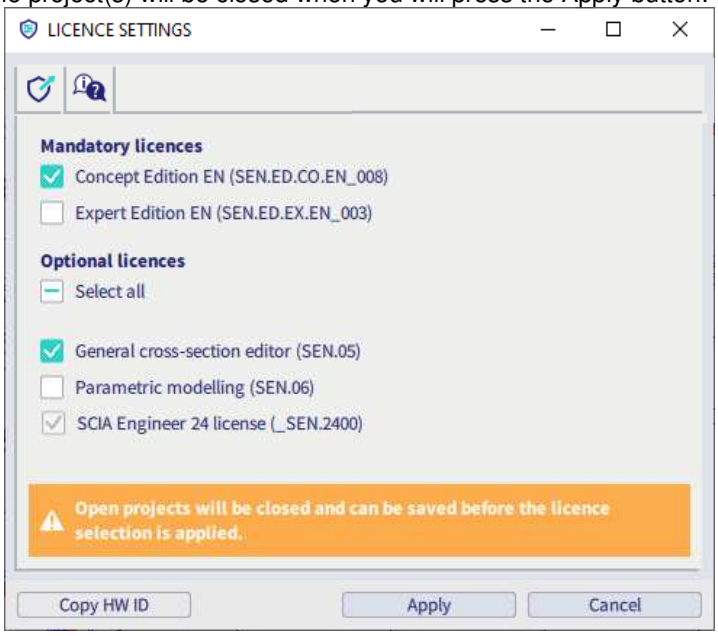
This will open the Licence settings dialog:



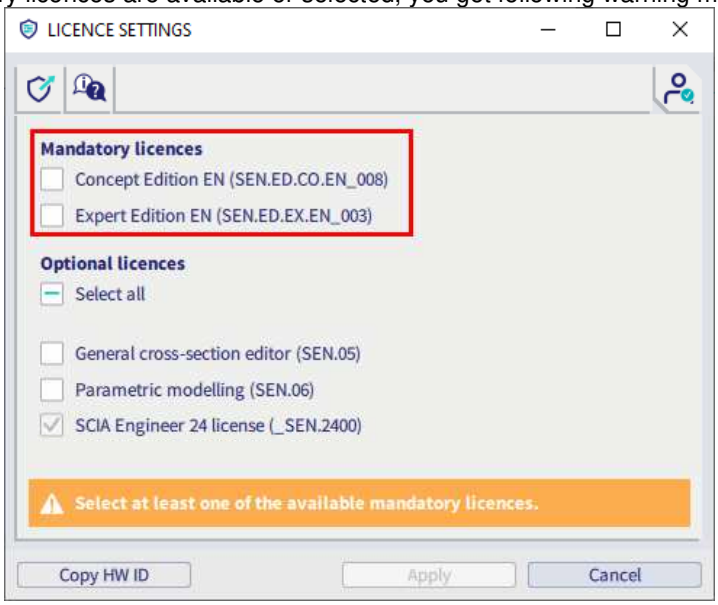
1. **Licence usage for organizational entitlements**
   This button opens the https://entitlement.scia.net/orgadmin/licenses# website, where users of an organizational licence (so not valid for student licences or try-out licences) can see the licence usage (see also chapter 5).
2. **Web help**
   This button opens the web help page concerning cloud protection.
3. **User profile – switch user**
   This button opens the Sign in dialog to switch user.
4. **Mandatory licences**
   In this area you should select at least 1 edition or licence to be able to start SCIA Engineer. Also a version module is necessary (see below).
5. **Optional licences**
   Additional modules can be selected together with a mandatory licence. It's possible to select all, deselect all or make a custom selection.
6. **Version module**
   Module for the SCIA Engineer version that you are working in (this module is necessary to start the software and cannot be deselected).
7. **Copy HW ID**
   Copy the hardware identifier to the clipboard.
8. **Apply**
   This button confirms the changes in the Licence settings dialog.
9. **Cancel**
   This button cancels the Licence settings dialog.

It's possible that additional information is shown in the licence settings dialog.

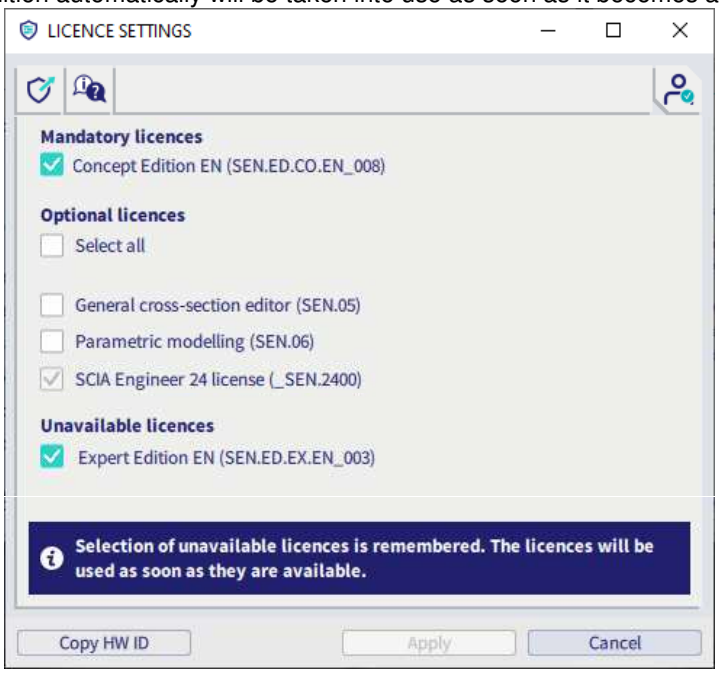
- When opening the Licence settings dialog when at least 1 project is opened, a warning is shown to indicate that the project(s) will be closed when you will press the Apply button:



