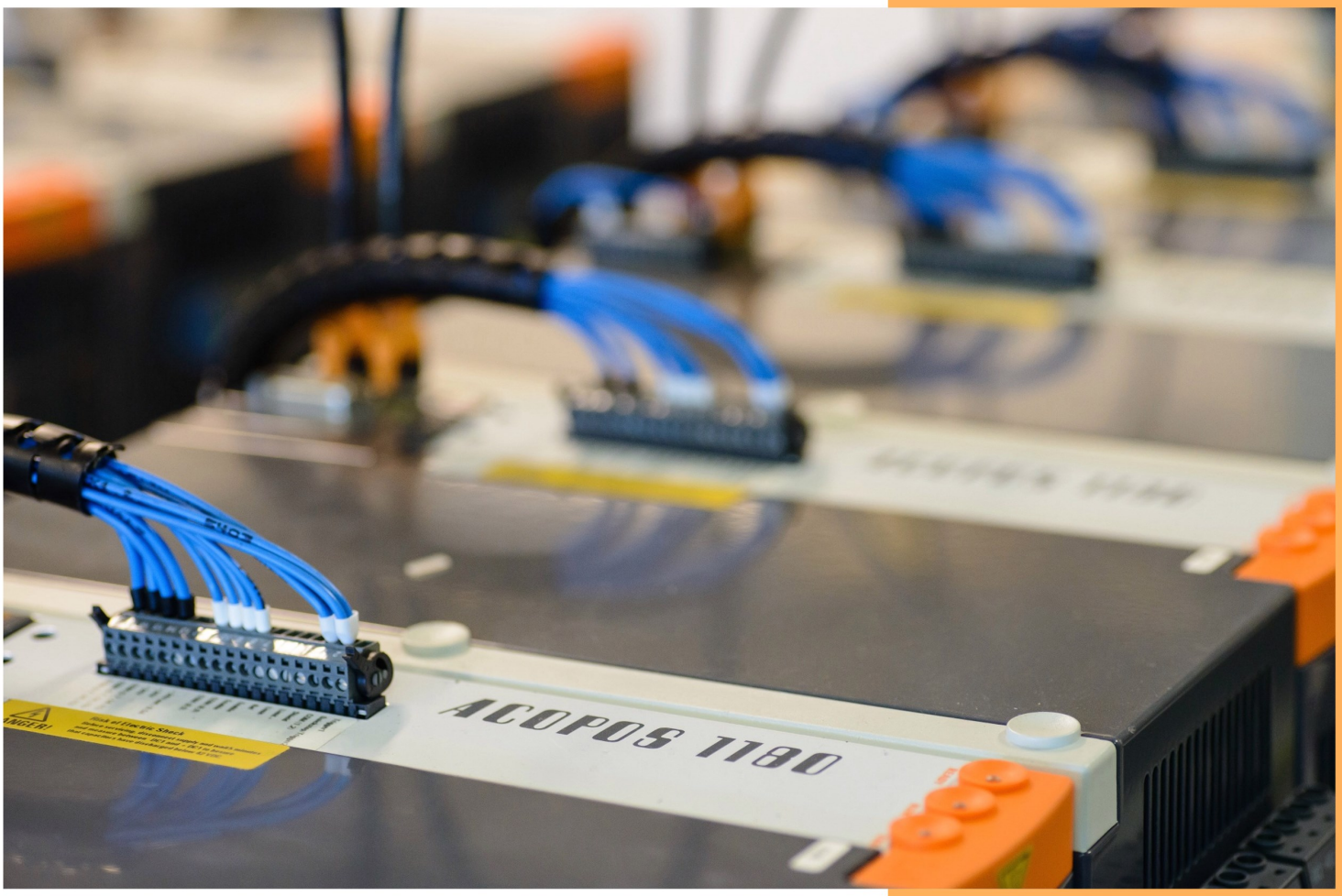
cadett ELSA

cadett
ELSA
Software for electrical design



Installation and Update Guide 2019

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2019-05-07

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Installation and Update Guide

Figure 1: Complete installation packages. To the left, cadett ELSA 3.05 from 1991 with 10 diskettes and a parallel port hardware lock. To the right, cadett ELSA R31 from 2011 with a DVD and a USB port hardware lock. 20 years had went between them. In 2019, 8 years later, physical media is no longer in use. The software is downloaded as one single executable file from the internet.

The **Installation and Update Guide** describes how you install or update cadett ELSA on a local computer or in a network.

The procedure is mainly independent of which version of cadett ELSA you are installing. The pictures show you an example of how it can look. The appearance varies slightly depending on which version of cadett ELSA and which operating system you are using, but this is mostly of minor importance. If you are using another language than English, the menus will of course be different, but the alternatives are the same anyway.

You are welcome to contact us at cadett if you need any assistance:

www.cadett.com
support@cadett.com

Telephone numbers and e-mail addresses are found on our homepage, when needed.

1 Requirements

1.1 Operating system for workstations

The operating system support depends on which version of cadett ELSA you are using. Please check the detailed information that is available for the particular version that you are installing. Typically the most recent versions of **Microsoft Windows** are supported, other operating systems not.

1.2 AutoCAD

cadett ELSA is available in a number of different product variants, from the most simple ones, to the most advanced. Functionality and price varies with these products. Some of the products require an AutoCAD to be fully functional. Others do not. The simplest cadett ELSA, the cadett ELSA View, does not use any AutoCAD at all. All other cadett ELSA products, either need an AutoCAD or are delivered with an embedded AutoCAD OEM based CAD Engine, the "Solo ecscad". The latter is true for all cadett ELSA Solo products.

Different versions of **cadett ELSA** support different versions of **AutoCAD**. Typically, the four most recent versions of AutoCAD are supported at any given point of time.

Please refer to the detailed information that is available for the particular version of cadett ELSA that you are installing.

AutoCAD LT is not supported.

So-called verticals like **AutoCAD Electrical** and **AutoCAD Mechanical**, can in most cases be used without any special arrangements or problems. However, only AutoCAD Electrical is tested by cadett and therefore officially supported. Unknown problems might occur for other verticals and no guarantee apply.

Please note that it is best to install AutoCAD first on the workstations, before cadett ELSA is installed. Even if it is not necessary to do it in that order, it makes things easier. To finalize the installation of AutoCAD you should manually start it. This should be done logged in as the user that is going to use cadett ELSA on the computer in question.

1.3 Operating system for the server

Only 64-bit versions of **Microsoft Windows** server operating systems are supported. When this is written – in April of 2019 – Microsoft Windows Server 2008, 2012 and 2016 are supported. Please note that old versions are discontinued and new versions are added to the list of supported versions, on a regular basis. Please contact cadett for a status update at the particular time when you are performing your installation.

Please note that certain configurations in the operating system might be needed to ensure a trouble-free operation. All details are described further on in this document.

1.4 Computers for workstations and servers

There are three different types of cadett ELSA installations available:

- Local installation on a personal computer
- A Windows Server installation with thick client computers in a Local Area Network (LAN)
- A Citrix Server installation with thin clients in a LAN or Wide Area Network (WAN)

Workstation computers that are running a thin client must meet the requirements of the particular version of Citrix that you are using.

The requirements for workstation computers that are not running a thin client are as follows:

- A supported version of AutoCAD or Solo ecscad must be installed and the hard- and software requirements of that particular version of AutoCAD or Solo ecscad must be met.

- If you are using AutoCAD, please refer to the AutoCAD documentation for details, but also detailed advice available from cadett.

- If you are using cadett ELSA Solo, please refer to the most recent technical details that is available from cadett.

- Please also note that only Microsoft Windows versions of AutoCAD are supported.

When the server is concerned, the basic rule is that the server should be at least as powerful as the most powerful workstation. In that way bottleneck limitations in overall performance, which would otherwise be the consequence, are avoided.

A dedicated server is strongly recommended, meaning that the server should be used for cadett ELSA only, not for other purposes as well. That is very important!

Virtual servers are not only supported but also highly recommended. There are no problems with the virtual server for cadett ELSA sharing the same hardware with other virtual servers, as long as the performance requirements are met.

2 How to use the Installation Guide

The Installation Guide is used as described below.

New local installation	If you are going to make a new local installation, please follow the instructions in chapter 3, page 15.
New server installation for conventional clients	If you are going to make a new installation in a network, please follow the instructions in chapter 4, page 40, for the installation on the server and chapter 7, page 82, for setting up the workstations.
New installation for thin clients	If you are going to make a new installation for thin clients, please follow the instructions in chapter 5, page 57.
Updating a local installation	If you are making an update from an older version that is installed locally, please read chapter 10 on page 151 about the general procedure. Then make a local installation according to the instructions in chapter 3, page 15. After that, start the software and import your old user data according to the instructions in chapter 11 starting on page 155.
Updating a server installation (both for conventional and thin clients)	If you are making an update from an older version installed in a network, please first read chapter 10 on page 151 about the general procedure. Then make a new network installation according to the instructions in chapter 4, page 40, and possibly chapter 7, page 82. Finally start cadett ELSA on one of the newly updated or installed workstations and import your old user data according to the instruction in chapter 11, page 155.

3 Local installation

Before starting to create the local installation of cadett ELSA, it is a good idea to check that a suitable version of AutoCAD is installed and running on your computer. If not, please install AutoCAD first, before proceeding with the installation of cadett ELSA. To finalize the installation of AutoCAD you must start it. Preferably, that should be done logged in as the user that is going to use cadett ELSA.

If you are making an update to a new version of cadett ELSA and already have a running AutoCAD that you plan to continue using with the new version of cadett ELSA, please check that the new version of cadett ELSA still supports your old AutoCAD. If not, you need to install a supported version of AutoCAD as described above for new installations.

If you will use cadett ELSA Solo, no separate AutoCAD is needed. Instead, the Solo ecscad embedded CAD Engine will be installed as part of the cadett ELSA installation procedure.

3.1 Download the installation file

The installation file is downloaded from cadett's homepage. Old-style CD's or DVD's are no longer used.

The address to cadett's homepage is http://www.cadett.com.

To be able to access the download area of the homepage, you need to login. To login you need a username and a password. If you do not have those, you can use the **Password request** feature of the homepage to get them. If you fail to do this, please contact cadett directly to get the appropriate assistance needed.

The installation file is one single big EXE file, named after the particular version and revision of cadett ELSA that you have downloaded. You can place this file anywhere you like on the computer on which you intend to install the software, like in the **Downloads** folder, on the **Desktop** or similar.

Please note that there might be more than one variant of the installation file available, for one particular version/revision of cadett ELSA. Typically, you might find one small compact file and one large complete file. The differences for each version are described in the file description on the homepage. For cadett ELSA R37 and later, the main difference is that one variant includes Solo ecscad and the other variant does not. For other versions, there might be other differences. There are also some versions with only one available installation file.

Please make sure that you download an installation file that meet your own needs!

3.2 Start the installation

To be able to run the installation, you need administrator privileges, either directly or through elevation, in the ordinary Microsoft Windows fashion.

To start the installation procedure, please double-click the installation file.

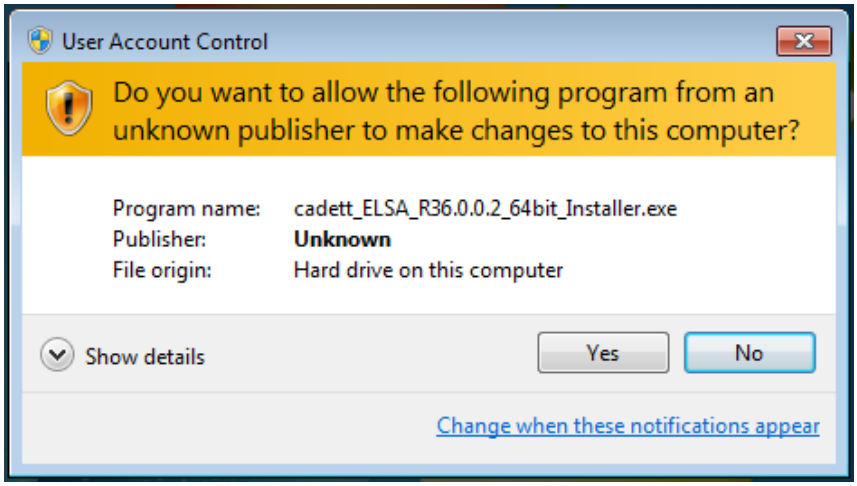

Figure 2: The User Account Control Elevation dialogue.

If UAC (User Account Control) is activated, which is the normal case, the first thing that will happen is an elevation. “Elevation” means that the user is elevated to an administrator with the accompanying privileges.

When you have confirmed the elevation, in some cases by providing administrator login information, in some cases by simply clicking “**Yes**”, the behavior will vary slightly depending on the particular installation file. For some installation files with Solo ecscad included, a somewhat time-consuming unpacking will occur first.

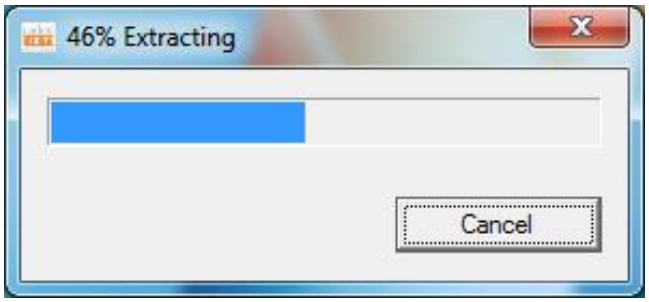

Figure 3: For some installation files with Solo ecscad included, the installation package for that is first extracted. The above picture is from cadett ELSA R37 Solo. A similar extraction is not needed in cadett ELSA R38 Solo.

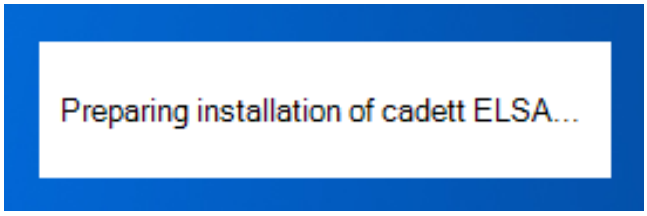

Figure 4: Thereafter, in some versions, a message will be displayed in the lower right corner of the screen. For small installation files without Solo ecscad, it will not. In cadett ELSA R38, this is not a part of the installation process.

After the initial unpacking when applicable, the installer dialogue shown below will be displayed.

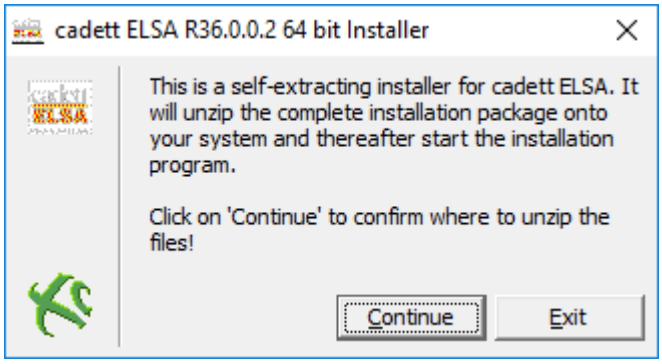

Figure 5: The Installer presents itself.

The dialogue box informs you about the extraction operation that will be performed as the next step.

Please click the **Continue** button.

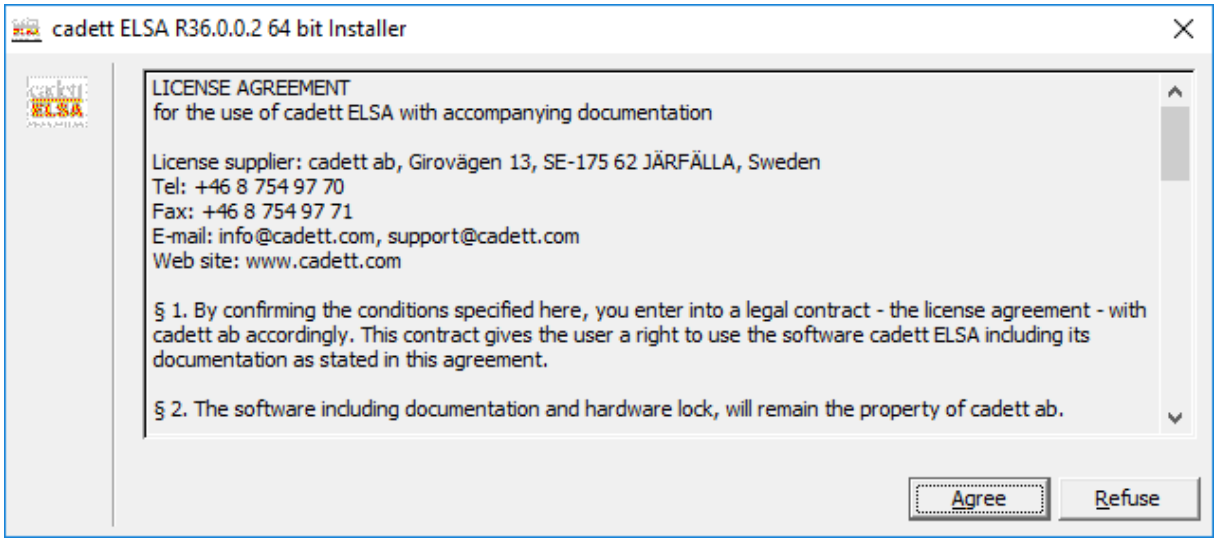

Figure 6: The License Agreement is displayed for your confirmation.

Next, the License Agreement will be presented. Please make sure to read all paragraphs carefully and to check all details with your lawyers (!), before you click the **Agree** button, to sign the agreement.

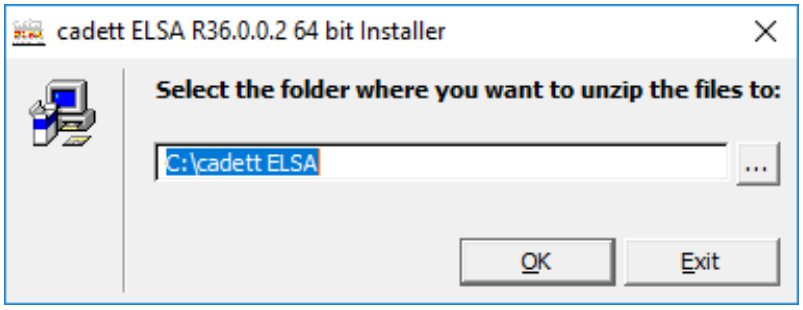

Figure 7: A directory (folder) must be specified to place the installation files in.

The installation files will be extracted to a directory (folder) of your own choice.

The default directory is **C:\cadett ELSA**. If that is ok with you, you can simply click the **OK** button. If you prefer another directory name, you can either type the name of it, or select an existing directory using the browse button to the right.

When you are satisfied with the directory name, please click the **OK** button.

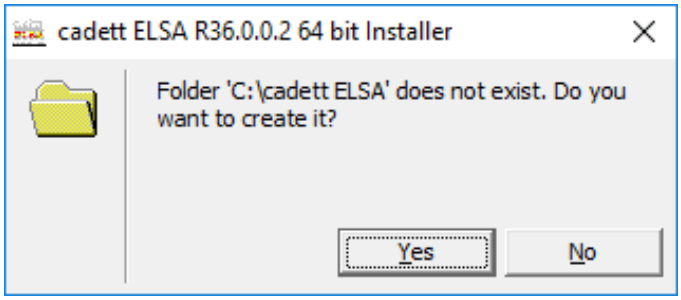

Figure 8: The creation of the directory must be conformed if it doesn't already exist.

If the directory that you have specified does not yet exist, a dialogue box will be presented with a question whether you would like to create it or not.

Please click the **Yes** button to create the directory.

The installation files will then be unzipped in the directory that you have specified.

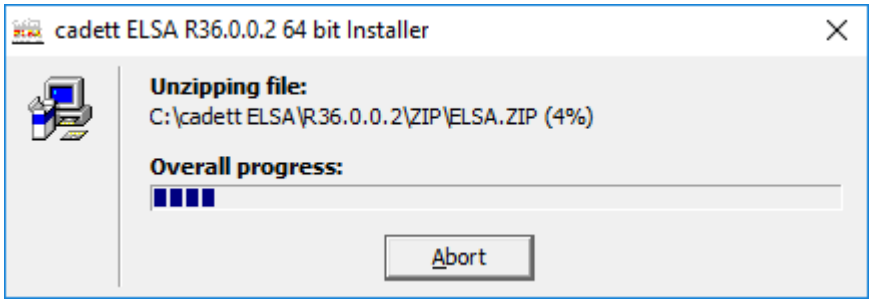

Figure 9: The files are unzipped into the directory of your choice.

A subdirectory for the specific version and revision of cadett ELSA that you are currently installing will be created and the installation files will be placed there.