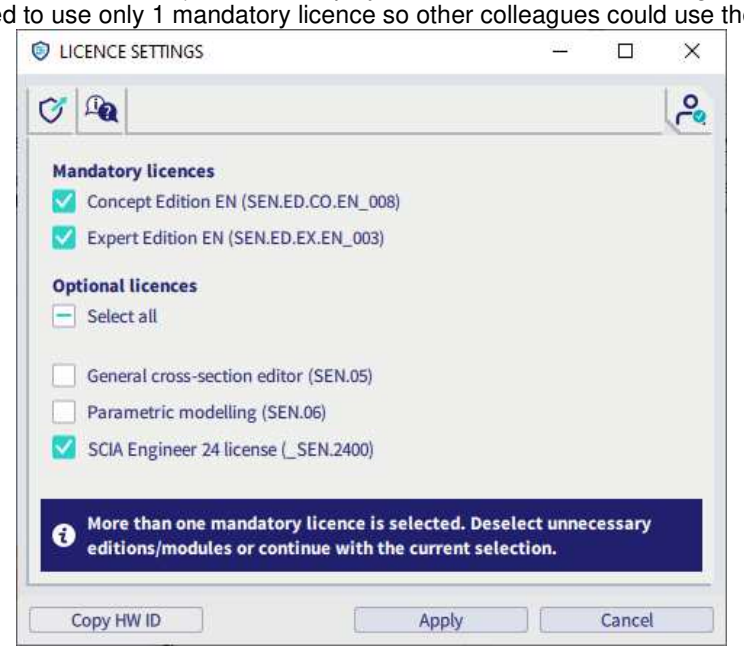
- If no mandatory licences are available or selected, you get following warning message:



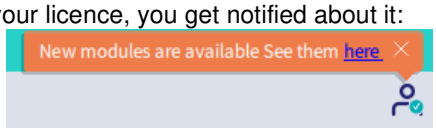
- When you have selected modules or editions which are currently not available, it will be displayed as well in this dialog. In case that the tickbox remains selected, the unavailable module/edition will automatically be used as soon as it becomes available. Or you can deselect the tickbox to avoid that the module/edition automatically will be taken into use as soon as it becomes available.



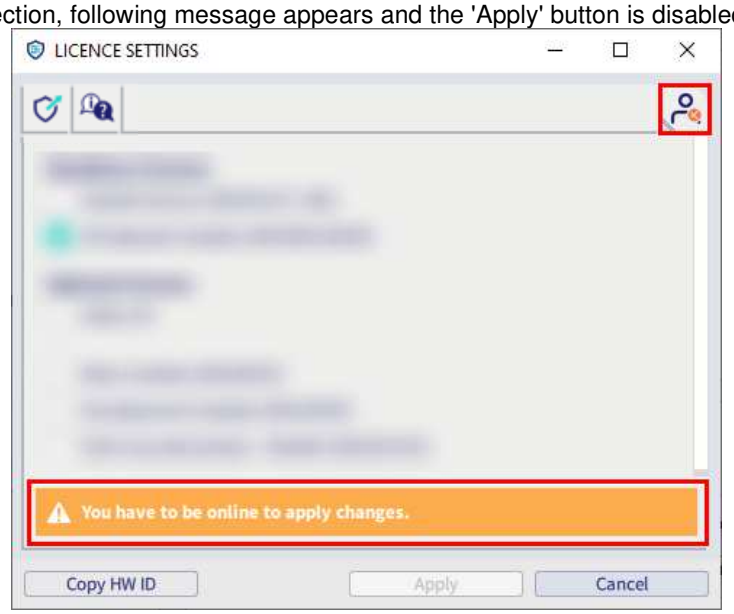
- When you have more than one mandatory licence selected in the licence settings dialog (e.g. two different editions are selected), it will be displayed at the bottom of this dialog box. It is recommended to use only 1 mandatory licence so other colleagues could use the other licence(s).



When new modules are added to your licence, you get notified about it:



When you lose connection, following message appears and the 'Apply' button is disabled:



When the connection is restored and the licences are available again while the dialog is open, this should be recognized and the dialog should be updated automatically so changes can be applied.

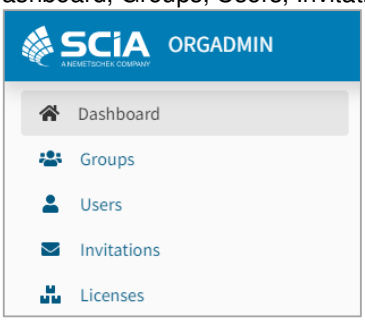
Chapter 5: SCIA Cloud Portal

OrgAdmin is a web-based admin tool/application that allows an organization administrator to create, set up and manage users, as well as have visibility of the licenses granted to their organization and control who can access those licenses. This guide is intended to assist an organization administrator to understand how basic tasks in the system are carried out.

Non-admin users have access to this portal as well, but they can only consult (e.g. the licence usage) and not make changes.

Orgadmin is available on https://entitlement.scia.net/orgadmin. To login, you can use your SCIA Account you use to access SCIA Engineer.

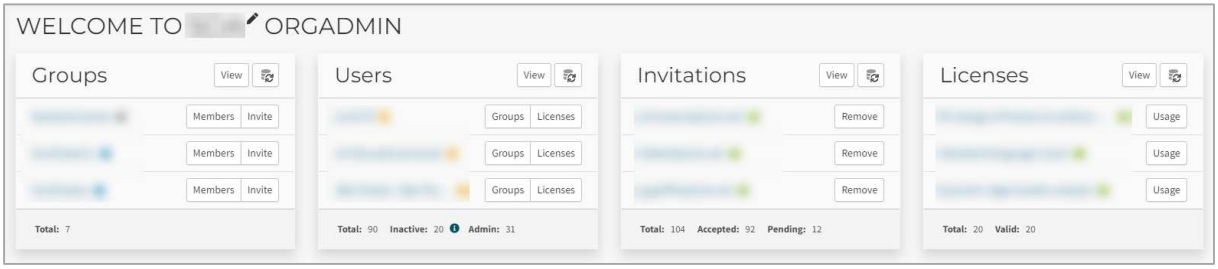
The menu includes 5 main sections: Dashboard, Groups, Users, Invitations and Licenses



5.1. Dashboard

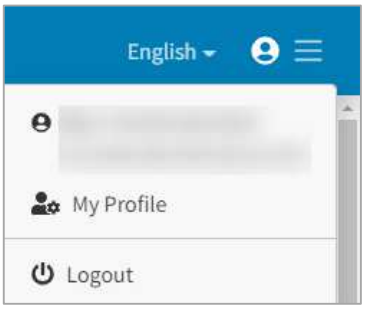
After you successfully sign in to OrgAdmin, you will land on the Dashboard from which you can quickly view and access different sections of the application.