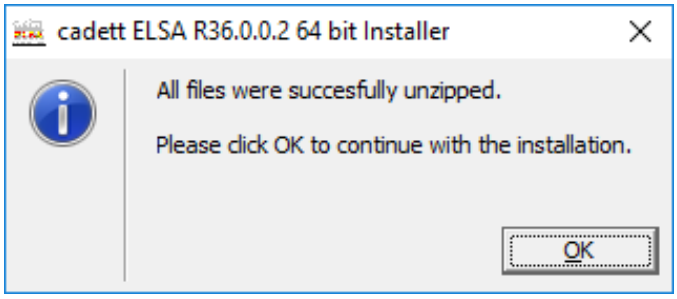

Figure 10: The unzipping is ready and the installation itself will follow.

When the unpacking is ready, a dialogue box will inform you of that.

Please click the **OK** button to start the installation.

Figure 11: The installation program starts.

The installation program will then start and present a dialogue box.

Technical note
If, for some reason, you will need to restart the installation, you do not need to run through the unpacking again. You can manually start the installation from the unpacked files. That is done by double-clicking the SETUP.EXE that is found here:

C:\<your selected unpack folder> \<current version of cadett ELSA being installed>\INSTALLER

Example:

C:\cadett ELSA\R38.0.2.0\INSTALLER\SETUP.EXE

When the cadett ELSA Installation dialogue appears, click **Next**!

3.3 Language selection

cadett ELSA have a built-in support for three different languages. They are Swedish, German and English. All menus and texts will be presented in the selected language.

After the installation is finished, you will be free to change the language setting whenever you like without having to perform a re-installation.

Figure 12: Language selection.

Select a language. This Installation Guide assumes **English**.

3.4 Type of installation

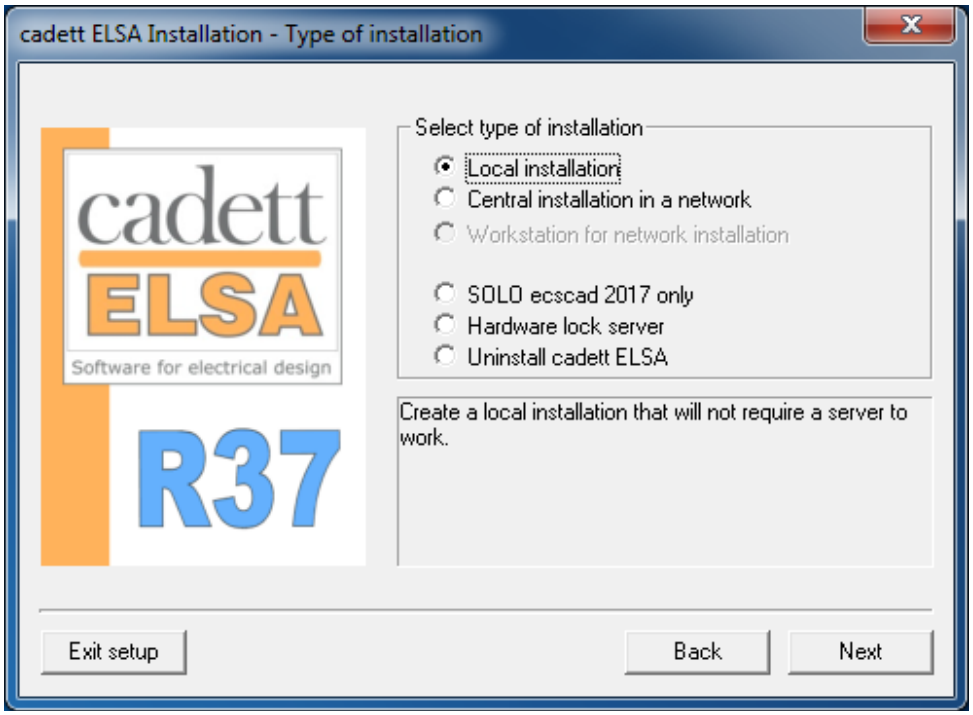

Figure 13: Selection of type of installation.

Please select what kind of installation you want to make. In this case, it will be a **Local installation**.

Then click **Next**.

3.5 Possible warnings caused by previous installation

When proceeding after the type of installation has been selected, a warning will be issued if an installation of cadett ELSA already exists on the computer.

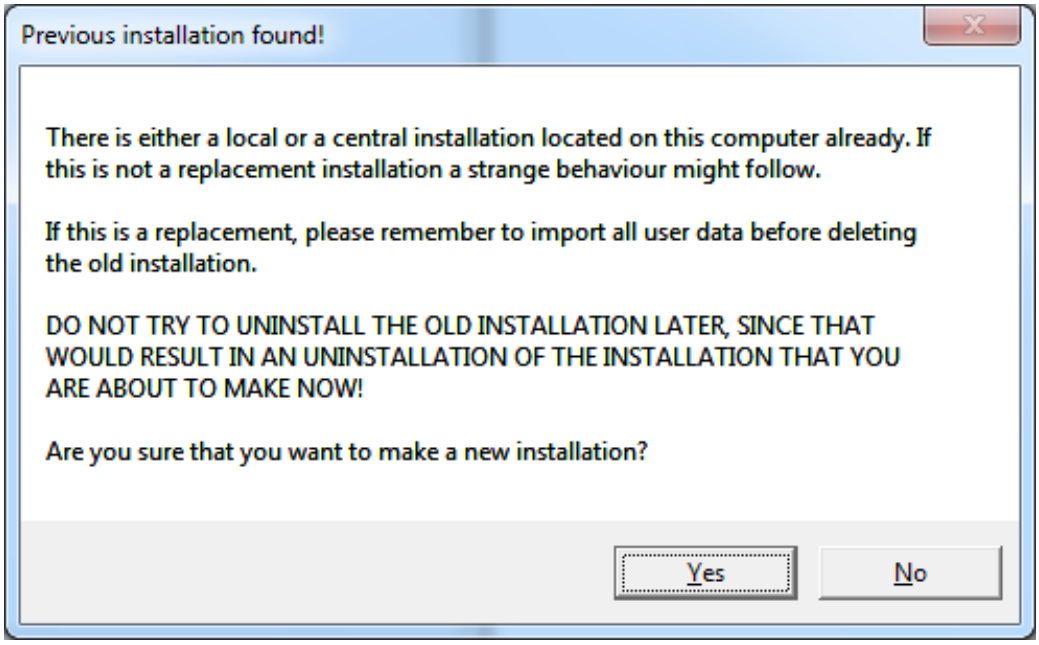

Figure 14: This warning is issued if an installation of cadett ELSA already exists on the computer.

The reason for the message is that, without special arrangements, it is not possible to have multiple installations of cadett ELSA running on the same computer at the same time. When creating a new cadett ELSA installation, any old installation on the same computer will stop working. If you are updating an existing installation of cadett ELSA, this is of course perfectly normal and nothing to worry about.

After confirming this warning, another one appears, if an installation of cadett ELSA is already present on the computer.

Figure 15: Message informing that the Spider service will be stopped.

That is a message telling you that the Spider service will be stopped. To be able to replace an existing installation, no files in it may be in use. Therefore the Spider database server service must be stopped.

No actions are required because of this information. When applicable, simply confirm and continue with the installation.

3.6 Remove hardware lock Reminder

During the installation process of cadett ELSA, the appropriate drivers for the hardware lock are automatically installed. For USB locks, you must ensure that the lock is not physically connected when this happens. Therefore, a reminder will be displayed, as shown in the picture below.

Figure 16: Reminder that no hardware lock must be connected during installation.

Please check that there is no USB lock connected to your computer, and if there is, please disconnect it.

Then click **OK**.

3.7 Main directory of cadett ELSA

Here you specify the main directory of cadett ELSA, which means the directory where the software should be located.

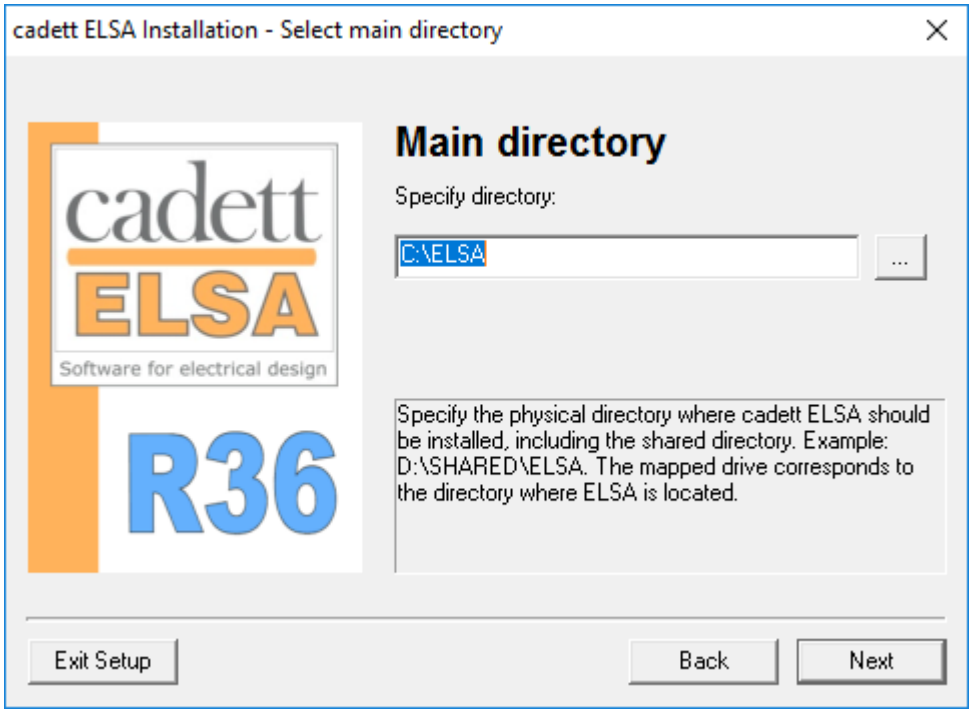

Figure 17: Specification of the main directory of cadett ELSA.

You can specify the directory name freely, with the following restrictions:

- The directory must be located in the root of a local drive (for example: C: or D:).
- The directory name must follow the DOS83-convention, which means that it cannot contain more than 8 characters, no spaces and it may only contain the characters A-Z, 0-9, _ and -.

The directory name **ELSA** is strongly recommended. Rarely – if ever – there is a reason not to use that name.

If you are updating an existing installation of cadett ELSA by installing it in the same directory as the old version, please make sure to select the directory, not typing it. By doing so, you ensure that you are really using the existing directory, which is important to simplify the update procedure.

If the directory that you specify, either by selecting it or by typing it, in fact does exist, a warning will be issued, as shown in Figure 18 below.

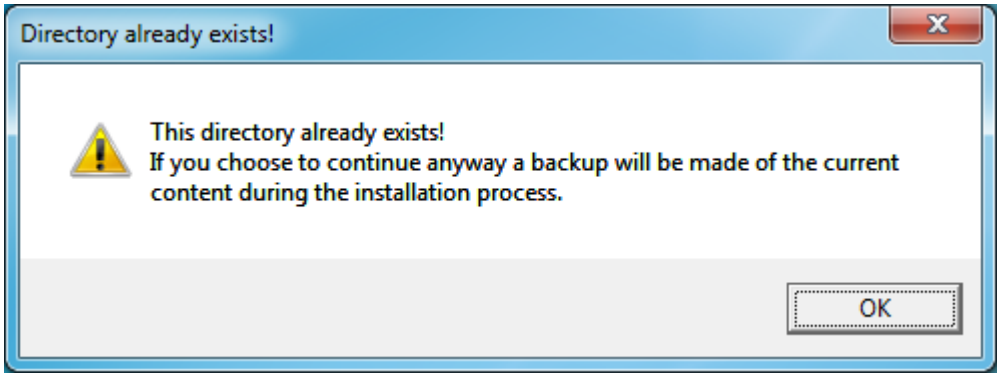

Figure 18: Warning issued if the specified main directory already exists.

If you are updating an existing installation this is perfectly normal.

The text informs you that the main directory of the old installation will be renamed to create a backup, so that the new installation can be placed in a new directory with the same name as was used for the main directory of the old installation.

3.8 Free space warning

To make a local installation of cadett ELSA you need approximately 15 GB of free disk space, at the time when the cadett ELSA folder is created. If you are installing cadett ELSA Solo, the installation file itself is rather big, a couple to a few GB. The unpacked version of the installation file has a similar size. A total of a number of GB of disk space will therefore be consumed before the actual installation starts, raising the need of free disk space before you copy the installation file to your computer to about 15 - 20 GB.

If the amount of free disk space is not enough, you will get an error message as shown in Figure 19 below.

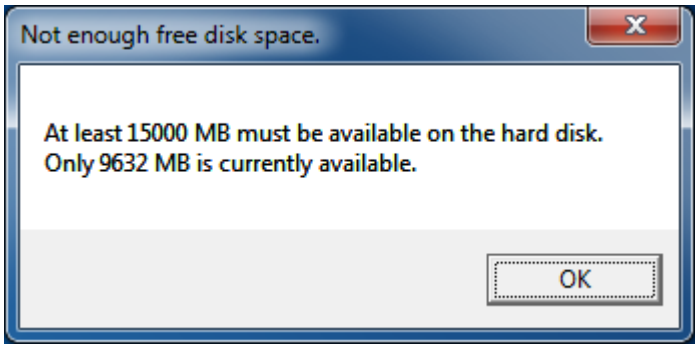

Figure 19: More disk space is needed for the installation.

You can take measures to fix this problem directly and then continue the installation. You do not need to restart the installation.

One simple action that can save you approximately a couple GB is to delete the original installation file. Since it has already been unpacked, it is no longer needed. Please do not forget to empty the Recycle Bin afterwards. Otherwise, you will not save any disk space at all!

3.9 Project directory for project samples

The project directory for the cadett ELSA project samples is a “root directory” in which the cadett ELSA project samples are installed. It is also used as a default location for your own projects. However, you are free to override this if you wish. Your own projects can therefore be placed wherever you like independently of this selection.

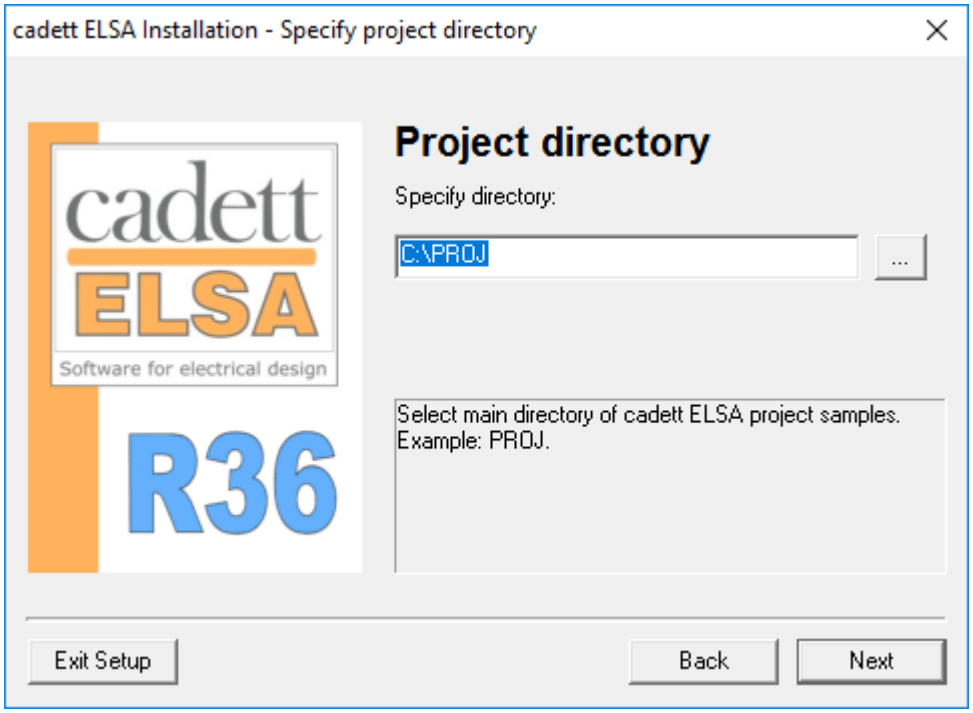

Figure 20: Specification of the project directory for the project samples.

Specify the project directory for the cadett ELSA project samples. This is a free selection with the following restrictions:

- The directory name must follow the DOS83 convention, which means that it may not contain more than 8 characters, no spaces and the valid characters are limited to A-Z, 0-9, _ and -.

The directory name **PROJ** is strongly recommended.

3.10 Spider

Spider is a database server that handles the Catalogue databases, the Translator Lexicon databases, the Symbol Databases and much more. It is implemented as a so-called service.

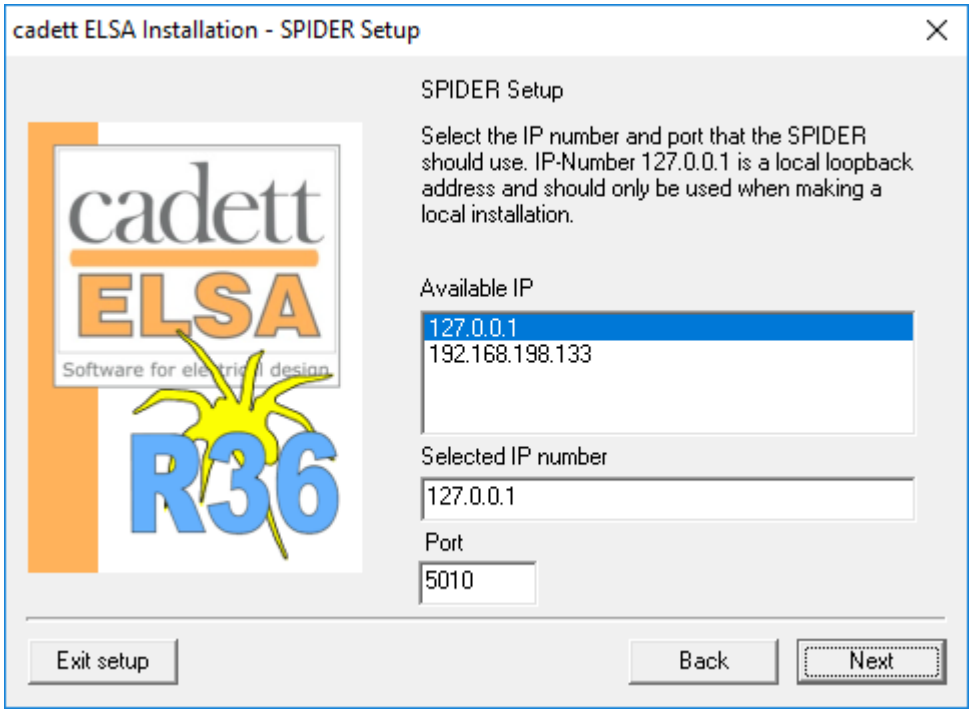

Figure 21: Settings for Spider.

You specify all the necessary configuration information for ***Spider*** here.

Since this is a local installation, the ***Spider*** program will be installed locally on your computer. Therefore, please select the IP-number **127.0.0.1** which is a so-called "local loop back address". The port can be set to **5010**.

In a local installation, you should not use any other alternative than 127.0.0.1.

3.11 Select product

cadett ELSA comes with five different product levels: *View, Start, Basic, Professional* and *Enterprise*. For Basic, Professional and Enterprise there is also a "Solo ecscad" alternative available. Solo ecscad is an embedded AutoCAD OEM based CAD Engine that can be used instead of AutoCAD or AutoCAD Electrical. In total, you therefore have no less than eight alternatives.

You will now have to select one of them.