- The number of groups in the organization + direct link to the Groups view
- The number of users in the organization + direct link to the Users view
- The number of user invitations + direct link to the Invitations view
- The number of licenses + direct link to the Licenses view



To access the profile information/page of the logged in user, the user can click on the hamburger icon in the top right corner and a dropdown with 2 options will show:

- My profile (which will open a new browser window and take the user to see their user profile page)
- Logout

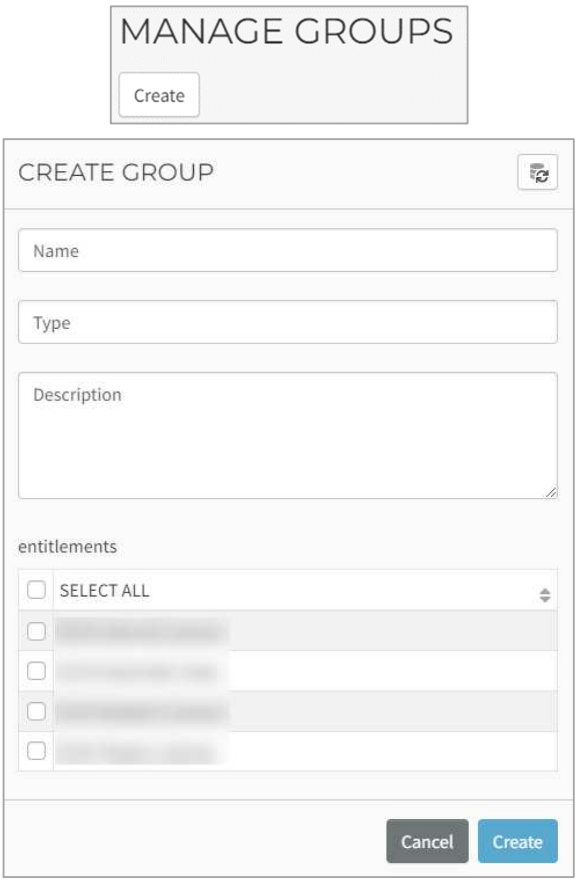


5.2. Groups

The groups section offers access to view & manage the list of current user groups. The group details include the name, type, entitlement(s) and members for that group.

Creating a Group

In the group view click on the ‘Create’ button.



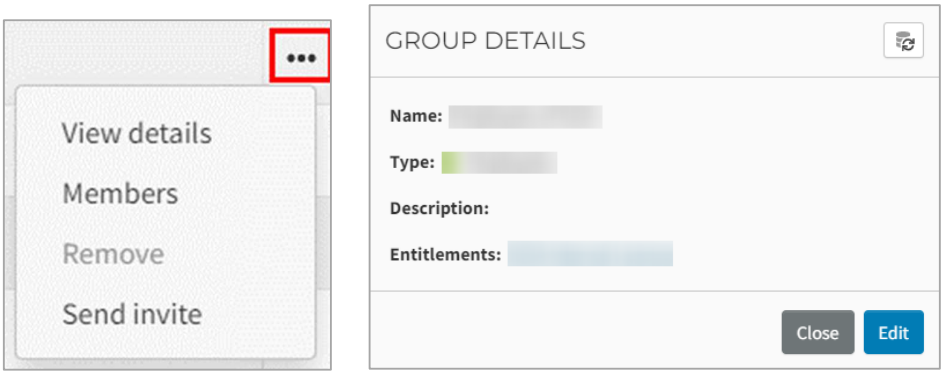
Select a Name and Description (optional).
Select Type: a tag to identify the audience which allows building default logic on membership per group type.
Select from:

- *Employees*: denotes group type formed of an organization’s employees with built-in default authorization logic. This logic includes the built-in role Organization Member to activate on users connected with an organization via the employees group. A built-in role is something that the 10Duke Identity Provider (IdP) applies contextually based on information and relations a user has. It is an efficient way of applying default authorization rules without user specific management.
- *LicenseConsumers*: denotes logically a group type which will be able to consume licenses from an organization entitlement. No logic is enforced based on this group type and it is provided as an example way of grouping users that may be external to an organization but are allowed to consume licenses that the organization owns.
- *Custom* values can also be defined (denotes group types created by an administrator that have meaning in a specific business case and should be used to assist with business logic in specific customer cases)

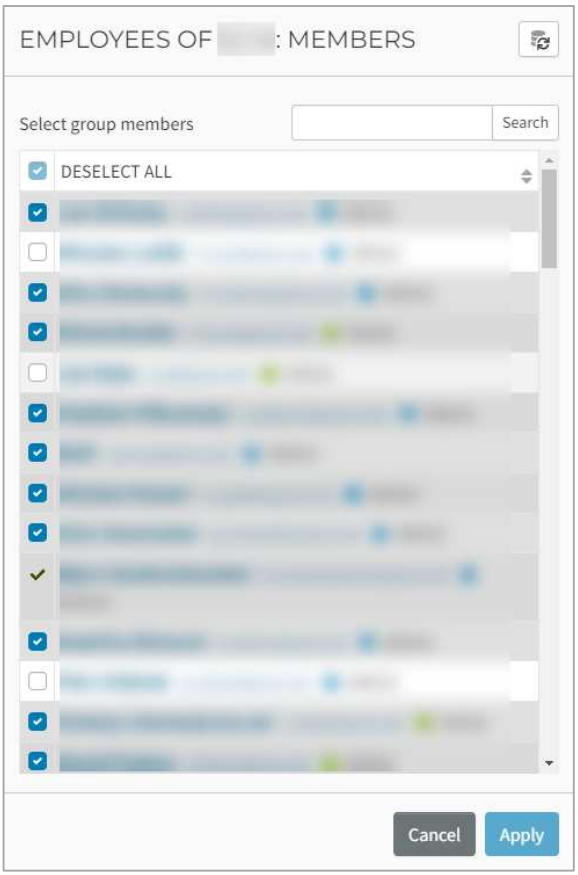
Select entitlement(s).
Press ‘Create’.