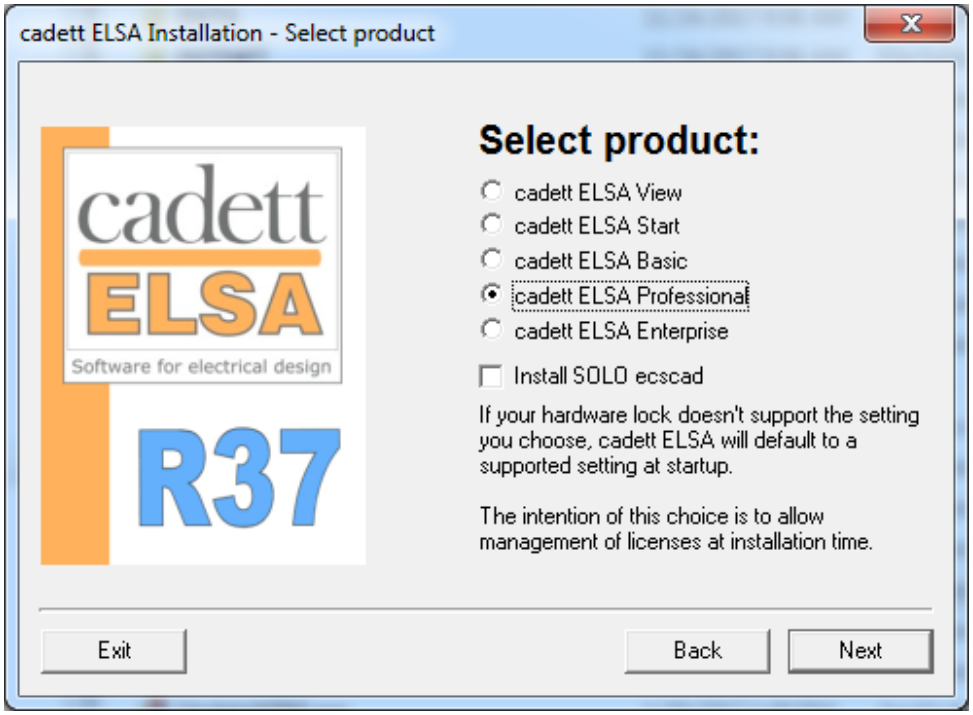

Figure 22: Selection of product.

The available alternatives are as follows:

cadett ELSA View	The simplest alternative. View only. AutoCAD cannot be used.
cadett ELSA Start	The simplest step-in design alternative. Single user only. AutoCAD is needed.
cadett ELSA Basic	The standard Basic alternative. Multiuser network installations supported. AutoCAD is needed.
cadett ELSA Professional	The most commonly used alternative. AutoCAD is needed.
cadett ELSA Enterprise	The top-level product with additional functionality for large businesses like distributed workplaces, cloud usage, Super Project Report Generation and much more.
Install SOLO ecscad	The five alternatives described above are so-called “radio buttons”, meaning that if you select one of them, the previously selected one will be unselected. The **Install SOLO ecscad** alternative is however separately selectable. That means that you can specify whether Solo ecscad should be installed or not, regardless of which cadett ELSA product you have selected. Please note however, that you cannot use Solo ecscad in combination with cadett ELSA View and Start.

Please note that if you would select for example the *cadett ELSA Professional*, even though you have only bought the *cadett ELSA Basic*, the program will start as a *cadett ELSA Basic* anyway. If you do not have a license support for the selection you have made, an automatic selection of the "best available" alternative will be made. The installation will run without errors, but you cannot start the program without a license!

Please also note that you can install Solo ecscad even if you do not have a license for it. In that case, you will not be able to use it.

3.12 Possible problem when renaming existing directory

If you are updating an existing installation by making a new installation in the same directory as the old installation – which is generally a good idea – a problem might occur when the old directory is renamed to make room for the new installation and to create a backup in one single operation.

The renaming of the existing directory – if one exists – may fail. If that happens, the message shown below in Figure 23 below will be displayed.

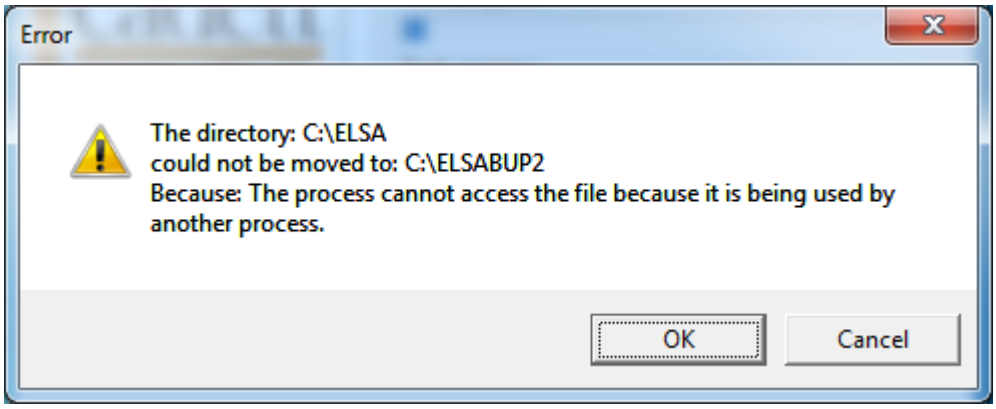

Figure 23: Error message displayed if renaming existing directory fails.

If so, it is in most cases not necessary to abort the installation. If you can find the reason for the problem and solve it, you can simply click the **OK** button afterwards. The renaming will then be retried. If successful, the installation procedure will continue as if nothing had happened. If not successful, the message will turn up again, giving you yet another chance to solve the problem.

For local installations, this kind of problem is relatively rare, but it happens from time to time. The most common reason is that a program of some kind is locking one of the files in the cadett ELSA installation. For example Microsoft Excel, Notepad, Windows Explorer, The Command Prompt or similar could have been used to check something in the old installation before the installation was started. If so, simply exit the program in question.

If you fail to find the reason, an effective solution in most cases is to restart your computer.

3.13 The files are copied and the program is registered

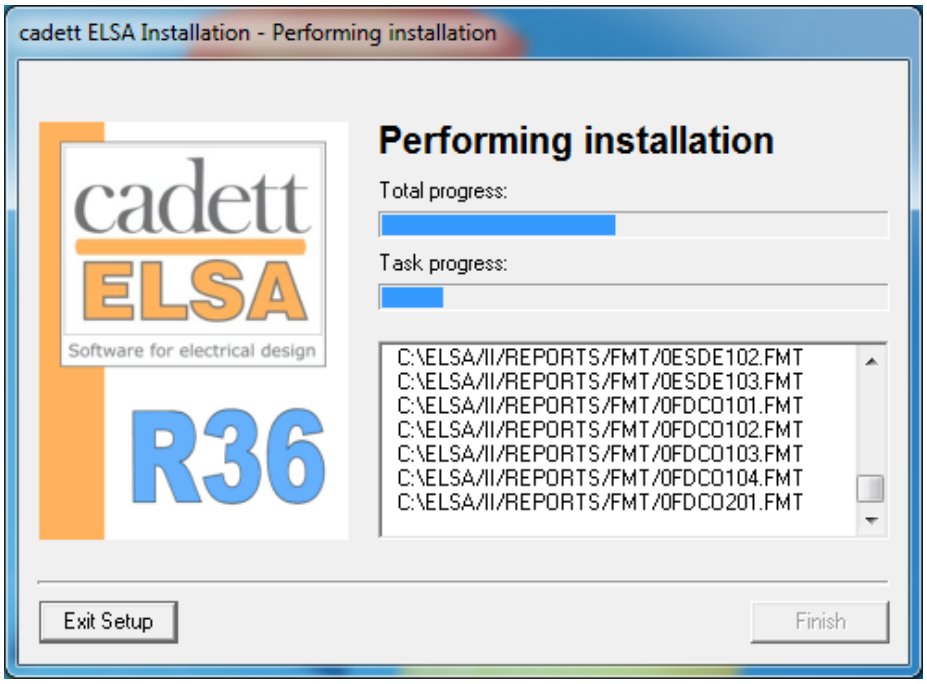

Figure 24: The files are copied.

The installation is performed and the files are copied to the hard disk.

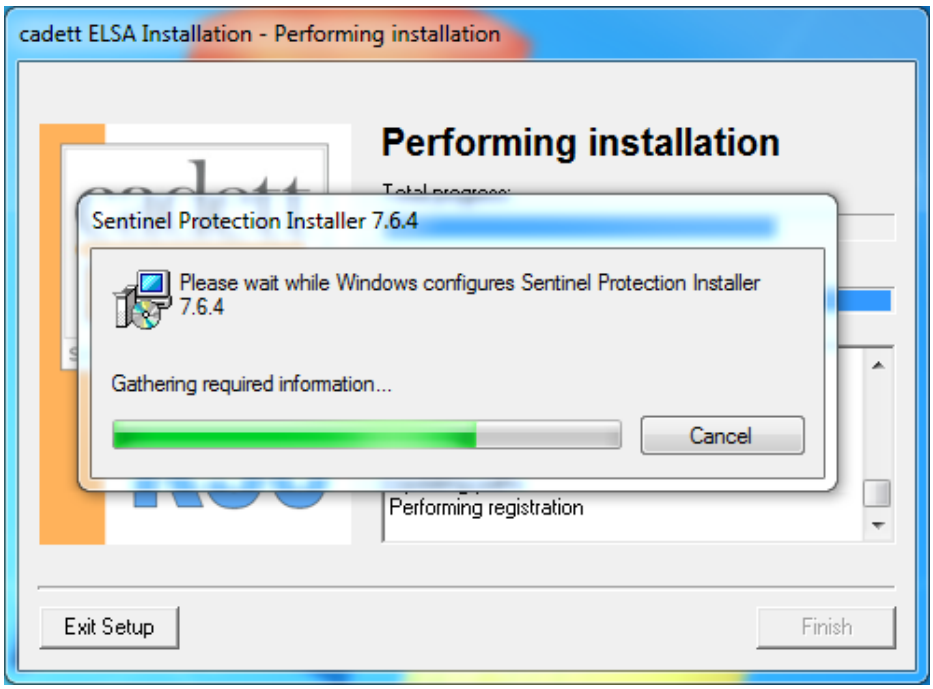

Figure 25: in the end of the installation process, the hardware lock driver is installed.

You can monitor this process – which normally will take several minutes – in the information window of the installation program.

3.14 Workstation installation

cadett ELSA consists of a central installation and a workstation connected to that central installation. In a multiuser network installation, the central installation is located on a server, while the workstation is located on a workstation computer. In a local installation, both the central installation and the workstation are located on the same computer. They will however be located in separate directories. Typically, the central installation might be located in **C:\ELSA**, while the workstation might be located in **C:\ELSAWS0**.

If you are making a local installation of cadett ELSA on a "clean" computer, without any current cadett ELSA installation, the workstation will be created as the final part of the installation process.

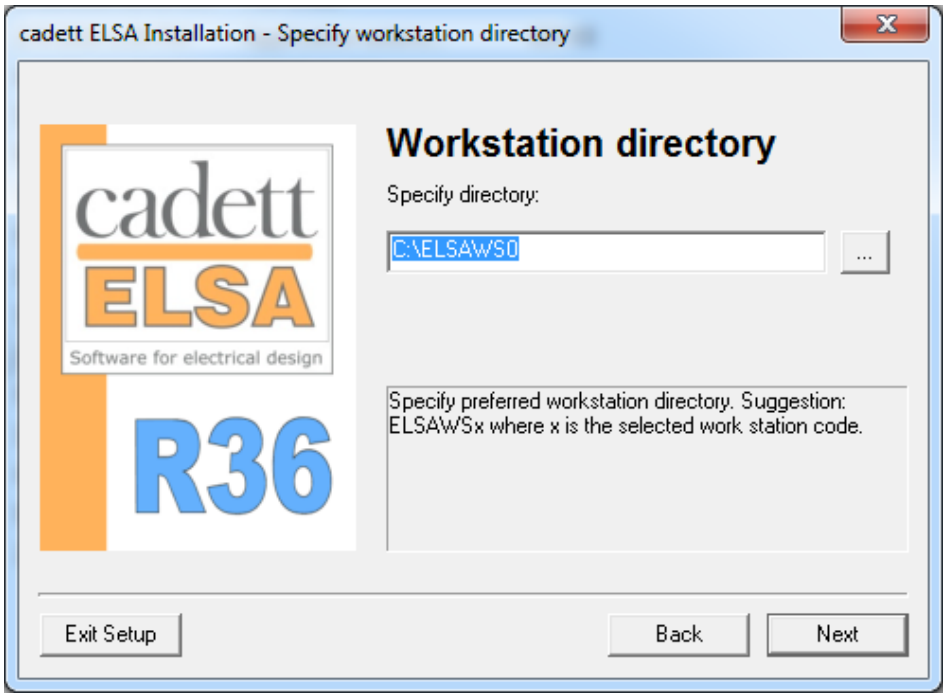

Figure 26: Specification of the workstation directory.

Keeping the default workstation directory name **C:\ELSAWS0** is strongly recommended. Please click **Next** to continue the installation.

Files will be copied to the workstation directory and the drivers for a possible local hardware lock will once again be addressed. Since they are already installed, the procedure will however run much faster than was the case when they were first installed, moments earlier.

3.15 Solo ecscad is installed

If you selected to install Solo ecscad, that will happen now. The installation of Solo ecscad varies dependent on the version. Solo ecscad 2017, which was part of cadett ELSA R37, was installed in silent mode where the details were replaced with a simplified information box with information of Solo ecscad and cadett ELSA in general. Solo ecscad 2019, which is part of cadett ELSA R38, is installed in visible mode, with the details of the installation presented directly on the screen.

You can find more details about the installation of Solo ecscad in section 8.2, page 111.

Please note that the Solo ecscad installation is extensive and will take a relatively long time, longer than other parts of the workstation installation.

Figure 27: Solo ecscad is being installed. This will take some time!

3.16 The installation is completed

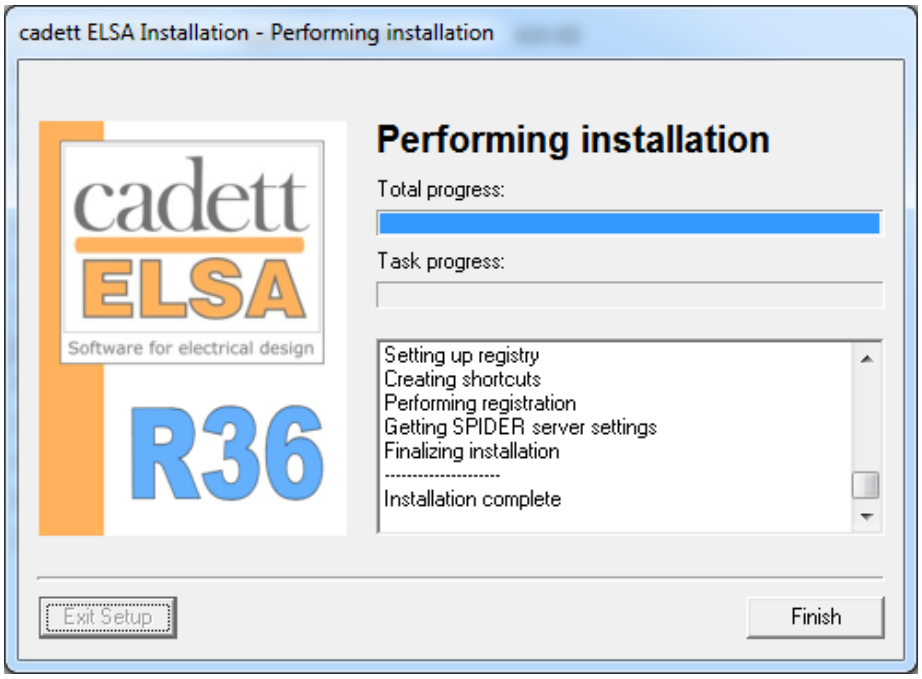

Figure 28: The installation is completed.

The **Finish** button, which has been grayed out during the entire installation process, will suddenly be available. In the information window, you will see that the installation is ready.

Click the **Finish** button. The local installation is now completed.

3.17 Connect hardware lock

To be able to run cadett ELSA, a hardware-lock of either network or local type is necessary. This lock must be connected and the necessary drivers must be installed before you can proceed to run the program.

When a conventional local installation is made, the necessary drivers for a local lock are automatically installed during the main installation. This means that during normal circumstances you will not have to do anything else than connecting the hardware-lock to the computer on which you have installed the program.

The appropriate time to connect the lock is now.

Figure 29: The hardware lock is connected to a USB port.

A detailed description of possible hardware-lock installation problems and solutions, including server based locks, is found in chapter 9, beginning on page 138.

3.18 Starting cadett ELSA

You start cadett ELSA either by double-clicking the shortcut on your desktop or with the **Start-menu / Program / cadett ELSA / cadett ELSA (C) WS[0]**.

Please note!
In case of start difficulties, please note what was said about hardware-locks at the end of the section above!

Figure 30: Shortcut.

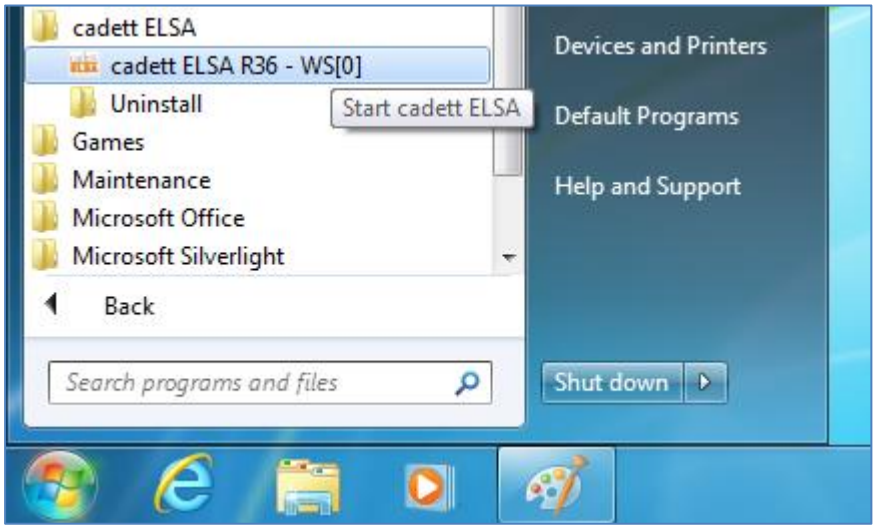

Figure 31: cadett ELSA in the Start Menu. The appearance differs depending on operating system and settings. The picture above is from Windows 7.

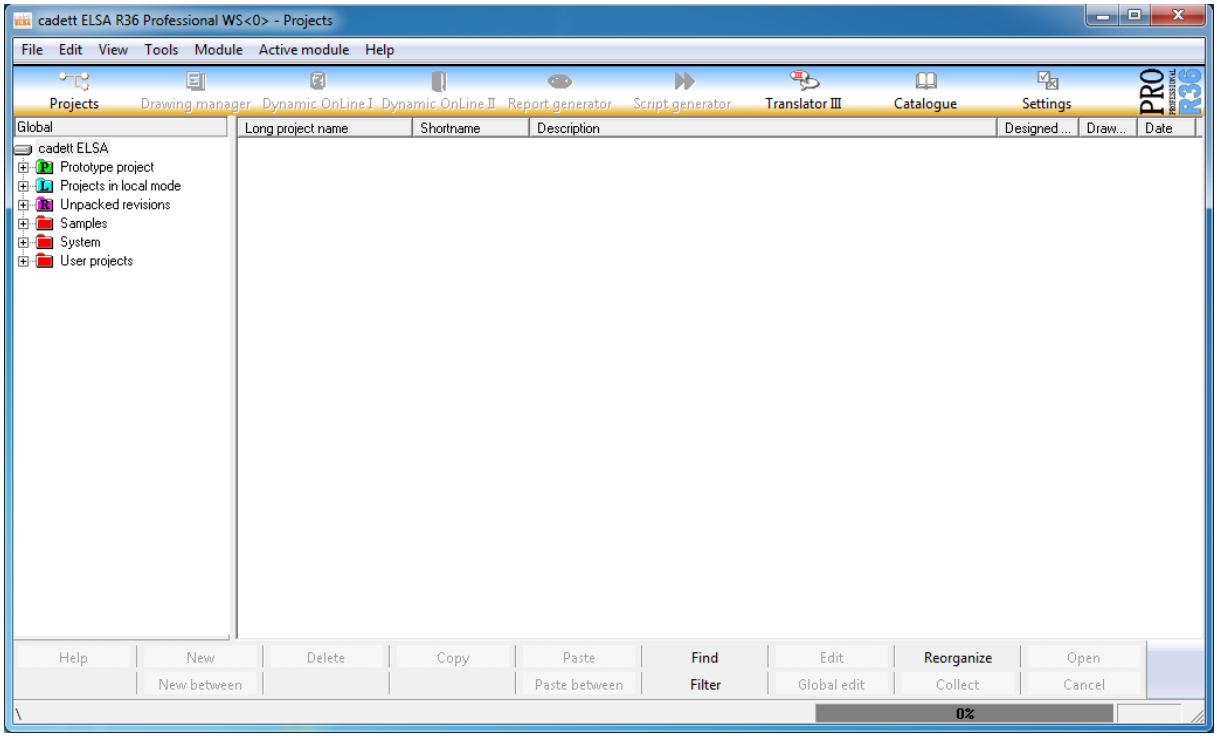

Figure 32: cadett ELSA started after a completed installation.

3.19 Configurations

When starting cadett ELSA for the first time after installation, a few configurations might need some attention.