Group details view

Press at the three dots at the end of an existing group and select 'View details' to see further information about the select group: Name, Description, Type and Entitlements (click on the entitlement to see the entitlement details like name, consuming groups and assigned licenses):



Click on 'Members' to see the members of the selected group. It shows all users in the organization and the users that below to the group are selected/ticked on. Members can belong to one or more Groups associated with an organization.

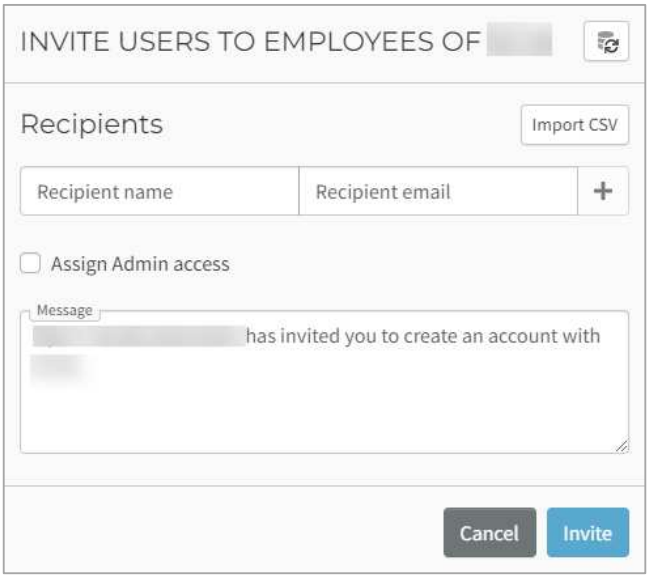


Add a member to a Group

Please note that the user must already have a user account in the system before it can be added as a member of a Group.
Click on the three dots at the end of a particular group and click on 'Members' to see the members of the selected group. A new view as shown above will open requesting you to select the user (the table is showing all available users). Select the user(s) and press the 'Apply' button

Inviting a member to a Group

Inviting a member assumes the person to be invited does not have an existing user account in the system.
For existing users the option 'Members' should be used.
Click on the three dots at the end of a particular group and click on 'Send invite'



A new view will open where the following information needs to be provided:

- Recipient name
- Recipient email
- Personal message (optional), including your name (the sender's name)

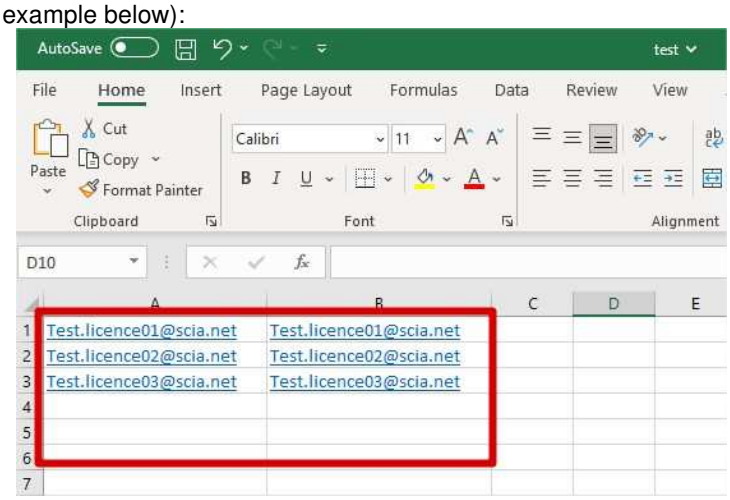
Click 'Invite' to send the invitation.

Once an invitation has been accepted the member will appear in the Group's table. The status of the invitation(s) can be seen if you navigate to the 'Invitations' section in the menu.

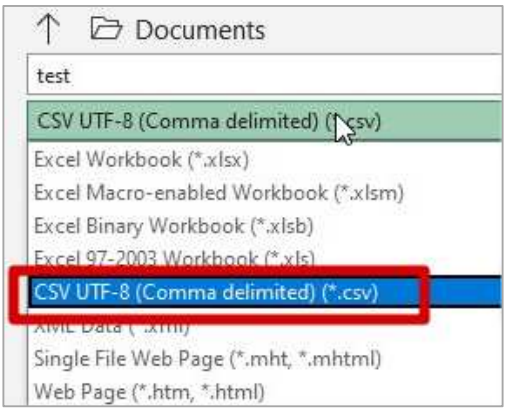
Inviting multiple users to a Group

- To invite multiple users at once you can use the 'Import CSV' button:

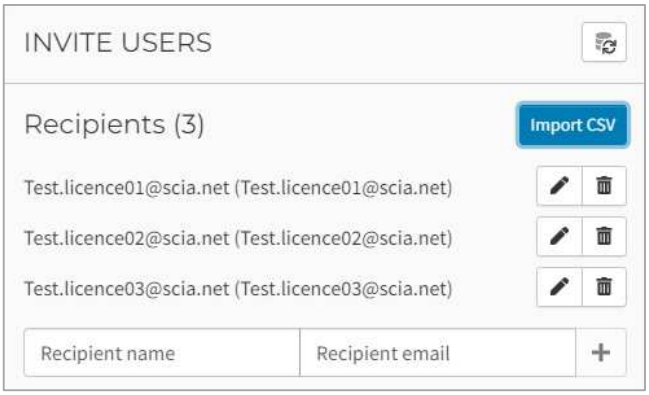
The file '.csv' can be created in Excel for example, and it needs to be composed of two columns. The first one contains 'Recipient name', but it is not important as for the recipient an account will be created and change the name can be changed there. It is important to indicate the email address in the second column (see column B in the example below):



Then the file needs to be saves as '.csv':



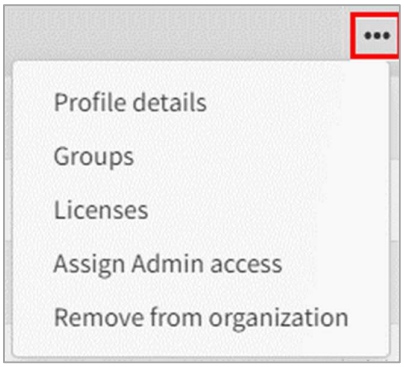
The import will look like:



5.3. Users

Managing a User

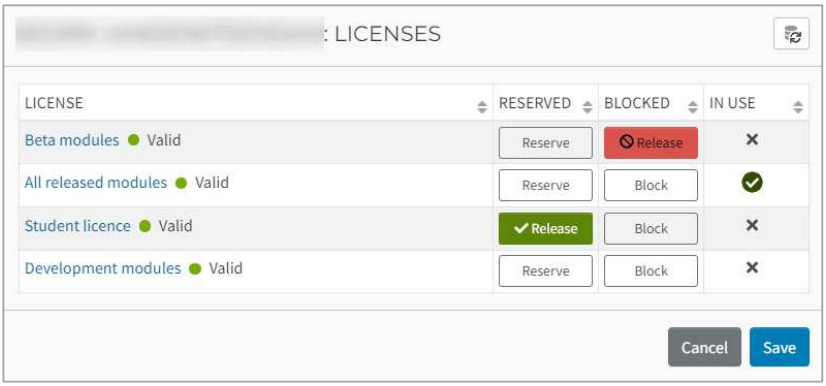
Select Users in the menu.
In the users table presented, select your user by clicking on the three dots.



Profile details gives your following information:

- Display name
- Status: Active, Inactive (this means that the user has not logged in for 30 days), Admin (this will give the user access to the OrgAdmin application)
- Professional title
- First name
- Last name
- Nickname
- Email
- Phone number

Via 'Groups' you can consult to which groups the user belongs and you can quickly add the user to certain groups or remove him/her from groups.
'Licenses' show all licenses that are available for the user. The column 'In use' indicates the modules that are currently in use by this user. You can click on the 'Reserve' button next to a specific module to reserve this module for him/her. Confirm with the 'Save' button. With the 'Block' option you can indicate that the user cannot take the module into use. Confirm with the 'Save' button. When a module is Reserved or Blocked, you can Release it to cancel this operation. Confirm as well with the 'Save' button.



There is also an option to assign Admin rights to the user and an option to remove the user from the organization.

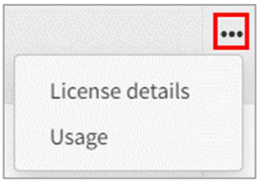
5.4. Licenses

Select the Licenses section in the menu
The Licenses view offers a graphical representation of the consumed licenses and availability (total seats available and total seats in use/consumed).
Active licenses section shows all licenses acquired by the organisation in a table which includes the following columns:

- Name of the license
- Entitlement (to which the license belongs to)
- Seats: total, consumed, available

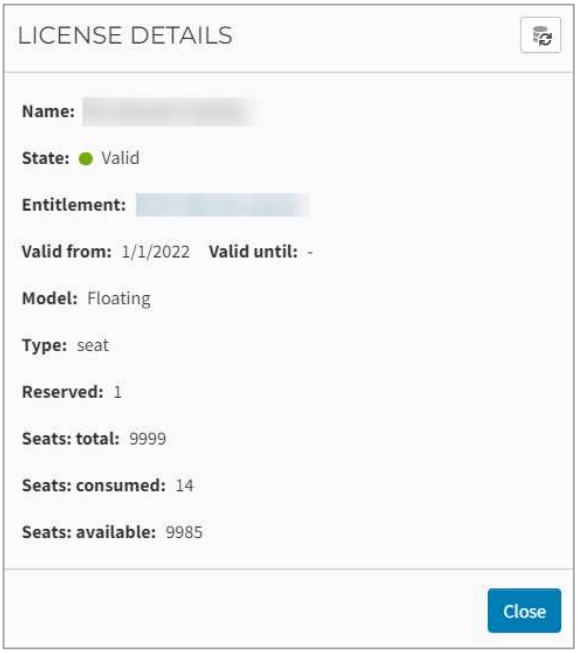
License details

In the licenses table presented, select a certain license by clicking on the three dots and select License details:



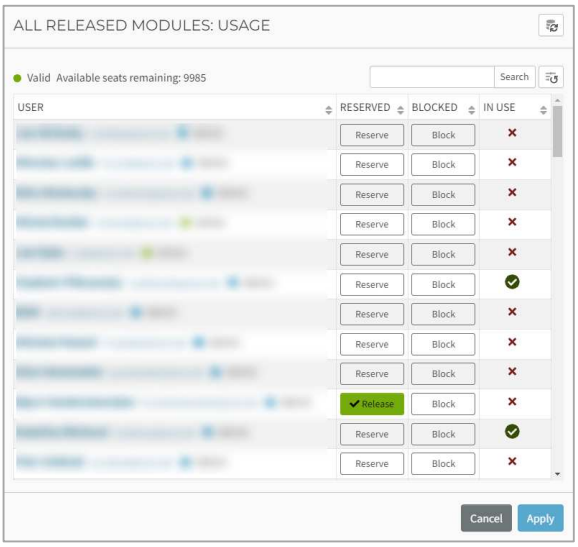
A license details view will open with more information about:

- Name of the license
- State
- Entitlement (the license belongs to)
- Valid from / Valid until dates
- Reserved seats
- Total seats, seats in use/consumed, seats available



Usage

By selecting ‘Usage’ you can see all users that have access to this module/edition. The column ‘In use’ indicates the users who are currently using this module:



You can click on the ‘Reserve’ button next to a specific user to reserve this license for him/her as indicated on the previous image. Confirm with the ‘Apply’ button.

With the ‘Block’ option you can indicate that a user cannot take the module into use. Confirm with the ‘Apply’ button.