In the **Tools** pull-down menu, please select **Alternatives (settings)…**

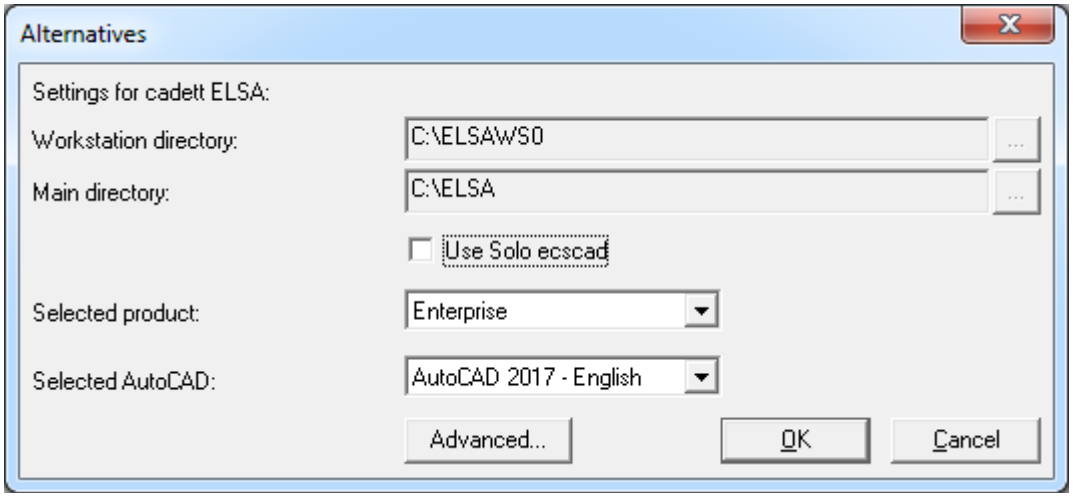

Figure 33: The "Alternatives" dialogue box.

There are two main options when it comes to which kind of AutoCAD to use with cadett ELSA. Either you have a separate license for AutoCAD, AutoCAD Electrical or a similar variant of AutoCAD, or you buy cadett ELSA in a Solo version, where an embedded CAD Engine is included. One example of such an embedded CAD Engine is the Solo ecscad 2019, which is part of cadett ELSA R38 Solo.

- If you are going to use the embedded Solo ecscad, please check **Use Solo ecscad**.
- If you are going to use a separate AutoCAD or similar, please uncheck **Use Solo ecscad**.

In the **Selected AutoCAD** field, you can then select which AutoCAD to use. Only AutoCAD versions that are installed and ready to use on your computer and which are supported by your version of cadett ELSA are shown in the drop-down list used for selection. It is also possible to select **None**, which means that no CAD Engine at all is used. For cadett ELSA View, that is for example a logical choice, since that product does not support AutoCAD.

A manual alternative is available but it should not be used under normal circumstances.

If the AutoCAD that you want to use, is not available in the drop-down list, please shut down cadett ELSA, start the desired AutoCAD separately, shut it down, start cadett ELSA again and re-open this dialogue box. If it is supported, the desired AutoCAD will then be available in the drop-down list.

> Technical note
> cadett ELSA examines available AutoCAD information in the registry to find out which AutoCAD versions are available. An AutoCAD program that has never been started lacks complete registry information and is therefore not available for selection. That is the background for the described procedure above.

Finally, there might be reasons to take an extra look at the settings that are made under the **Advanced…** button. For local installations, this is however in most cases not necessary.

If you need to access the advanced settings you can read more about them in section 9.1.1, page 139.

3.20 Verify that the installation is working properly

To verify that the installation that you have made is working properly, at least in the most basic way, you can do the following test:

- Restart the computer.
- Login as the user who is going to work with cadett ELSA on this computer.
- Start cadett ELSA.
- Activate the **Catalogue**.
- Select a demonstration Catalogue, like **DEM385**.
- Check that the content of the selected Catalogue is displayed.
- Activate the **Project** module.
- Open a demonstration project, for example **Demo English IEC1082 simple i.d.** located under **Samples / IEC1082**.
- Activate the **Drawing Manager**.
- Select one of the existing drawing sheets in the project, preferably one of the circuit diagrams.
- Click the **Open** button in the toolbar.
- Check that AutoCAD is starting and that the selected sheet is opened.
- Check that the ribbon menus are displayed.
- Double-click one of the symbols.
- Check that an OnLine dialogue box is displayed.
- In the **Tools** tab of the ribbon menu, in the ***Dynamic OnLine I*** panel, please select the **Device list…** command.
- Check that a device list is displayed.

If no problems occur when going through these steps, it is fair to say that cadett ELSA is indeed working on this computer.

3.21 Additional actions

Additionally, depending on individual requirements, configurations for printing and PDF generation can be made.

Printer configurations for old style conventional printers (which print on paper) are made in AutoCAD.

To be able to create PDF files, which could contain hyperlinks and bookmarks and be searchable, a free software called GhostScript must be installed. Two virtual printers must also be configured in AutoCAD. All details are described in section 12, page 182.

3.22 Start using cadett ELSA

It is then time to start exploring cadett ELSA. If you are a new user, the *cadett ELSA Tutorial* will give you a good introduction.

4 Server installation

This description covers a server installation for multiple conventional workstations with common data like symbol libraries, catalogues and projects, where cadett ELSA is used as a multi-user system. The workstations must be connected to the server in a fast Local Area Network (LAN).

Please note that you must have full administrative rights to the server as well as to the workstations to be able to perform the installation. You must also be able to access the console of the server directly, by remote desktop or by other means.

If the installation that you are doing is an update of cadett ELSA, meaning that you already have an old version of cadett ELSA running which you now will update to a newer version, please first check that the version of AutoCAD that you have installed on your workstations is supported by the new version of cadett ELSA. If not, you must install a newer supported version of AutoCAD on your workstations to be able to continue using cadett ELSA.

The examples showed below are from an installation on Windows Server 2012 R2. If you are installing on another supported Windows Server Operating System, the operations and the looks might differ slightly, but the main procedures will still be the same.

4.1 Download the installation file and place it on the server

The installation file is downloaded from cadett's homepage. Old-style CD's or DVD's are no longer used.

The address to cadett's homepage is http://www.cadett.com.

To be able to access the download area of the homepage, you need to login. To login you need a username and a password. If you do not have those, you can use the **Password request** feature of the homepage to get them. If you fail to do this, please contact cadett directly to get the appropriate assistance needed.

The installation file is one single big EXE file, named after the particular version and revision of cadett ELSA that you have downloaded. You can place this file anywhere you like on the server on which you intend to install the software, like in the **Downloads** folder, on the **Desktop** or in any other directory of your choice.

Please note that there might be more than one variant of the installation file available for one particular version/revision of cadett ELSA. Typically, you might find one small compact file and one large complete file. The differences for each version are described in the file description on the homepage. For cadett ELSA R37 and later, the main difference is that one variant includes Solo ecscad and the other variant does not. For other versions, there might be other differences. There are also some versions with only one available installation file.

Please make sure that you download an installation file that meet your own needs!

The server installation is always performed directly on the server, with either physical presence or using remote desktop.

Please ensure that the installation file is available directly on the server, as described above. If it is not, please copy it to the server.

4.2 Start the installation

To be able to run the installation, you need administrator privileges, either directly or through elevation, in the ordinary Microsoft Windows fashion. (Elevation means that the user is elevated to an administrator with the accompanying privileges).

To start the installation procedure, please double-click the installation file.

With some versions of cadett ELSA, an additional unpacking will take place before the cadett ELSA installer starts. With other versions, that is not needed. In both cases, the installer will eventually start, displaying a dialogue box like the one shown below.

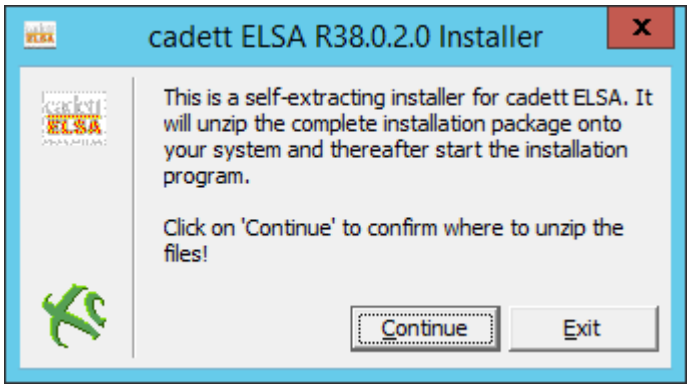

Figure 34: The Installer presents itself.

After you have confirmed a possible elevation and if necessary provided the necessary account information, a dialogue box will be presented that informs you about the extraction operation that will be performed as the next step.

Please click the **Continue** button.

Figure 35: The License Agreement is displayed for your confirmation.

Next, the License Agreement will be presented. Please make sure to read all paragraphs carefully and to check all details with your lawyers, before you click the **Agree** button, to sign the agreement.

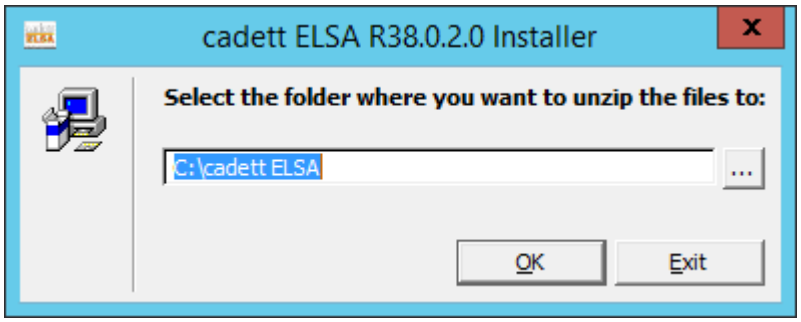

Figure 36: A directory (folder) must be specified to place the installation files in.

The installation files will be extracted to a directory (folder) of your own choice.

The default directory is **C:\cadett ELSA**. If that is ok with you, you can simply click the **OK** button. If you prefer another directory name, you can either type the name of it, or select an existing directory using the browse button to the right.

When you are satisfied with the directory name, please click the **OK** button.

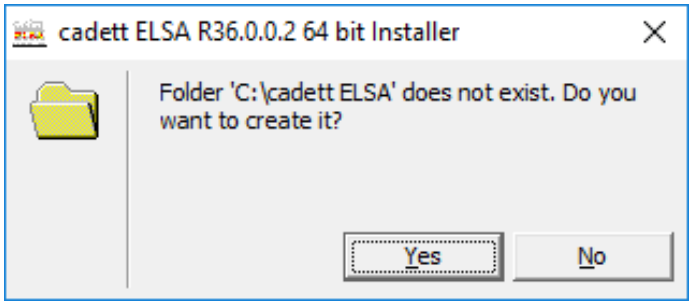

Figure 37: The creation of the directory must be confirmed if it does not already exist.

If the directory that you have specified does not yet exist, a dialogue box will be presented with a question whether you would like to create it or not.

Please click the **Yes** button to create the directory.

The installation package will then be unzipped in the directory that you have specified.

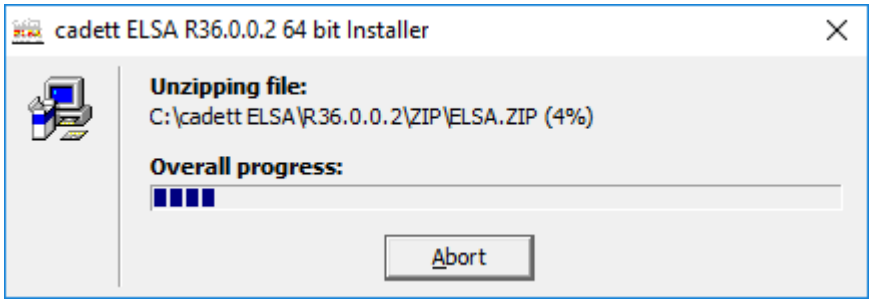

Figure 38: The files are unzipped into the directory of your choice.

A subdirectory for the specific version and revision of cadett ELSA that you are currently installing will be created and the installation files will be placed there.

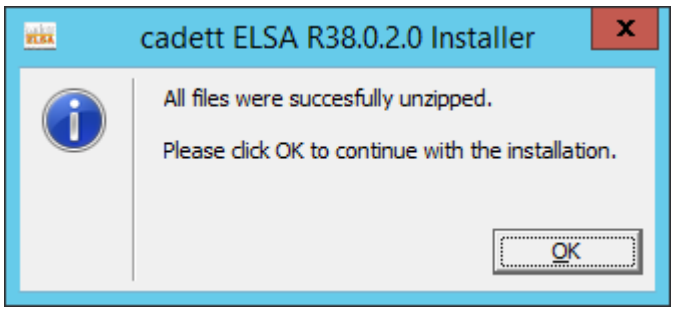

Figure 39: The unzipping is ready and the installation itself will follow.

When the unpacking is ready, a dialogue box will inform you of that.

Please click the **OK** button to start the installation.

Figure 40: The installation program starts.

The installation program will then start and present a dialogue box.

Technical note
If, for some reason, you will need to restart the installation, you do not need to run through the unpacking again. You can manually start the installation from the unpacked files. That is done by double-clicking the **SETUP.EXE**, which is found here:

C:\<your selected unpack folder> \<current version of cadett ELSA being installed>\INSTALLER

Example:

C:\cadett ELSA\R38.0.2.0\INSTALLER\SETUP.EXE

When the cadett ELSA Installation dialogue appears, click **Next**!

4.3 Language

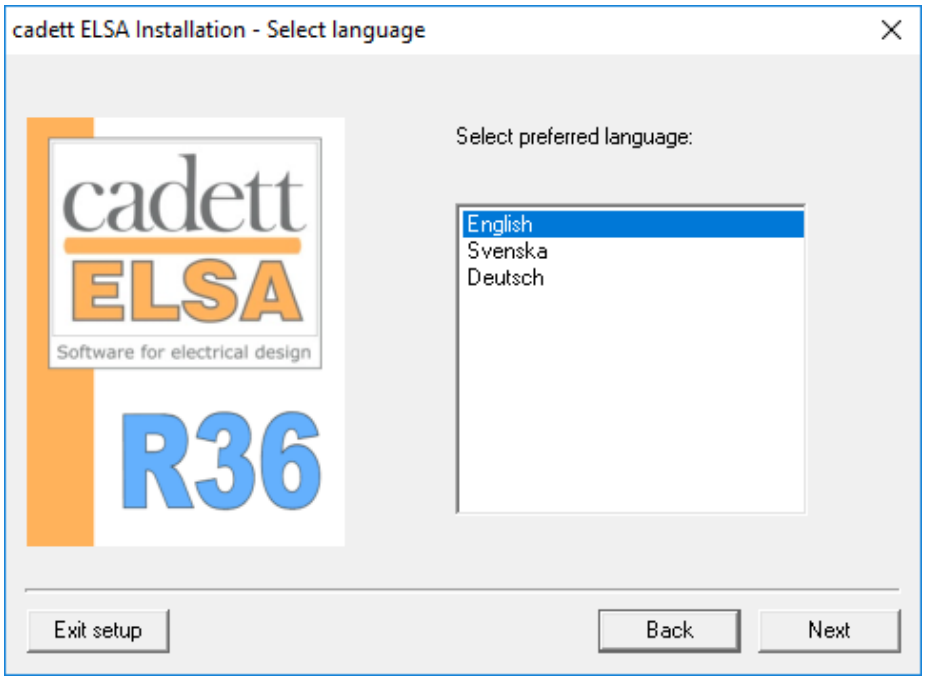

Figure 41: Language selection, in this case English.

Select the preferred language. This installation guide assumes **English**.

As you can see in the figure above, you can as an alternative install in either German or Swedish. Please note that you can change the language setting separately and independently for each workstation. This means that it is possible to use different languages on different workstations at the same time on the very same network installation of cadett ELSA.

The language that you select here will control:

- the language that the installation procedure itself will use, and
- the group names for project samples and system projects.

Everything else is controlled by the language setting done on the workstations.

4.4 Type of installation

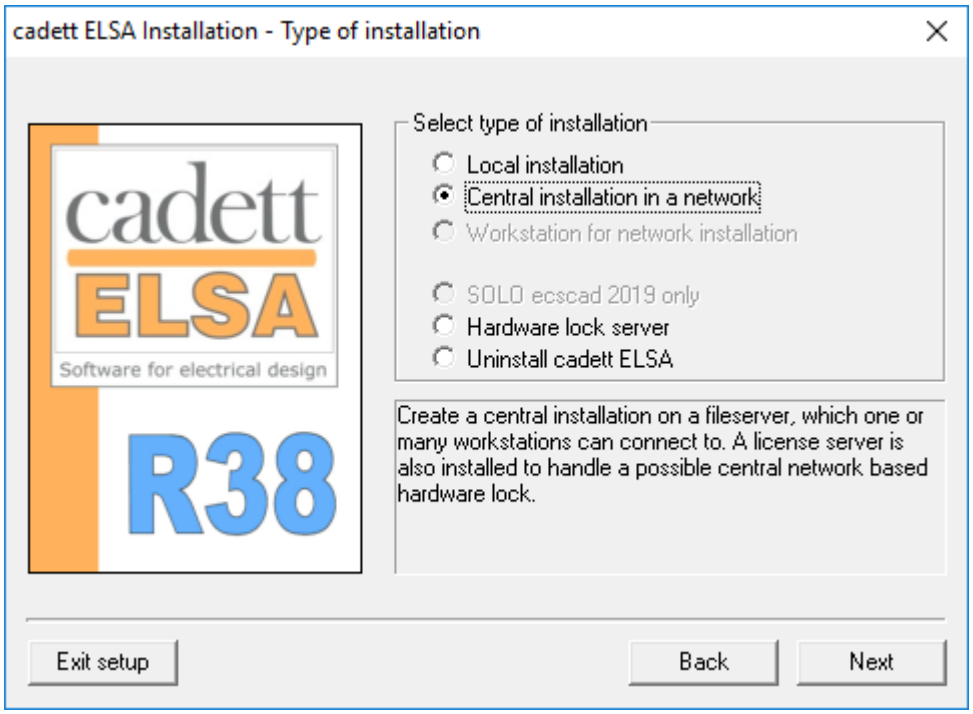

Figure 42: Selection of installation type. In this case, a "Central installation in a network" is selected.

Select type of installation. Then click **Next**.

This section covers a **Central installation in a network** only. Nothing else!

4.5 Possible warnings caused by previous installation

When proceeding after the type of installation has been selected, an additional dialogue will be displayed if an installation of cadett ELSA already exists on the same server.

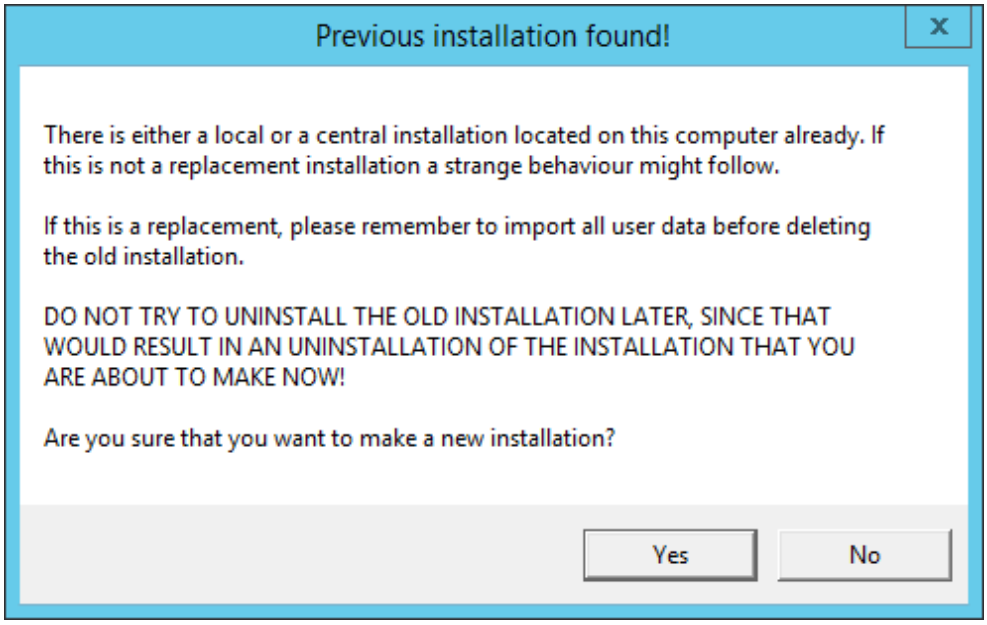

Figure 43: This warning is issued if a version of cadett ELSA is already installed on the server.

The reason for the message is that it is not possible to have multiple installations of cadett ELSA running on the same server at the same time.

When creating a new cadett ELSA network installation, any old installation on the same server will stop working.

If you are updating an existing installation of cadett ELSA, this is of course perfectly normal and nothing to worry about.

After confirming the warning, another one may appear, if an installation of cadett ELSA already exists on the server.

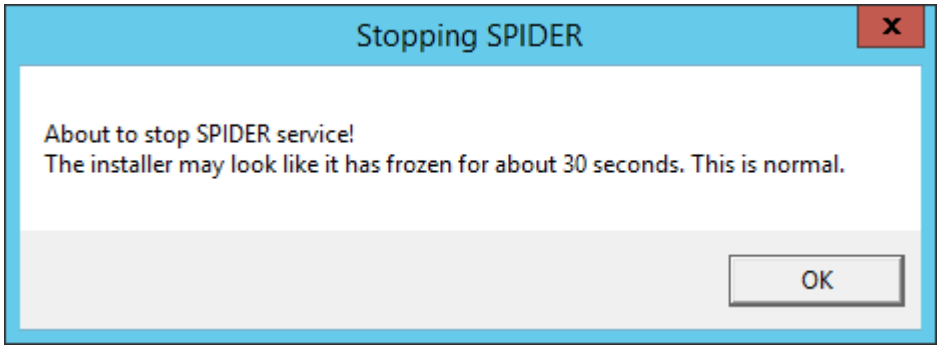

Figure 44: Message informing that the Spider service will be stopped.

That is a message telling you that the Spider service will be stopped. To be able to replace an existing installation, no files in it can be in use. Therefore the Spider database server service must be stopped.

No actions are required because of this information. When applicable, simply confirm and continue with the installation.

4.6 Main directory and mapped drive

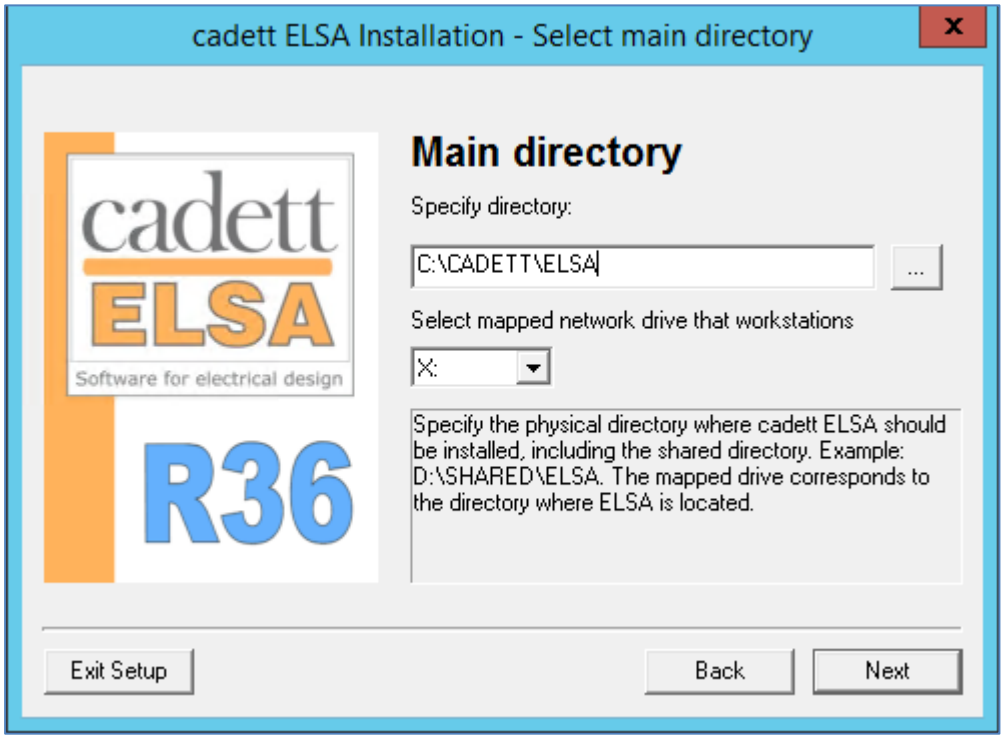

Figure 45: Specification of the cadett ELSA main directory.

In the next step of the installation, you specify the physical main directory of cadett ELSA and the mapped drive letter used on the workstations.

Please note that the physical directory where cadett ELSA will be located is not identical with the path that the workstations will use. This is because the workstations access cadett ELSA using a drive that is mapped to a shared directory on the server.

You will therefore now specify both the physical directory and the drive letter that will be used.

Example:

From the workstation's point of view cadett ELSA is located in

X:\ELSA

X: on the workstations represents the directory

C:\CADETT

on the server.

The directory **C:\CADETT** on the server is shared. On the workstations it is mapped as **X:**.

The physical directory in which cadett ELSA hence should be installed is

C:\CADETT\ELSA

The mapped drive letter for the workstations is

X:

It is possible to make a free selection of directory name for the cadett ELSA main directory (**ELSA** in the example above) but with the following restrictions:

- The directory from the workstation's point of view must be located in a root (for example **X:**).

- The directory name must follow the DOS83 convention, which means that it cannot contain more than 8 characters, no spaces and it may only contain the characters A–Z, 0–9, _ and -.

The directory name **ELSA** is recommended. There are no reasons not to follow that recommendation. There are also good reasons not to change it.

> Remark
> The shared directory that represents the root in which the cadett ELSA main directory ELSA is located – **C:\CADETT** in the example – does not need a name that follows the DOS83 convention. A name like "**cadett ELSA**" would work perfectly.

If the selected drive letter is not mapped on the server in the same manner as on the workstations, the installation program will automatically create a so-called "substitute". This means that the command SUBST is used to create a "virtual drive" connected to the directory that is shared with the workstations. In this way, the installation of cadett ELSA "looks the same", when viewed both from the server and from the workstations.

Please note that all workstations must use exactly the same drive mapping, with the same drive letter. You must therefore select a drive letter that does not conflict with anything else for all workstations.

If the directory that you specify for sharing (C:\CADETT in the example above) does not exist, it will be automatically created by the installation program. The sharing of it on the server and the mapping of it on the workstations has to be done manually however. The installation program will not help you with that.

If the specified directory does not exist, a message will be displayed to inform you of that, before it is created.

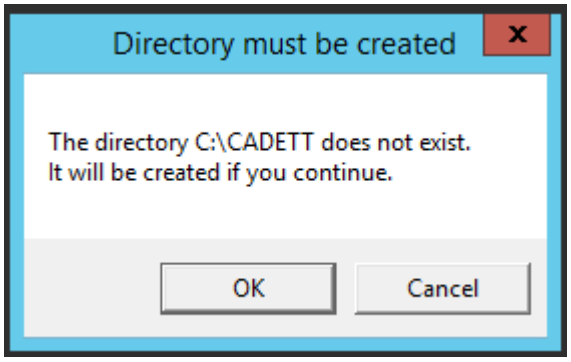

Figure 46: Message shown if directory does not exist.

If you are updating an existing installation by installing in the same directory as the old installation was located in, it is wise to select the directory, not typing it. In that way you ensure you are really using the existing directory, which is important in order to simplify the update procedure.

If the directory that you specify, either by selecting it or by typing it, in fact does exist, a warning will be issued, as shown in Figure 47 below.

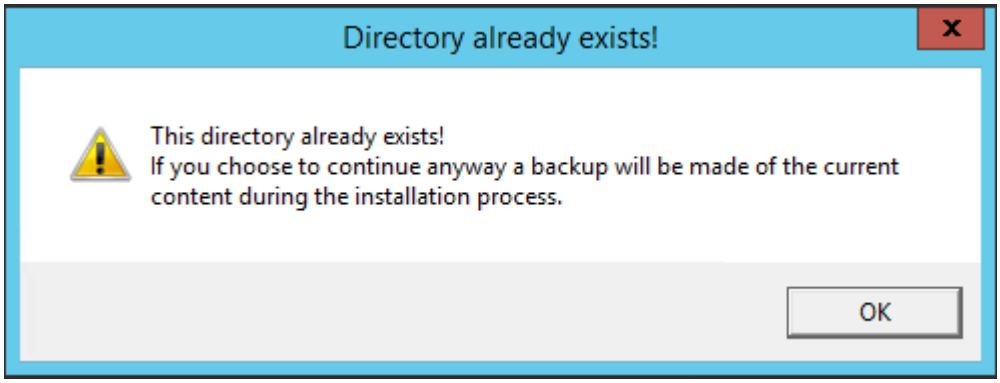

Figure 47: Warning issued if the specified main directory already exists.

If you are updating an existing installation this is perfectly normal.

The text informs you that the main directory of the old installation will be renamed to create a backup, so that the new installation can be placed in a new directory with the same name as was used for the main directory of the old installation.

4.7 Project directory for project samples

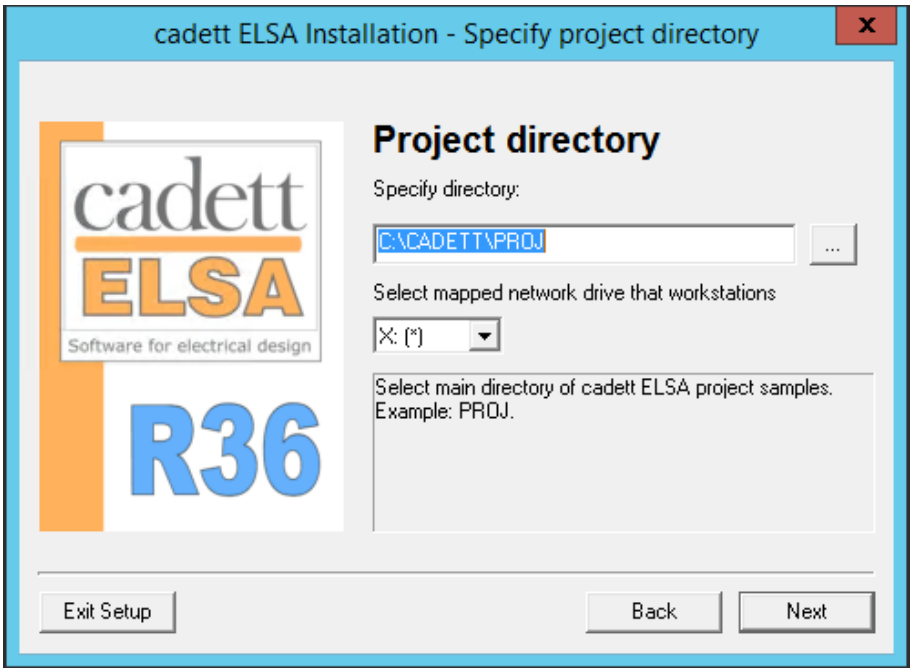

Figure 48: Specification of project directory and mapped drive.

Specify the physical project directory for project samples and the mapped drive letter that should be used for it on the workstations.

Please note that this drive can be the same as for the cadett ELSA main directory, but it can also be different.

What you should specify here is a physical directory in which project samples of cadett ELSA will be located. This directory will be seen in a different way from the workstations perspective.

Example

Looking at it from the workstations, the project directory for the project samples should be:

X:\PROJ.

X: on the workstations represents the directory

C:\CADETT

on the server.

This directory is shared and mapped as **X:** on the workstations.

The physical directory in which the project samples hence should be installed is

C:\CADETT\PROJ

The mapped drive letter for the workstations is

X:.

It is possible to make a free choice of the directory name for the cadett ELSA project samples (**PROJ** in the example above) with the following restrictions:

- The directory from the workstations' point of view must be located in a root (for example **X:**).
- The directory name must follow the DOS83 convention, which means that it cannot contain more than 8 characters, no spaces must be used and it may only contain the characters A–Z, 0–9, _ and -.

The directory name **PROJ** is recommended.

Remark
The shared directory that represents the root in which the project directory for the cadett ELSA project samples are located – **C:\CADETT** in the example – does not need to have a name that follows the DOS83 convention. A name like "**cadett ELSA**" would work just fine too.

If the selected drive letter is not already mapped on the server in the same way as on the workstations, for example because you have selected a different drive letter than for the cadett ELSA main directory, the installation program will perform a so-called "substitute". This means that the command **SUBST** is used to create a "virtual drive" connected to the directory shared with the workstations. This way, the project directory "looks the same" when viewed both from both the server and the workstations.

4.7.1 Project data on a separate server

Placing the projects on another server than where cadett ELSA itself is installed is not a good idea. There are a number of severe disadvantages with such a solution. To be able to fully utilize all features and all power of cadett ELSA, it is therefore strongly recommended that the software and the project data are placed on the same server.

4.8 Spider

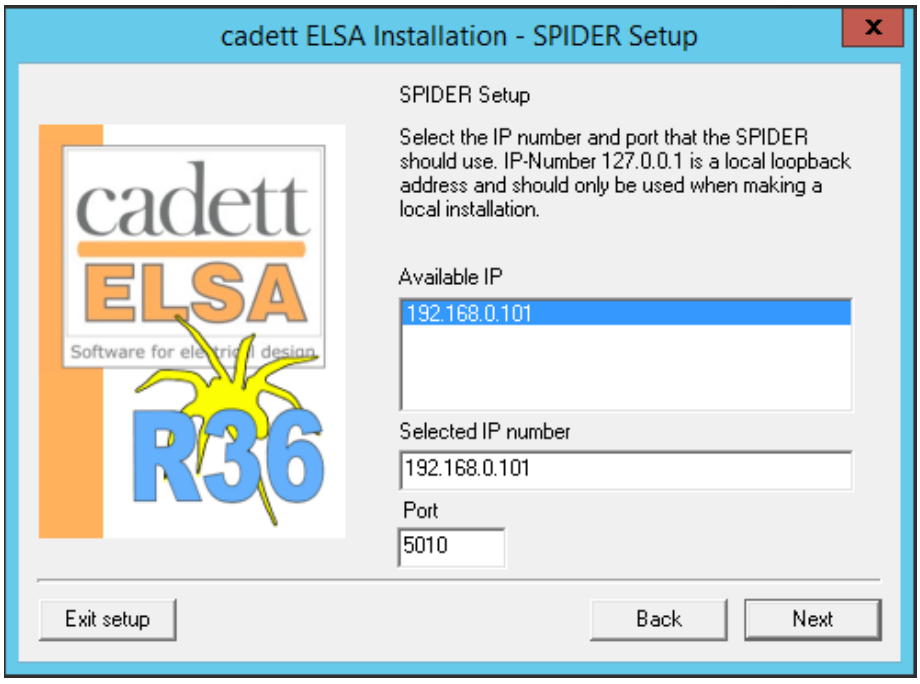

Figure 49: Settings for the Spider database server.

The next step is to set the configuration information for ***Spider***.

Spider is the database server that manages all catalogue data and some other common data storage. Since this is a network installation, the ***Spider*** will execute on the server and all workstations will communicate with it over the network.

The IP number you should select is the server's own IP address. In most cases, there is only one alternative to select from, which is the correct one!

Please note!
Please note that cadett ELSA and *Spider* assumes that TCP/IP is available as a protocol for communication between the server and the workstations in the network. It is through this protocol all communication with the *Spider* takes place. Please also note that cadett ELSA does not support dynamic IP address assignment for the server, i.e. the computer where *Spider* is installed. If you use dynamic IP address assignment (DHCP), you have to make an exception for the computer used as the cadett ELSA server. It must have a fixed IP address.

If you get *several alternatives* and you are uncertain about which one to select, please *contact your network administrator* for further guidance.

In most cases, you can keep the default **5010** for the port. It is however possible to specify another port if 5010 conflicts with anything else in your network.

If the server is equipped with an active firewall, which is the case normally, the settings of that firewall probably have to be updated to allow the communication between the workstations and the Spider database server. How that is typically done is discussed in section 6.3, page 70.

If *problems* with Spider would occur – i.e. problems with the *Catalogue* – after installation and updating the firewall settings, please *contact your network administrator*. When doing so a few notes about your current Spider settings will probably come in handy for you. The *IP address* and the *port* are equally important for a proper function.

4.9 Possible problem when renaming existing directory

If you are updating an existing installation by making a new installation in the same directory as the old installation – which is generally a good idea – a problem might occur when the old directory is renamed to make room for the new installation and to create a backup in one single operation.

The renaming of an existing directory – if one exists – may fail. If that happens, the message shown below in Figure 50 below will be displayed.

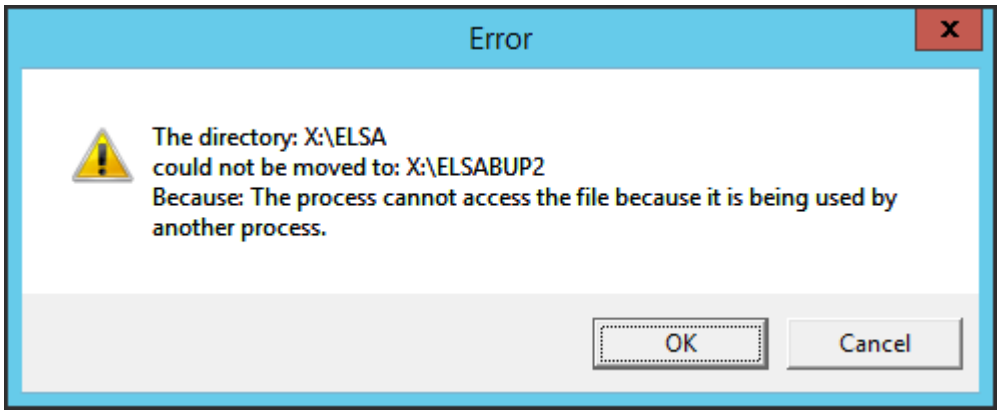

Figure 50: An error message like this is displayed if renaming the existing directory fails.

If so, it is in most cases not necessary to abort the installation. If you can find the reason for the problem and solve it, you can simply click the **OK** button afterwards. The renaming will then be retried. If successful, the installation procedure will continue as if nothing had happened. If not successful, the message will turn up again, giving you yet another chance to solve the problem.

This is a common problem in network installations, and it might be quite difficult to find out what is causing it. In such cases, it will be necessary to use some force to throw out the users that are blocking the renaming, even if you do not know who they are. An easy way of doing that is to remove the share of the directory in which the cadett ELSA main directory is located. When doing so, anybody accessing the installation will be thrown out. The share can then be immediately restored.

If you throw out all users as suggested above and still face the same issue, you are probably stepping on your own toes, meaning that the guilty party is you! The most common reason is that a program of

some kind is locking one of the files in the cadett ELSA installation. For example Microsoft Excel, Notepad, Windows Explorer, The Command Prompt or similar could have been used to check something in the old installation before the installation was started. If so, simply exit the program in question.

4.10 The files are copied and the program is registered

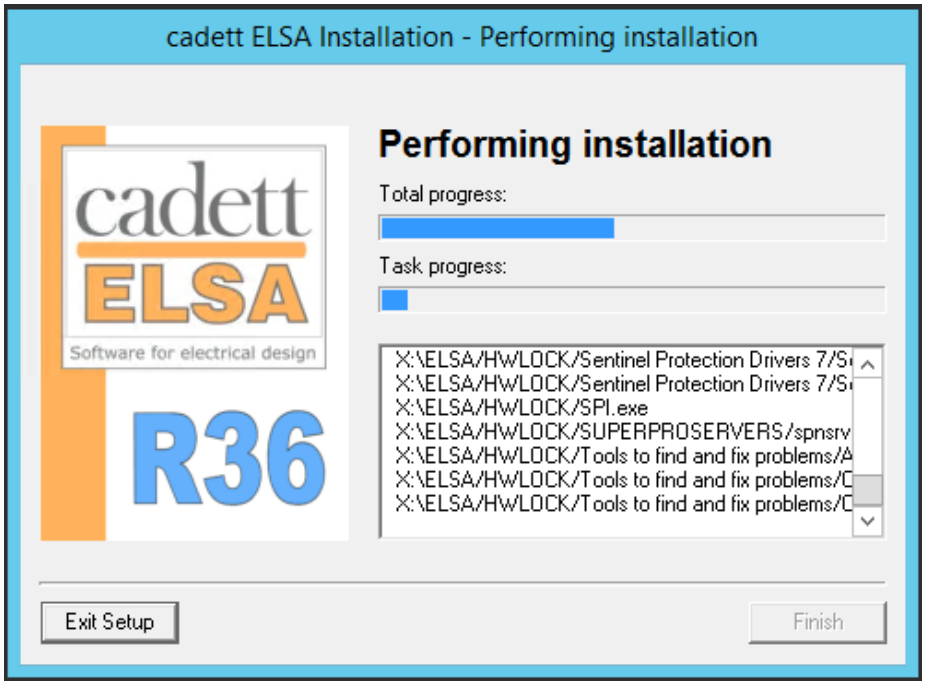

Figure 51: The files are copied.

The installation is performed. The files are copied to the server hard drive.