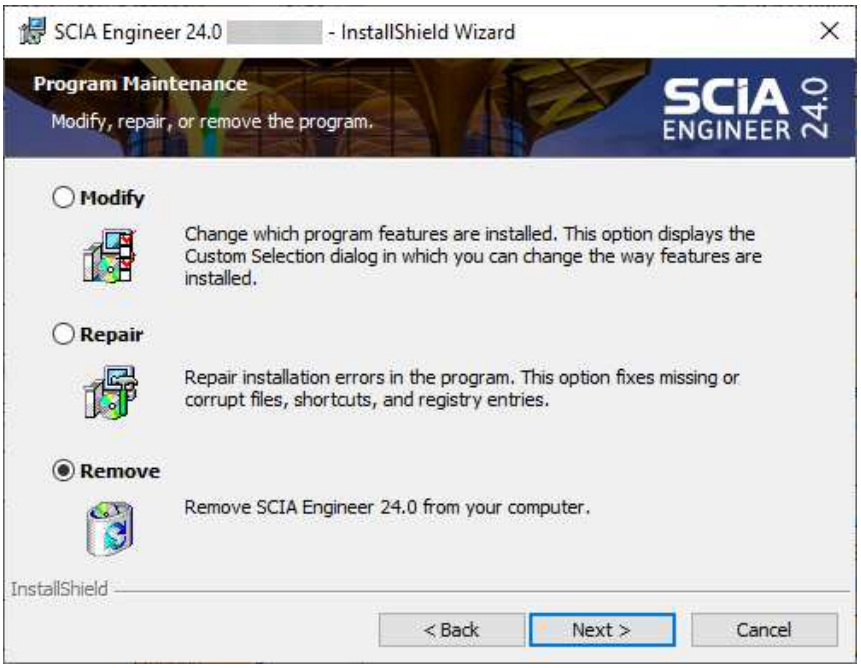
When a module is Reserved or Blocked, you can Release it to cancel this operation. Confirm as well with the ‘Apply’ button.

Chapter 6: Uninstalling SCIA Engineer

6.1. Uninstalling with Add/Remove Programs in Windows

SCIA Engineer can be uninstalled like any other Windows based software application:

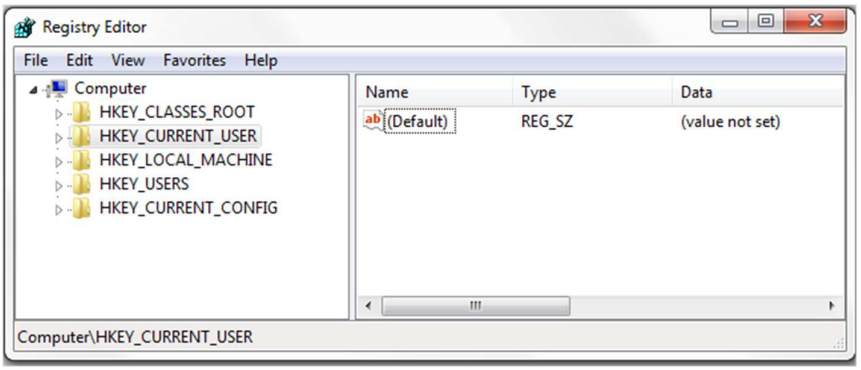
1. Go to Add or Remove Programs through Start > Settings > Control Panel > Add or Remove Programs.
2. A list with installed software applications will appear. Select SCIA Engineer and press [Change/Remove]
3. In the dialog box that appears choose the option **Remove**



4. Press [Next] to start the uninstall procedure.

After completing the uninstallation, some settings remain in the registry of Windows. These traces can be deleted manually. Deleting these entries can be necessary when problems occur with a new installation.

1. Open the Run dialog box through Start > Run
2. Type regedit and press [OK]
   Take note, for this step it is required to have Administrator rights!
3. The Registry Editor appears.



4. Go to the following key's and delete them using the Delete button.
   - HKEY_CURRENT_USER\Software\SCIA\ESA*
   - HKEY_LOCAL_MACHINE\Software\SCIA\ESA*

   Where * represents the version number (for example 24.0 for Scia Engineer 24.0).

5. Close the Registry Editor through File > Exit

After completing the uninstallation, some folders remain on your hard disk and can be deleted manually:

- 32 bit version: C:\Program Files (x86)\SCIA\ Engineer**
- 64 bit version: C:\Program Files\SCIA\Engineer**

Also the following folders remain on your hard disk and can be deleted:

- Windows 7/8/10:
  - C:\Users\#User#\Esa**
  - C:\Users\#User#\Documents\Esa**
    Where ** represents the version number

These folders can be deleted using Windows Explorer. Please note that the first folder can contain projects so you must be absolutely sure if you wish to delete these folders.

6.2. Uninstalling without Add/Remove Programs in Windows

Sometimes SCIA Engineer cannot be uninstalled using the 'Add/Remove programs' feature of Windows. Sometimes an error message presents itself or SCIA Engineer is not added to Add/Remove Programs. In this case, it is not possible to uninstall the software.

This problem can occur with any Windows based program.

To easily uninstall Scia Engineer, use the following procedure:

- Go to Start > Run and in the dialog that appears, type the following command:
  msiexec /x {XXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX}

  Where XXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX is the product code of the program (so it's depending on the installed version of the software).

To find the product code (as parameter ProductCode) in the registry, use following procedure:

1. Open the Run dialog box through Start > Run
2. Type regedit and press [OK]
   Take note, for this step it is required to have Administrator rights!
3. The Registry Editor appears. Go to the following key's:
   - SCIA 32 bit version: HKEY_LOCAL_MACHINE\SOFTWARE\SCIA\Installer\SciaEngineer**.*
   - SCIA 64 bit version:
     HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\SCIA\Installer\SciaEngineer**.*_x64

   Where **.* represents the version number (for example 24.0 for Scia Engineer 24.0).

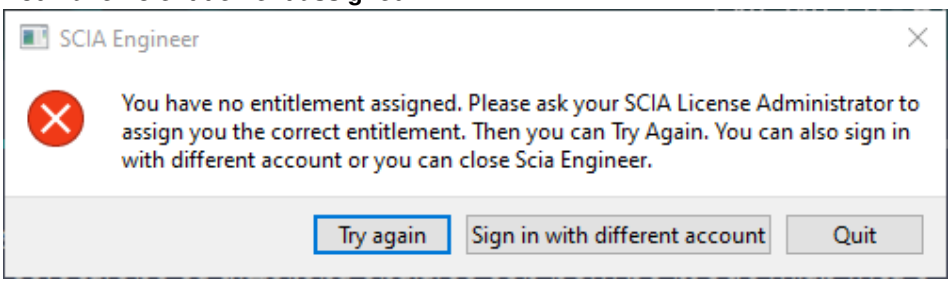
This will execute the same procedures as uninstalling through Add/Remove Programs.