You can monitor the progress in the information windows of the installation program.

The amount of data copied to the hard drive of the server is quite large. The number of files is also quite big. Typically we are talking of about 15 000 files. For this reason, the installation process often takes a few minutes.

4.11 The server installation is completed

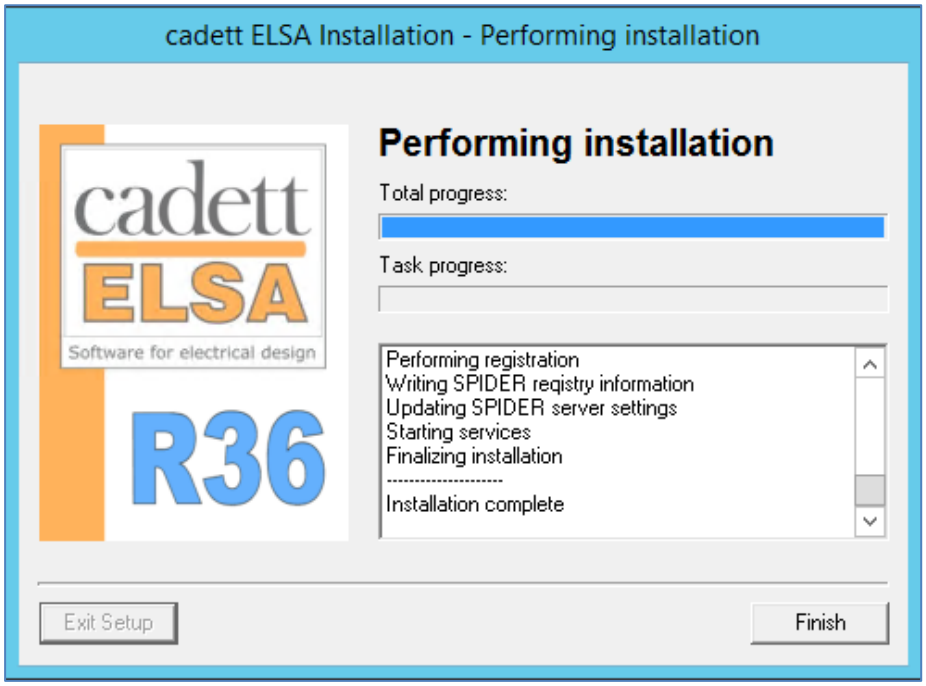

Figure 52: The installation is completed.

The **Finish** button in the lower right corner of the dialogue will be grayed out during the entire installation process, until it is finished. When it however is, the **Finish** button will finally be available for you to click.

Exit the installation by clicking the **Finish** button.

4.12 Remaining steps

Now only four major steps remain:

- Making the appropriate operating system configurations, like sharing the appropriate directory on the server, mapping it on the workstations and establishing the necessary user rights. This is described in chapter 6, page 67.
- When applicable, setting up a Solo ecscad license server. This is described in section 8.3.1, page 119.
- Installing hardware lock (or locks). This is described in chapter 9, page 138.
- Setting up the workstations. This is described in chapter 7, page 82.

5 Installation for thin clients

Installations for thin clients are quite different from conventional network installations using conventional workstation computers.

The thin client concept enables the use of a Wide Area network – typically the Internet – for communication between server and workstation. This is made possible by far lower bandwidth requirement than otherwise.

- With conventional workstation clients, a bandwidth of at least 1000 Mbps is required.
- With thin clients, a bandwidth of only 10 Mbps is enough. The bandwidth requirement is in other words reduced with 99 %! The requirements for the workstations are also much lower. Instead of requiring a powerful workstation computer, any PC will do.

With thin clients, it is made possible to work with cadett ELSA in your multi-user network environment, regardless of where you are located physically. As long as you have access to a decent Internet connection, you are fine!

The software will be executed on a Citrix server instead of on a workstation. The workstation will act as a terminal to the Citrix server. This is similar to a Remote Desktop connection, but with far better performance.

If the maximum number of concurrent users is 4 - 5 or lower, the Citrix server and the cadett ELSA server may be the same.

If the maximum number of concurrent users exceeds that number, the cadett ELSA server must be separated and more than one Citrix server used, so that the number of concurrent users per Citrix server is limited to about 4 - 5.

If you for example have 8 users, you would typically have one cadett ELSA server and two Citrix servers, limiting the maximum number of concurrent cadett ELSA users per Citrix server to four.

As long as the maximum number of concurrent users is relatively low, let us say in the single digit range, it might be perfectly fine to assign each user to a specific Citrix server.

On the other hand, if the maximum number of concurrent users is relatively high, let us say 10 or more, a solution with so-called roaming profiles might be better. In that case, the load will automatically be distributed among available Citrix servers, and each user might end up in different Citrix servers from work session to work session, depending on current loads.

In a conventional network environment, each user will have a fixed workstation code, which is selected at installation. When using thin clients, so-called dynamic workstations will instead be used. For dynamic workstations, the workstation code is determined at start-up. As long as the previously used workstation code is free, it will be used again. If it for some reason is not, another workstation code will be assigned. This arrangement enables the possibility to have more than 58 defined users, which

is otherwise the maximum. The maximum number of concurrent users on a single cadett ELSA server is however still 58.

Please note that all servers referred to here in most cases will be virtual. In medium and large size installations where multiple servers are involved, it is extremely important to have a superfast connection between the servers. If they run on separate physical host machines, they must be able to communicate with at least 10 000 Mbps (10 Gbps).

The installation instruction below covers all kinds of thin client installations:

1. Small sized installations where the Citrix server and the cadett ELSA server are the same.

2. Medium sized installations where the cadett ELSA server is separated from the Citrix servers and where roaming profiles are not used.

3. Large sized installations where the cadett ELSA server is separated from the Citrix servers where roaming profiles are used.

5.1 Server requirements

The server requirements differ depending on the number of concurrent users and the type of installation.

5.1.1 Small sized installation (max 4 concurrent users)

For small installations, one single preferably virtual Citrix server is in most cases the best solution. That server acts both as cadett ELSA server and as a Citrix server, which will host the clients.

An installation of this kind can handle a maximum of approximately four concurrent users. The server in question must be very powerful to handle the heavy load where all activities that would normally be handled by a server and four separate workstations are all handled by one single server.

Properly dimensioned, this solution is however extremely effective and can offer a superb user experience, with very good performance.

As a rule of thumb, please calculate 16 GB RAM to start with and at least 8 GB per concurrent user, giving 16 + 4 x 8 = 48 GB RAM.

You need at least two processor kernels for the cadett ELSA server, and at least two per user, giving 2 + 8 = 10 kernels minimum. Practically you could for example have two processors with eight kernels each, giving totally 16 kernels.

The hard disk should be large and extremely fast.

5.1.2 Medium sized installation (typically 5 – 8 concurrent users)

Since the number of concurrent users in this kind of installation exceeds what one Citrix server can handle, two Citrix servers must be used. To make things simple, half the users may be assigned to one Citrix server and the other half to the other. There is therefore no immediate need to use roaming profiles or load balancing.

The cadett ELSA server will be separated from those, and be very similar to a conventional cadett ELSA server.

The cadett ELSA server should have a large and extremely fast hard disk. At least 16 GB RAM and a powerful processor with at least two cores should be used.

For the Citrix servers, a stingy dimensioning would be 4 GB to start with and 4 GB RAM per concurrent user, giving 4 + 4 x 4 = 20 GB minimum for four users. A more generous dimensioning would be 8 GB to start with and 8 GB RAM per concurrent user, giving 8 + 4 x 8 = 40 GB RAM minimum for four users.

The processors for the Citrix servers should of course be of the most powerful kind, with at least two kernels per concurrent user, giving a minimum of eight kernels for four users.

5.1.3 Large sized installations (typically 9 concurrent users or more)

In an installation like this, more than two Citrix servers are needed. To optimize performance, it is a good idea to distribute the load as evenly as possible between available Citrix servers. This is something that Citrix can handle in an elegant fashion with so-called “load balancing”. This means however, that a user may end up in different Citrix servers at different times. Therefore, so-called “roaming profiles” are used, which will make that procedure transparent to the user. The user profile with personal directories like the desktop, My documents and the cadett ELSA workstation directory, will be part of a personal profile that will be automatically copied to the Citrix server that the user happens to login to.

The same dimensioning rules apply to this installation type, as for the previously discussed.

5.2 Installation procedure

The installation of a cadett ELSA thin client solution is made in three major steps:

1. First a **cadett ELSA** server installation is made

2. On each Citrix server, the following steps are gone through:

    a. A so-called “neutral workstation” is created
    b. **AutoCAD** or **Solo ecscad** is installed
    c. **Microsoft Office** is installed if needed (if a need to use Excel is at hand)
    d. **GhostScript** is installed if needed (if a need to create PDF files is at hand)
    e. **Adobe Reader** is installed if needed (if a need to view PDF files is at hand)

3. The users that should be able to run cadett ELSA are defined

5.2.1 cadett ELSA server

The installation is made in the same way as for a conventional cadett ELSA server. Please follow the instruction in chapter 4, page 40.

When the network installation is ready according to that, a manual configuration must be made in an INI file called **DYN_WS.INI** located in the cadett ELSA main directory (X:\ELSA or similar). This INI file enables the use of dynamic workstations. With such you don't have to make separate installations for each user. One installation for all users will do.

When using dynamic workstations, a specific drive letter is used for the workstation directory, making it possible for all users to have exactly the same path to the workstation directory, even if they refer to separate physical directories. Therefore you have to find a drive letter that is free to use for this purpose for all users. It could for example be U: as in the example presented below.

The content of DYN_WS.INI should be as follows (where the actual drive letter may vary depending on current needs):

```
[WORKSTATION]
WS_DRIVE_LETTER=U
```

The drive letter specified is in other words used for workstations as a substitute for the personal profile for each user.

5.2.2 Citrix server

Multiple Citrix servers can be used to host cadett ELSA workstations. For each one of them, you need to follow the steps described below. For small installations, the Citrix server and the cadett ELSA server is one and the same. For medium and large size installations, multiple Citrix servers separated from the cadett ELSA server are used. The installation procedure is however the same.

5.2.2.1 Installation of AutoCAD or Solo ecscad

AutoCAD or Solo ecscad must be installed once on each Citrix server.

If you have a cadett ELSA Solo product, your CAD Engine will be the Solo ecscad. Installation of the Solo ecscad is described in section 8.2, page 111.

If you do not have a cadett ELSA Solo product, your CAD Engine will be the AutoCAD or AutoCAD Electrical. Please note that special circumstances apply for needed optimizations, which is described in section 8.1, page 106 below.

5.2.2.2 Installation of Microsoft Office

Microsoft Office is useful for many purposes. Some features in cadett ELSA uses Microsoft Excel, which is part of Microsoft Office. If you are interested in using those features, like generating Microsoft Excel reports, you need to install a genuine Microsoft Office on all Citrix servers, so that it is accessible for all users.

Please note that it must be a supported version of Microsoft Excel that in turn must support automation. Cloud versions of Office can therefore not be used. The software must be installed and run on the server.

5.2.2.3 Installation of Adobe Reader

Adobe Reader is the original free Adobe viewer for PDF files. It is free of charge and can be downloaded directly from the Internet.

Adobe Reader is the preferred choice of PDF viewing tool.

If you have a need to view your PDF files, Adobe Reader should be installed so that it can be used by all users on the Citrix server.

5.2.2.4 Installation of GhostScript

GhostScript 9.15 is installed in the way described in section 12.1, page 182.

5.2.2.5 Installation of neutral workstation

A so-called neutral cadett ELSA workstation is installed. The neutral workstation installation will make all necessary registrations needed to run cadett ELSA. When a user starts cadett ELSA for the first time, a workstation directory is automatically created with the necessary settings.

When applicable (in medium and large thin client solutions), a drive letter is first mapped to the cadett ELSA server (for example X:). If you are preparing a small thin client solution, no drive mapping will be needed, since a suitable substitute will already be in place.

Thereafter, the installation program is started:

X:\ELSA\INSTALLER\SETUP.EXE

Depending on current security policies, an elevation to administrator might occur. In any case, the installation of the neutral workstation requires administrative privileges.

Figure 53: The installation program hast started.

As shown above in Figure 53, the installation program presents itself. Please continue by clicking **Next**, and then select a suitable language for the installation process, as shown in Figure 54 below.

Figure 54: A suitable language for the installation process is selected.

After the language has been selected, you come to the selection of the type of installation to perform. If everything done prior to the current operation has been correct, only one option should be available, as shown in Figure 55 below.

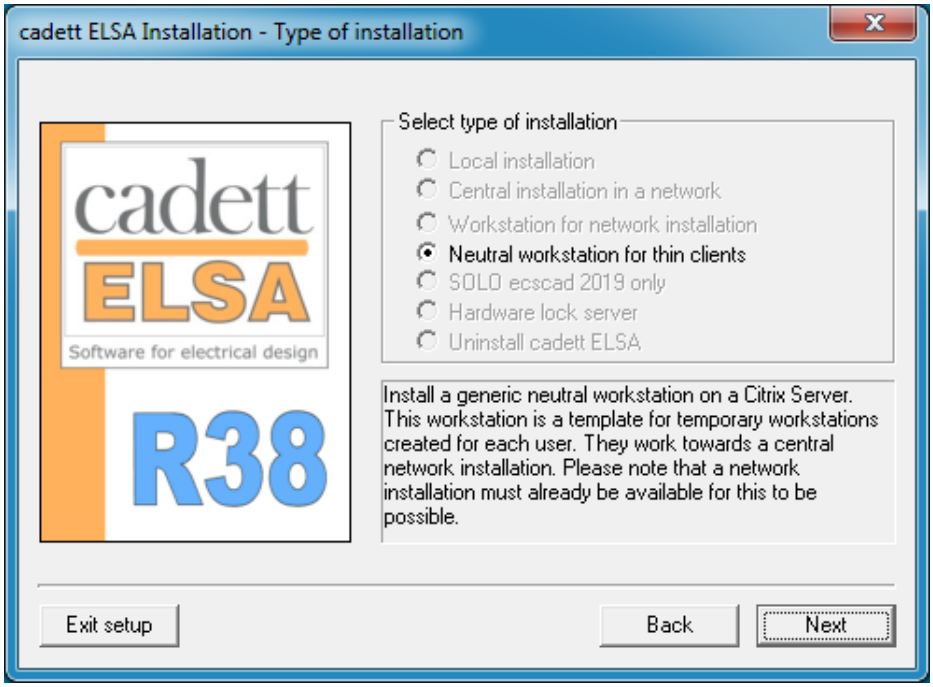

Figure 55: Installing a neutral workstation is the only available option. If that option is not available, you probably have an incorrectly configured DYN_WS.INI.

If **Neutral workstation for thin clients** is not available, something is wrong, and you need to correct the problem before proceeding. The most likely error in that case, is a problem with the configuration in DYN_WS.INI. Please refer to 5.2.1, page 60, if you have ran into that situation.

Figure 56: The main directory of cadett ELSA is selected.

The next step is to identify the main directory of cadett ELSA, as shown above in Figure 56. After you have done that, the installation will run for a little while, as shown below in Figure 57.

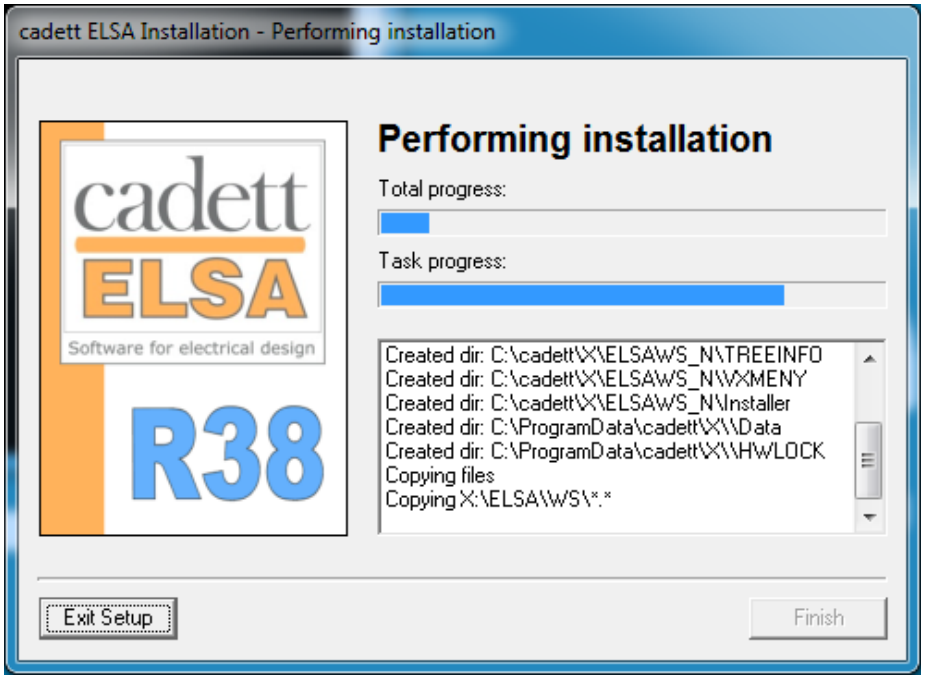

Figure 57: The installation procedure is running.

In the end of the installation process, drivers for hardware lock communication are installed, as shown in Figure 58 below.

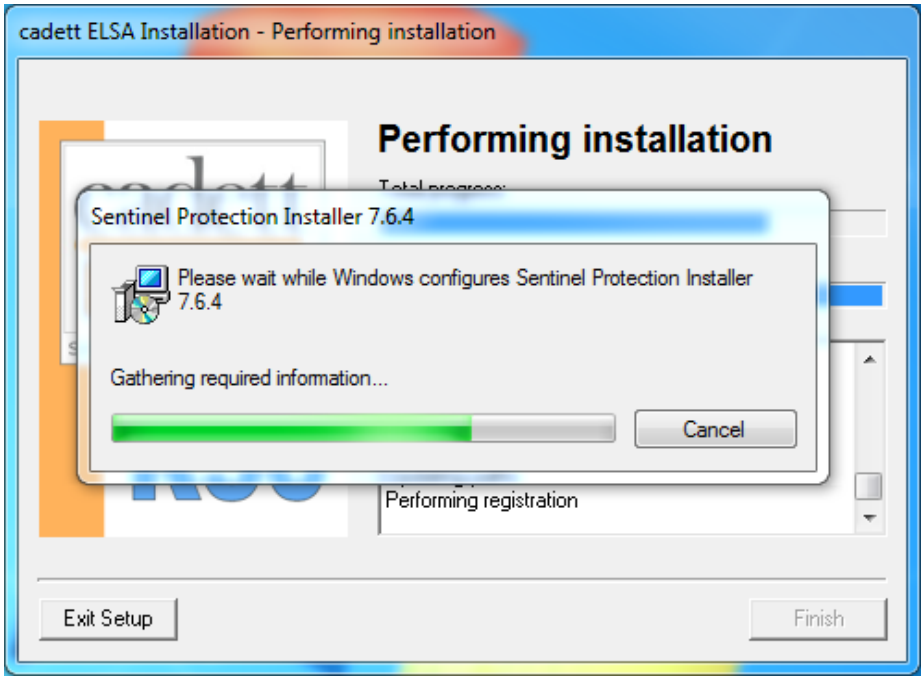

Figure 58: In the end of the installation process, the hardware lock driver is installed.

When everything is in place, the dialogue that is shown below in Figure 59, informs you that the installation is ready.

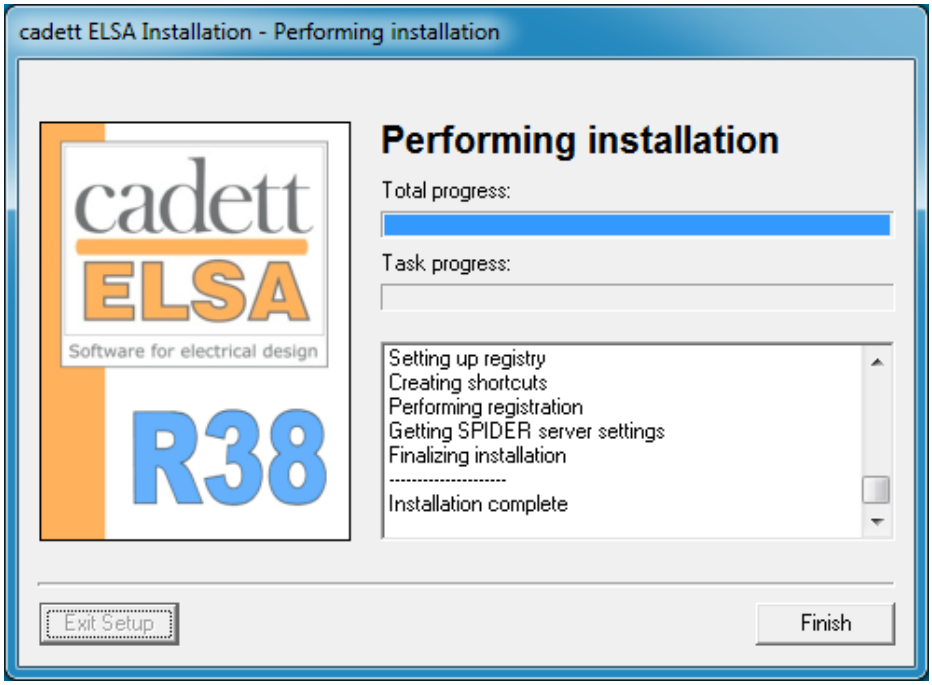

Figure 59: The installation is complete.