Chapter 7: Troubleshoot

7.1. License Error on SCIA Engineer start

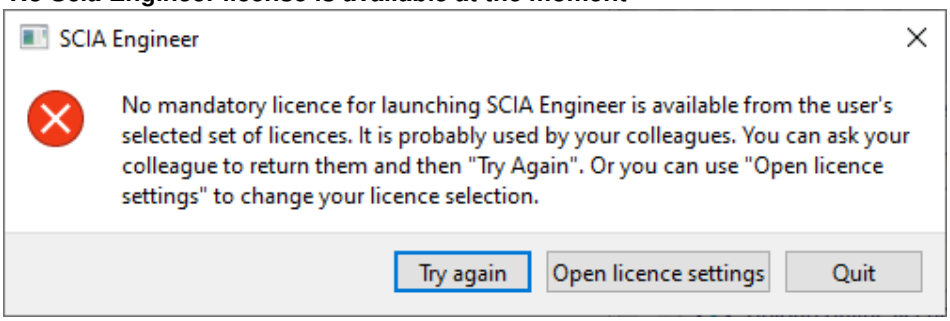
Following protection errors might happen on SCIA Engineer start:

- **You have no entitlement assigned**



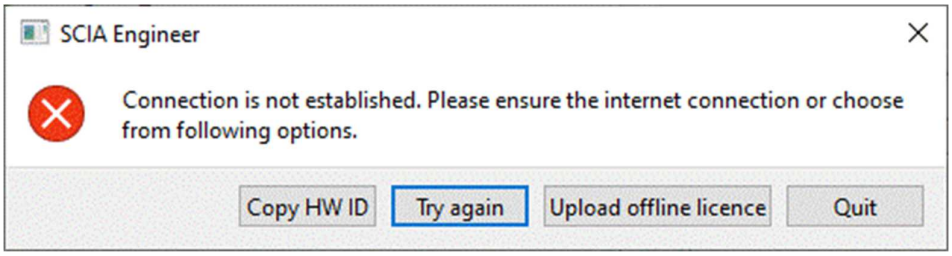
Your SCIA account is not associated with any license. If you are using organizational license, ask your organizational admin to give you access to license. If you asked for student/trial license, your request either waits for approval or was rejected.

- **No Scia Engineer license is available at the moment**



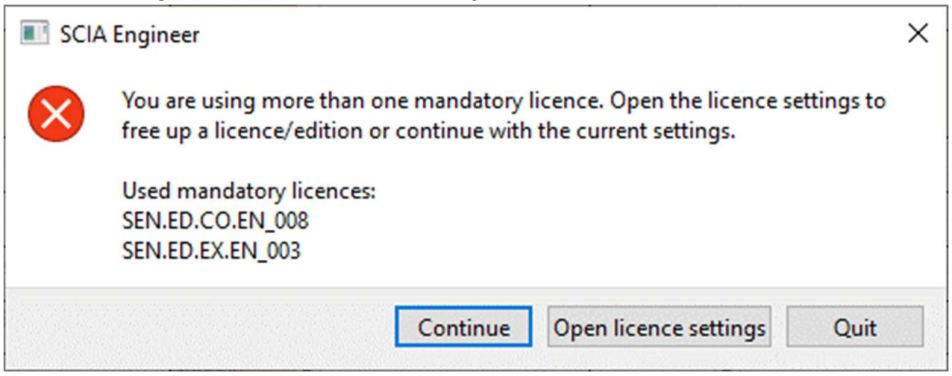
Somebody else is using the organizational license at the moment or you use your license on another device. You or your colleague need to close their instance of SCIA Engineer so you will be able to get the license and open SCIA Engineer.

- **Connection is not established**

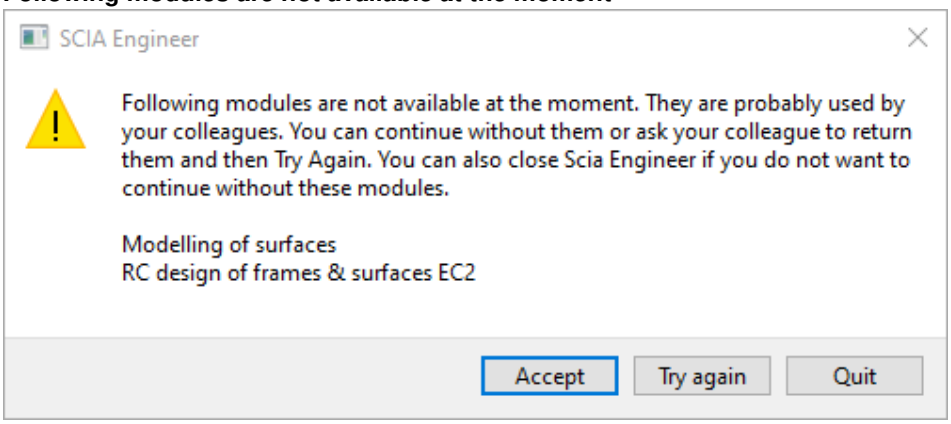


SCIA Engineer is not able to connect to https://entitlement.scia.net. Please check your internet connectivity or your firewall/antivirus setup.

- **You are using more than one mandatory licence.**



- **Following modules are not available at the moment**

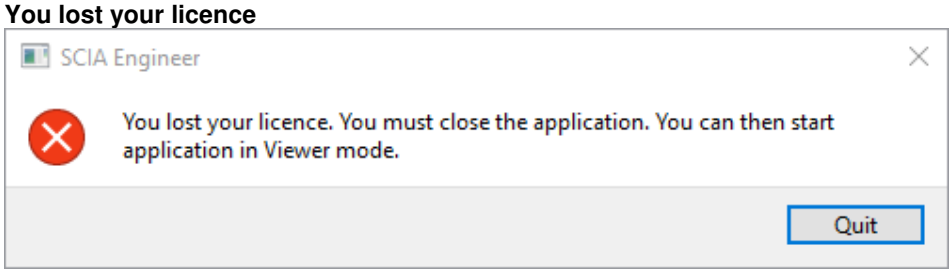


Some modules from your license are not available at the moment as they are being used by another user or on another device. You can continue, however, make sure that missing modules are not required in your project(s).

7.2. License Error on SCIA Engineer runtime

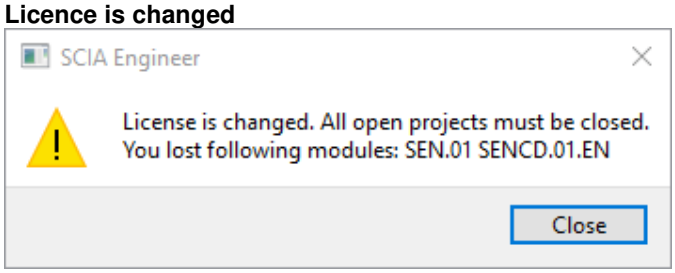
Following errors might happen on SCIA Engineer runtime:

- **You lost your licence**



Your license seat expired (after sleep, hibernation or PC locked), your license expired or organizational admin took away your license or your assignment to the license. You are forced to close all open projects.

- **Licence is changed**



Some modules from your license expired or were removed by admin from your entitlement. You are forced to close all open projects. You can re-open them with new set of modules.

7.3. Application/PC crash

After a crash of the computer or SCIA Engineer, it is possible that the license is still in use. You can just start the application again and you will use your existing license seat. When you close the application gracefully, license seat will be released.

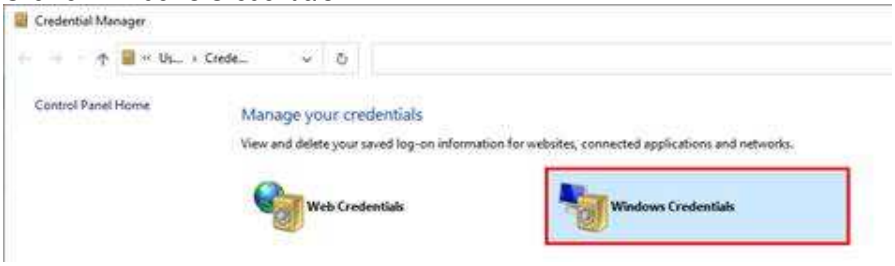
7.4. Password issues

You can try to reset your password via the forgot password link:
https://entitlement.scia.net/user/forgot/password

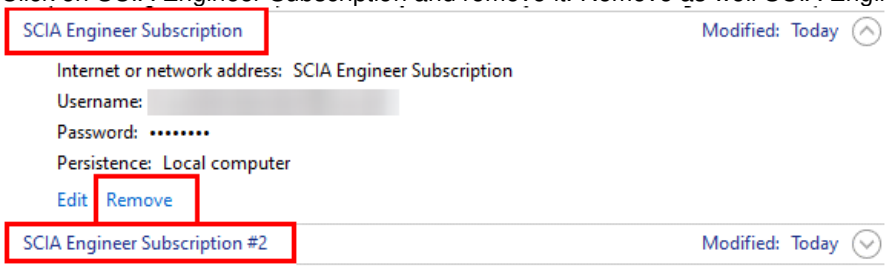
In Windows your password is stored in the Credentials Manager. To reset the credentials, you can simply delete them via following procedure:

- Go to Credential Manager (for example via the Windows start button):

- Click on Windows Credentials:



- Click on SCIA Engineer Subscription and remove it. Remove as well SCIA Engineer Subscription #2:



Afterwards you can try to login again when asked for while starting SCIA Engineer.

7.5. Supported SCIA Engineer versions with cloud protection

Following versions are supported for the cloud protection:

- SCIA Engineer 24.0, 22.1 & 22.0
- SCIA Engineer 21.1, from patch 3 on (21.1.3XXX)
- SCIA Engineer 21.0, from patch 5 on (21.0.5XXX)
- SCIA Engineer 20.0, from patch 5 on (20.0.5XXX)
- SCIA Engineer 19.1, from patch 5 on (19.1.5XXX)

7.6. Will a dongle license still work with SCIA Engineer?

Yes, a dongle (standalone or server) will still work up to and including version SCIA Engineer 20.
From SCIA Engineer 21 on, a dongle isn't supported anymore.

Contacts

Belgium Headquarters SCIA nv Corda 2, Kempische Steenweg 309/0.03 B-3500 Hasselt Phone: +32 11 94 86 10 Email: info@scia.net Support Phone: +32 11 94 86 20 Email: support@scia.net	**France** SCIA France sarl Centre d'Affaires 16, place du Général de Gaulle FR-59800 Lille Phone: +33 3 28 33 28 67 Email: france@scia.net Agence commerciale 8, Place des vins de France FR-75012 Paris Phone: +33 3 28 33 28 67 Email: france@scia.net
Austria SCIA Datenservice Ges.m.b.H. Dresdnerstrasse 68/2/6/9 A-1200 WIEN Phone: +43 1 7433232-11 Email: info@scia.at Support Phone: +43 1 7433232-12 Email: support@scia.net	**Germany** SCIA GmbH Regus Ellipson, Ruhrallee 9 D-44139 Dortmund Phone: +49 231/99950540 Email: info@scia.de Support Phone: +49 231/99950540
Netherlands SCIA BV Goeman Borgesiuslaan 77 NL-3515 ET UTRECHT Phone:+31 26 320 12 30 Email: info@scia.net	**Switzerland** SCIA Swiss Office Dürenbergstrasse 24 CH-3212 Gurmels Phone: +41 26 341 74 11 Email: info@scia.ch
Czech Republic SCIA CZ s.r.o. Praha Evropská 2591/33d 160 00 Praha 6 Phone: +420 226 205 600 Email: info.praha@scia.cz SCIA CZ s.r.o. Brno Slavickova 827/1a 638 00 Brno Phone: +420 530 501 570 Email: info.brno@scia.cz	**Slovakia** SCIA SK s.r.o. Murgašova 1298/16 SK-010 01 Žilina Phone: +421 415 003 070 Email: info@scia.sk