Please click **Finish** and then continue to test the installation.

5.2.2.6 cadett ELSA shortcuts

The cadett ELSA desktop shortcut is automatically shared for all cadett ELSA users, since its location is in the following folder:

C:\Users\Public\Desktop

5.2.2.7 Technical details

When using current versions of all files, dynamically allocated workstation codes are automatically separated from fixed workstation codes with the word “DYNAMIC” in the OLDCOMMENT field of STATIONS.DBF. Only workstation codes specifically defined as “dynamic” in that way, will be subject to reuse for other users when needed.

A manual adjustment of STATIONS.DBF might be needed to get all information correct, if old data is present (which can be done using DBFPLUS.EXE or similar).

5.2.2.8 Special circumstances around disabling AutoCAD Infocenter

AutoCAD Infocenter is disabled by editing the registry for each individual user. This means that the applicable registry information is located under “CURRENT USER” in the registry.

6 Operating system configurations

The steps described here differ depending on which operating system versions you are using on the server and on the workstations. Which version of cadett ELSA that you intend to use is also an important factor to determine which configuration measures needs to be taken. The examples shown here are from Windows Server 2012 R2 and Windows 7 workstations.

With other supported operating systems, the procedure will be similar but not identical.

6.1 Obstacles to look out for

A number of possible obstacles can interfere and create problems for network installations. Some of the most common ones are mentioned here.

SMB2 and SMB3

The database engine used by cadett ELSA R37 and earlier supported SMB1 only. SMB2 and SMB3 must therefore be turned off to ensure trouble-free use of the software, if you are using cadett ELSA R37 or older. With cadett ELSA R38 or newer, that restriction is gone.

Firewalls

Firewalls on the server and/or on the workstations may stand in the way of sharing, drive mapping and the TCP/IP communication that is necessary for both Spider database communication and the licensing with a server based hardware lock. Reconfiguring or turning off such firewalls may be necessary.

Anti-virus software

There is no limit to what surprises anti-virus software may cause. The experience says that virtually anything can happen. Please note that operations are affected by anti-virus software both on the server and on the workstations. The situation can worsen when both are active checking the same operations multiple times. Some other known problems created by anti-virus software include poor performance, stability issues and the total loss of all functionality. To avoid and/or reduce such problems, there is a good idea to exclude both the cadett ELSA main directory (typically \ELSA) and the area where your projects are stored, often the project main directory (typically \PROJ), from all runtime anti-virus checks. This should be done both on the server and on the workstations. (cadett ELSA makes its own check of executable files making it unnecessary for anti-virus software to do the same).

The cadett ELSA workstation directory on each workstation (C:\ELSAWSxx or similar) should also be excluded in the same way.

Other security restrictions

Operating system developers and computer administrators constantly invent new methods of preventing productive work from being done. In most cases, this is made in the name of security.

Short File Name Generation	cadett ELSA R34 and earlier demanded that generation of short file names (“8dot3filenames”) was active on the server. If it was not, cadett ELSA went lost. For cadett ELSA R35 and newer, that requirement is gone. On the contrary, it is advantageous to turn that feature off, since doing so improves performance substantially.

Below the most common actions that you need to take are discussed in detail.

6.2 SMB configuration

SMB configuration was important in cadett ELSA R37 and older. In cadett ELSA R38 and later, you are free to use any SMB configuration. The general information below is of course still valid, but for cadett ELSA R38 and later, you can disregard this section since it does not matter.

6.2.1 General information

In computer networking, Server Message Block (SMB) operates as an application-layer network protocol mainly used for providing shared access to files, printers, and serial ports and miscellaneous communications between nodes on a network.

Three main versions of SMB are available: SMB1 (commonly referred to as only SMB), SMB2 and SMB3. SMB2 was introduced in Windows Vista and Windows Server 2008. It is typically used by Windows 7 as well. SMB3 was introduced in Windows 8 and Windows Server 2012.

6.2.2 SMB configurations valid for cadett ELSA R37 and older

The database engine of cadett ELSA is currently optimized for SMB1. When using SMB2 or SMB3 for the communication between the workstation and the server, performance and stability issues will therefore occur. The most common problem is errors from the OnLine Engine related to databases or database index files. Luckily, it is easy to avoid these problems, simply by configuring at least one end of the communication to use the SMB1 protocol, which will force the other end to do so as well. This solution works really well.

Workstation computers are typically used for many purposes, some of which may benefit from the SMB2 or SMB3 protocols. The server however, is typically dedicated to cadett ELSA. Therefore, there are only advantages with a limitation to SMB1. The workstations can still communicate with other servers or with each other using the SMB2 or SMB3 protocols.

Below you will therefore find a description how to reconfigure a cadett ELSA Server running Windows Server 2012 or 2008 to use the SMB1 protocol only. This operation will result in better performance and increased stability. Doing these settings is mandatory.

6.2.3 Windows Server 2012

To deactivate SMB2 and SMB3 on a Windows Server 2012, please follow the steps described below:

1. Make sure that no workstations are running cadett ELSA.

2. Logon to the server using remote desktop or similar. Start the PowerShell as an administrator.

3. Execute the following cmdlet to deactivate SMB2 and SMB3 on the server:

   Set-SmbServerConfiguration -EnableSMB2Protocol $false

4. The server does not need to be rebooted. All workstations must however be rebooted.

Additional technical information
To check the status of the SMB protocols, the following cmdlet can be used:

Get-SmbServerConfiguration | Select EnableSMB1Protocol, EnableSMB2Protocol

To reactivate SMB2 and SMB3 the following cmdlet can be used (not recommended when using cadett ELSA):

Set-SmbServerConfiguration -EnableSMB2Protocol $true

6.2.4 Windows Server 2008

To deactivate SMB2 on a Windows Server 2008, please follow the steps described below:

1. Make sure no workstations are running cadett ELSA.

2. Logon to the server using remote desktop or similar. Start the PowerShell as an administrator.

3. Execute the following cmdlet to deactivate SMB2 on the server (SMB3 is not supported by Windows Server 2008):

Set-ItemProperty -Path "HKLM:\SYSTEM\CurrentControlSet\Services\LanmanServer\Parameters" SMB2 -Type DWORD -Value 0 -Force

4. Reboot the server.

5. Reboot all workstations.

Additional technical information
To reactivate SMB2 you can use the following cmdlet (not recommended when using cadett ELSA):

Set-ItemProperty -Path "HKLM:\SYSTEM\CurrentControlSet\Services\LanmanServer\Parameters" SMB2 -Type DWORD -Value 1 –Force

6.2.5 Windows Server 2003

Windows Server 2003 is no longer supported, neither by cadett, nor by Microsoft. If you are still using a Windows Server 2003 for cadett ELSA, you should immediately replace it with a contemporary server and a contemporary version of cadett ELSA.

6.2.6 Windows Server 2016

Windows Server 2016 is supported by cadett ELSA R37 and can be handled in the same way as Windows Server 2012 in these regards. As already mentioned, no SMB configuration alterations are needed for cadett ELSA R38 and newer.

6.2.7 Windows Server 2019

When this is written in March of 2019, Windows Server 2019 is not yet supported. Please check with current cadett ELSA hard- and software requirement guides for updated information.

6.3 Firewall settings

Typically, the TCP/IP communication between the workstations and the Spider database server will, by default be blocked by the firewall. An example from the standard firewall of Windows Server 2012 R2 is described here, where the procedure to open the firewall for the communication in question is discussed.

For an example of the consequence of a firewall blocking the IP communication between workstations and the Spider database server, please refer to section 7.16, page 99.

6.3.1 Configuring Windows Server 2012 R2 firewall

Please note that the description provided here should be regarded as an example only. The procedure may differ substantially depending on operating system versions, configurations and third party software.

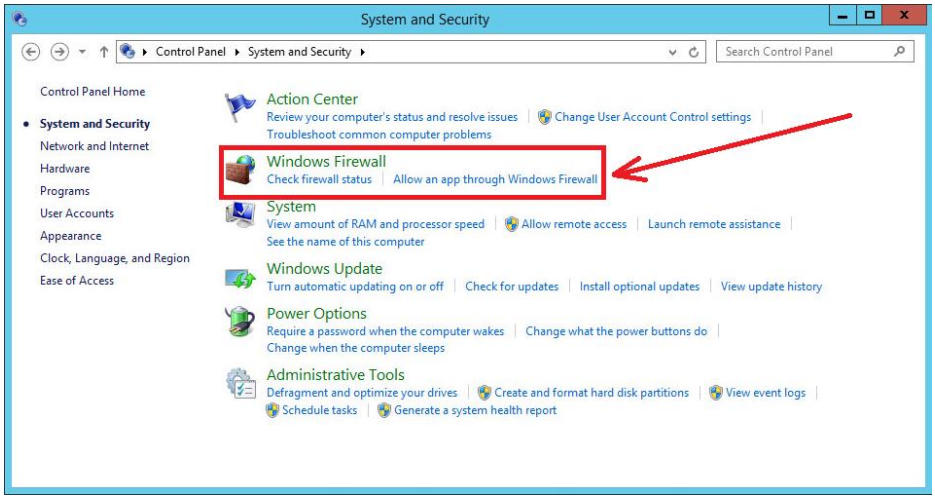

Figure 60: Accessing the Windows Firewall from the Control Panel of Windows Server 2012 R2.

Please start the **Control Panel**. Enter **System and Security** and there the **Windows Firewall**, as shown in Figure 60 above.

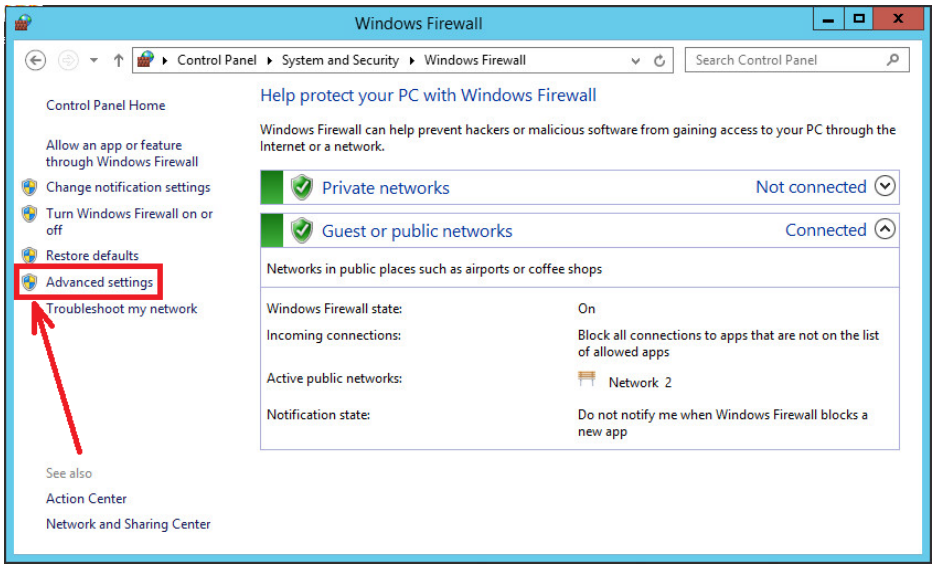

Figure 61: Enter Advanced settings in Windows Firewall.

Enter **Advanced settings** as shown in Figure 61 above.

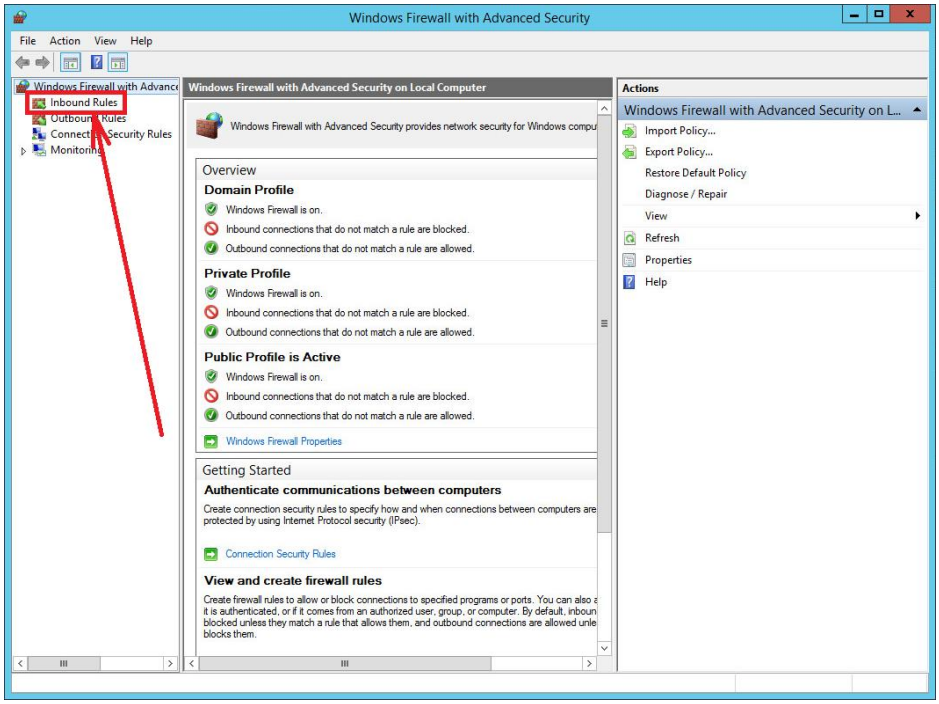

Figure 62: Enter Inbound Rules

Enter the **Inbound Rules** as shown in Figure 62 above.

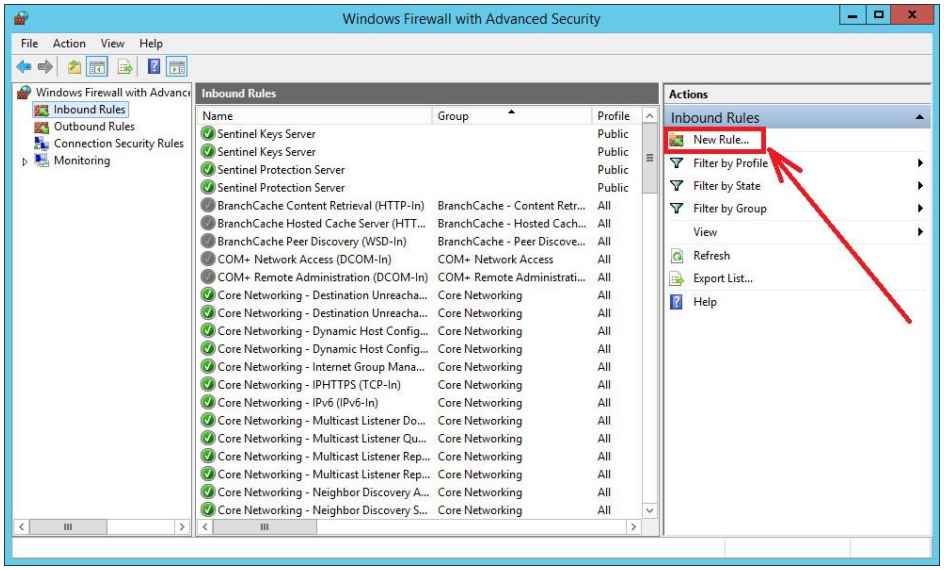

Figure 63: Start creating a New Rule.

Start creating a New Rule as shown in Figure 63 above.

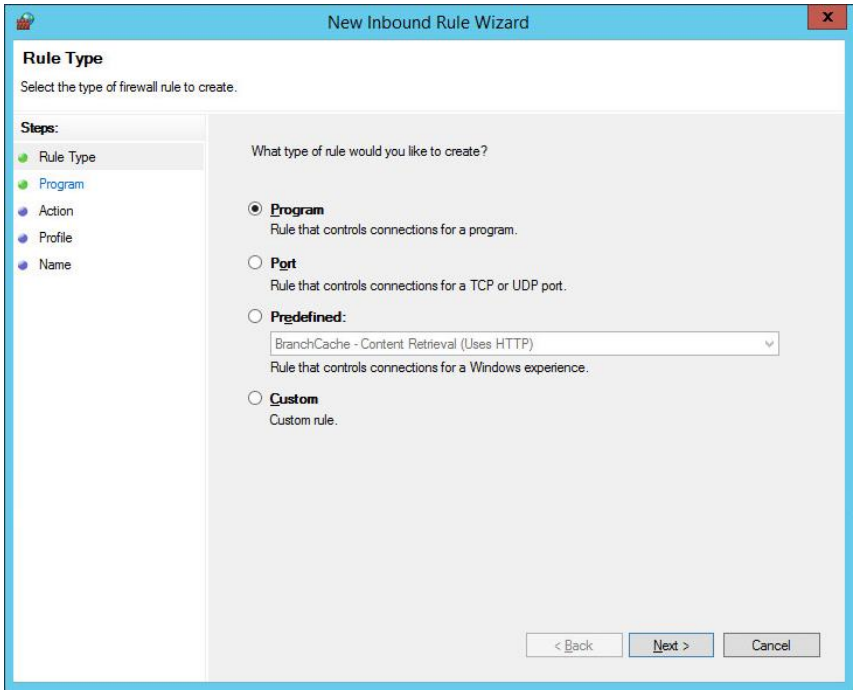

Figure 64: Select Program.

Select **Program** as shown in Figure 64 above. Then click **Next >**.

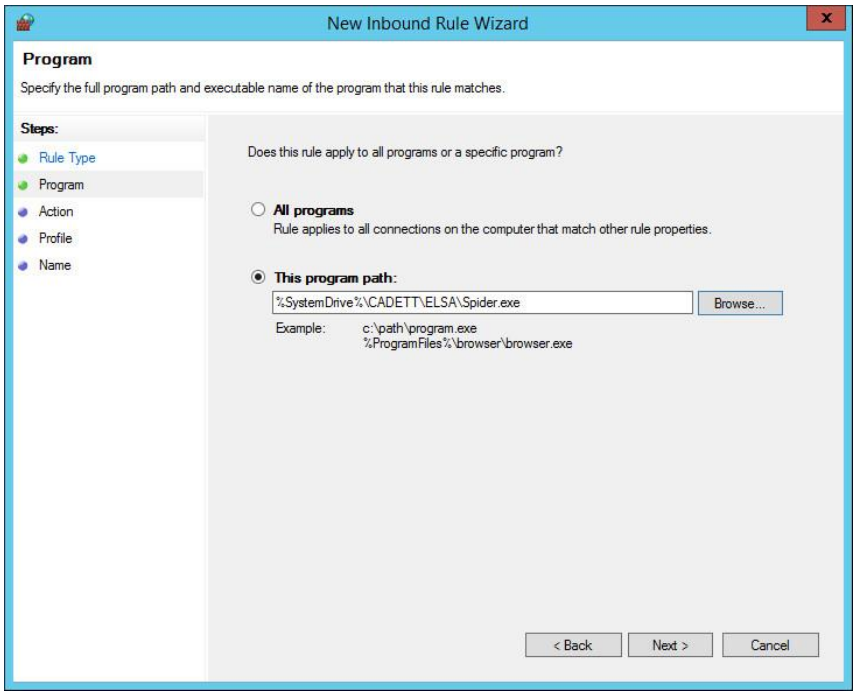

Figure 65: Use the Browse... button to select the Spider.exe.

Use the **Browse…** button to navigate to and select the **Spider.exe**, which is located in the cadett ELSA main directory. Figure 65 above shows what it looks like when the selection is ready.

Please note that you must select **Spider.exe** in its physical location, not the substituted one. In other words, selecting Spider.exe in **X:\ELSA** in the example we are discussing will not work. You must select it in the corresponding physical directory, which in our example is **C:\CADETT\ELSA**.

Click the **Next >** button.

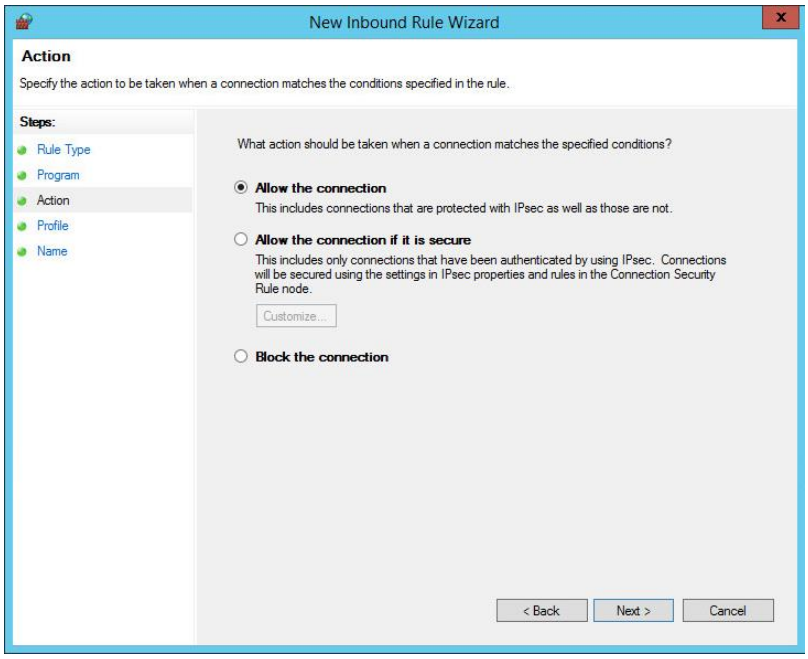

Figure 66: Select Allow the connection.

Select **Allow the connection** as shown in Figure 66 above. Then click the **Next >** button.

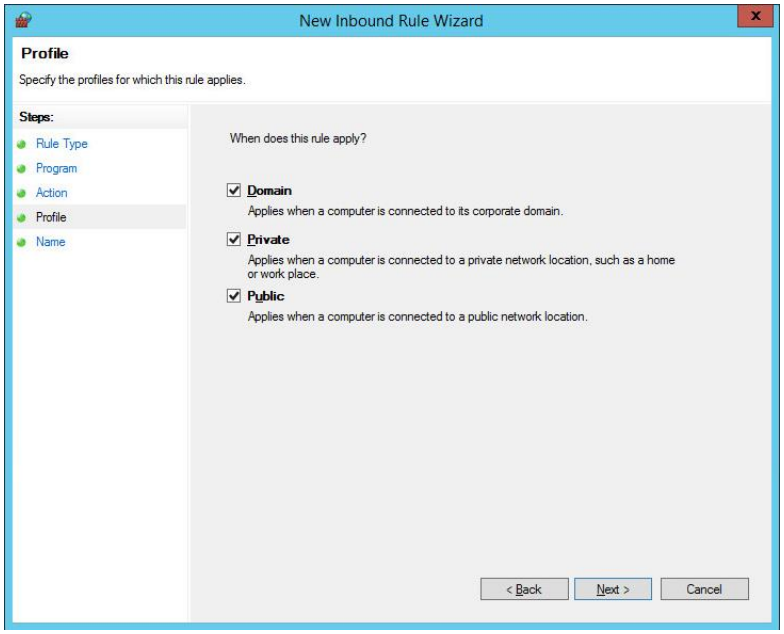

Figure 67: Specify when the created rule should apply.

Specify when the rule that is created should apply as shown in Figure 67 above.

Depending on particular circumstances in your network, you may be able to use a more conservative setting than the one suggested here, which is to make the rule apply for all available options.

Click the **Next >** button.

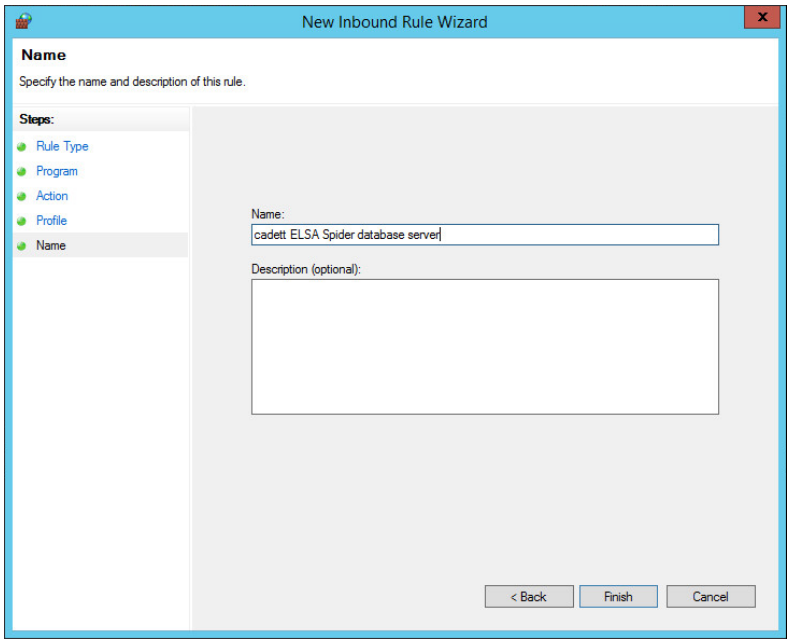

Figure 68: The rule is given a suitable name.

Give the created rule a suitable and informative name like the one shown in Figure 68 above. The suggested name is "**cadett ELSA Spider database server**".

Click the **Finish** button to finalize the creation of the rule.

The new rule will become active immediately resulting in the Spider communication suddenly starting to work. Error messages indicating it was not will disappear and the Catalogue will be available for use, among other things.

6.4 Sharing including user rights to the share

The directory in which the main directory of cadett ELSA is located must be shared. The same is true for the directory in which the main project directory is located. (In many cases, this is the same directory, as in the example described above).

A simple method of doing that is described here:

- From the console of the server, start the Windows Explorer.
- Locate the directory which should be shared and right-click it.
- Select **Properties** in the context menu that appears.
- Activate the **Sharing** tab.

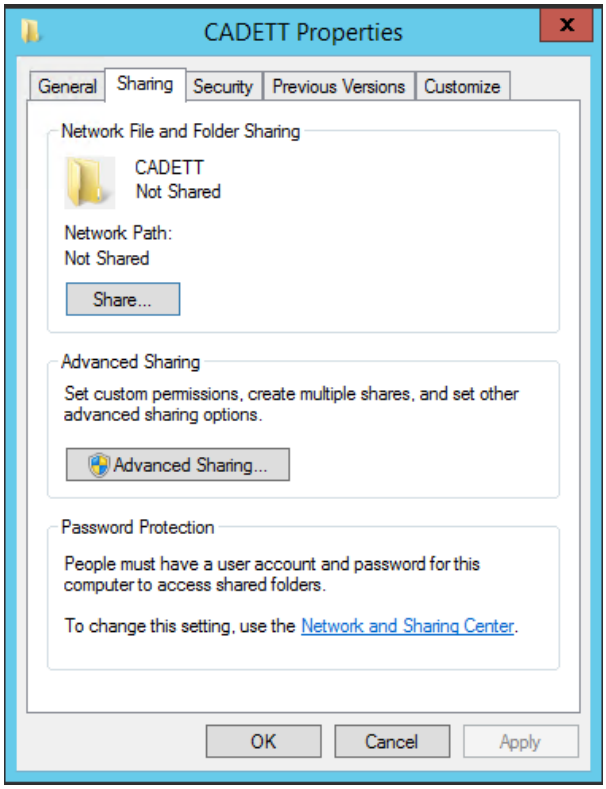

Figure 69: The sharing tab of the Properties dialogue for the directory to share.

- Click the **Advanced Sharing…** button.

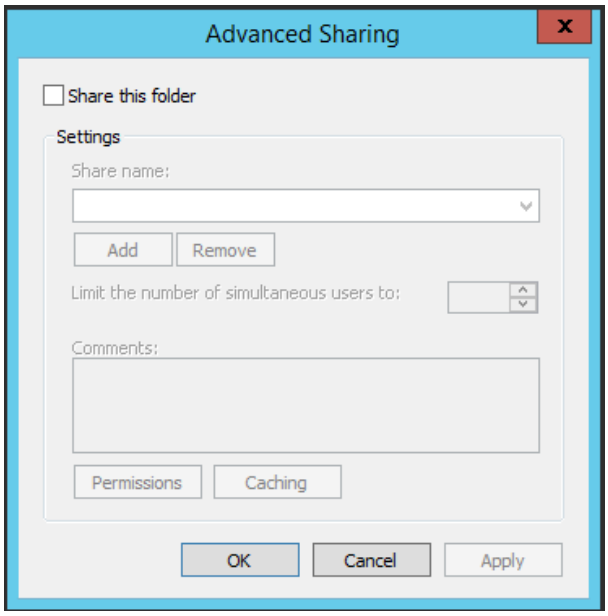

Figure 70: Advanced sharing before it is activated.

- Activate **Share this folder**.

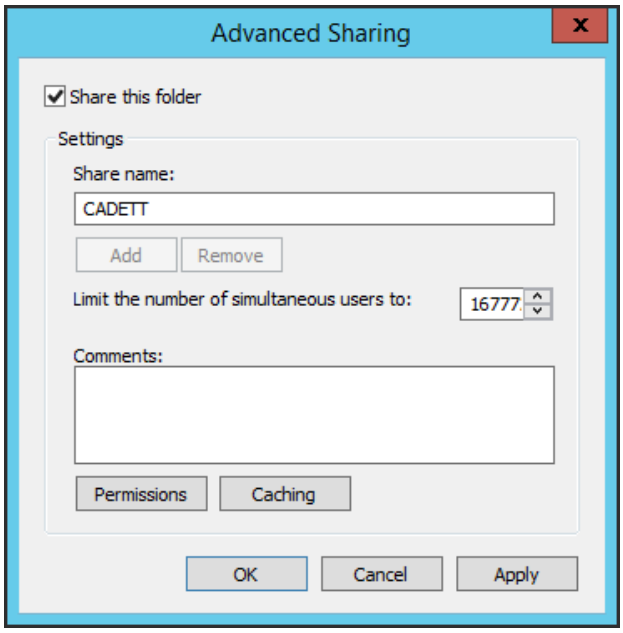

Figure 71: Advanced Sharing. Activate it!

- Give the Share an appropriate name, like “CADETT” in the example above.
- Click the **Permissions** button.

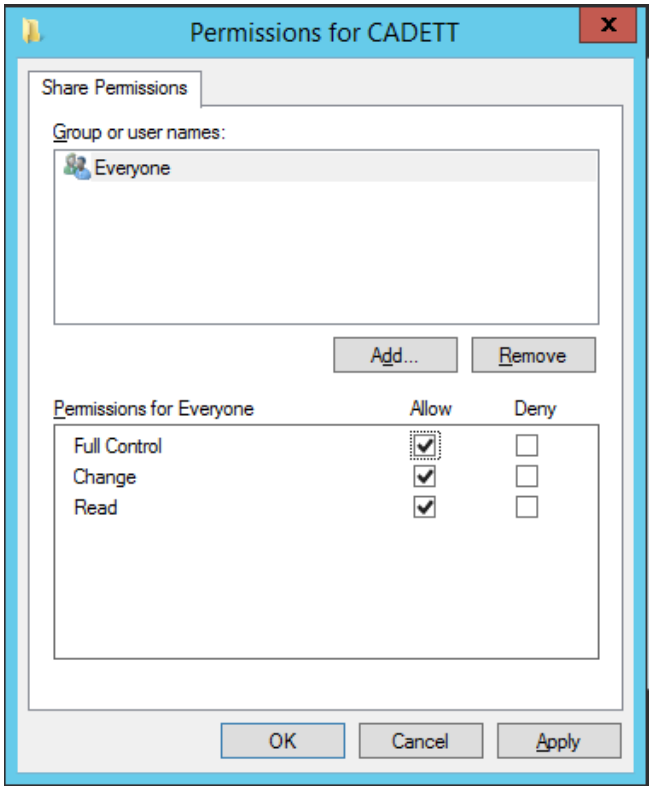

Figure 72: Allow everyone to do everything. It is not as dangerous as it sounds.

- Allow **Full Control**, **Change** and **Read** rights for **Everyone** as shown in the picture above.
- Click the **Apply** button.

6.5 User rights to the file system

Giving all users full rights to the share as described above isn't enough to make it possible for the user to access the necessary files, among them cadett ELSA itself and the projects that the users will work with. Therefore, it is not dangerous to allow everybody to do everything as described.

The user rights setting in the file system is the most important restriction.

- In the **Properties** dialogue for the directory to share – which you are already in if you have followed the procedure above and which you activate with right-click and selecting **Properties** if not – you then activate the **Security** tab.

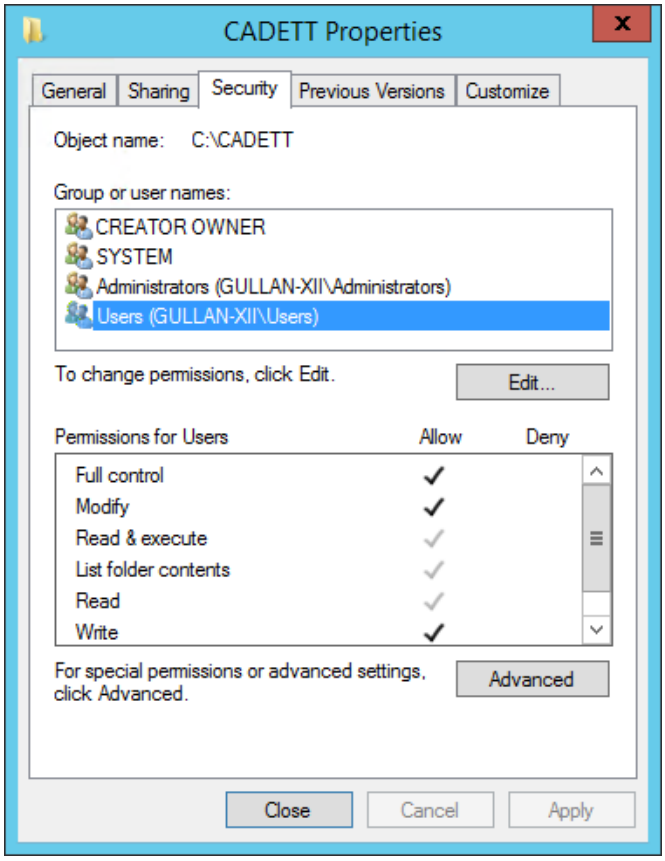

Figure 73: The Security tab of the Properties dialogue for the shared directory.

- Make sure that all cadett ELSA users have all possible permissions to this directory and all its content.

6.6 Drive letter mapping on the workstations

The necessary drive mapping can be made in many different ways, one of which is described here.

- On a workstation, start the Windows Explorer.
- Navigate to the server where cadett ELSA is located.
- Find and right-click the share in question (in the sample above called “CADETT”).
- Select **Map network drive…** in the context menu that appears.
- Select the same drive letter as you have decided to use when making the cadett ELSA installation on the server.
- Activate the **Reconnect at logon** option.

- Click the **Finish** button.

6.7 Short file name generation on the server

Up until cadett ELSA R34, automatic generation of short file names (so-called “8dot3filenames”) has been a requirement for cadett ELSA. Microsoft Windows Network Operating Systems support that, but the configuration must be done correctly. However, cadett ELSA R35 and newer does not require this generation to be active, which means that any setting of it will do. In fact, turning it off might be an advantage, since it enhances general file system performance.

(8dot3filename generation refers to the ability by the operating system, to translate long file names to a short equivalent, like translating “SUPERBOOK.DBF” to “SUPERB~1.DBF”).

Typically, on Windows Server 2012, the generation of short file names is configured using a tool called **FSUTIL.EXE** started from a command window. Please refer to the Windows Server documentation for more details on this subject.

7 Setting up a workstation

When the central network installation is completed, the setup of workstations remains. This is done once on each computer where cadett ELSA will be running.

7.1 Preparations

If you plan to use Solo ecscad with your cadett ELSA workstation, the advice presented below about AutoCAD can be disregarded.

If you do not plan to use Solo ecscad with your cadett ELSA workstation, please verify that AutoCAD is installed and running properly before you start any installation work on the workstation. Make it a habit to start AutoCAD and then exit it before doing anything else.

It is possible to setup a cadett ELSA workstation before AutoCAD is installed, but in most cases, it is easier to do it the other way around.

For the cadett ELSA View product level, AutoCAD is not used and therefore of course not needed.

If you plan to use Solo ecscad, you can either install both the cadett ELSA workstation and Solo ecscad in one single operation, or do them one after the other.

When applicable and you have verified that AutoCAD is installed and functional, please continue by verifying that the drive letter that you selected when installing the server is mapped correctly on the workstation computer. If it is not, please map it before proceeding!

Example

In the example earlier in this installation guide, the directory **C:\CADETT** was shared, for example with the resource name **CADETT**.

The drive letter in the example was **X:**.

In the example, you would then have to check that drive **X:** is mapped to the **CADETT** resource on the server.

7.2 Starting the installation program

To be able to run the installation, you need administrator privileges, either directly or through elevation, in the ordinary Microsoft Windows fashion.

You can easily find the mapped drive (**X:** in the example) using the Windows Explorer. On the mapped drive, you will find the cadett ELSA main directory, usually named **ELSA**.

In the **ELSA** directory, you will find an **Installer** sub-directory and in that, you will find the **setup.exe** file. Double-click it and the installation program will start.

Example

In the example above, you should in other words start the file:

X:\ELSA\Installer\setup.exe

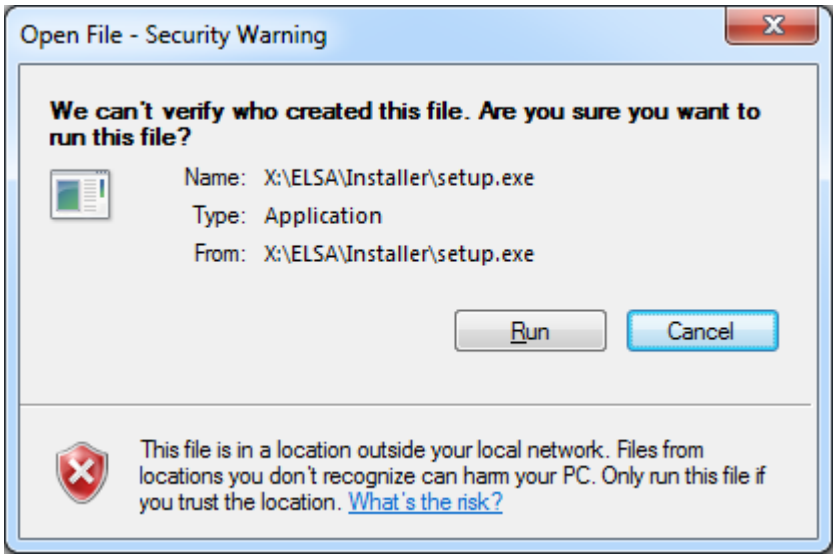

Figure 74: Security Warning dialogue box

A security warning, as shown in Figure 74 above, might be displayed depending on your particular network environment. If so, please click the **Run** button to start the installation program.

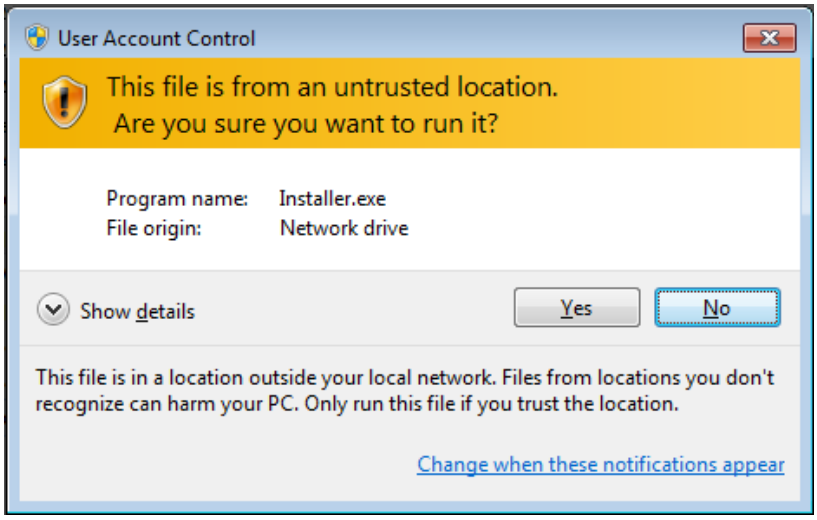

Figure 75: The User Account Control Elevation dialogue.

If UAC (User Account Control) is activated, the next thing that will happen is an elevation, (Elevation means that the user is elevated to an administrator with the accompanying privileges).

Figure 76: The installation program starts.

The installation program starts. Proceed to the language selection by clicking the **Next** button.

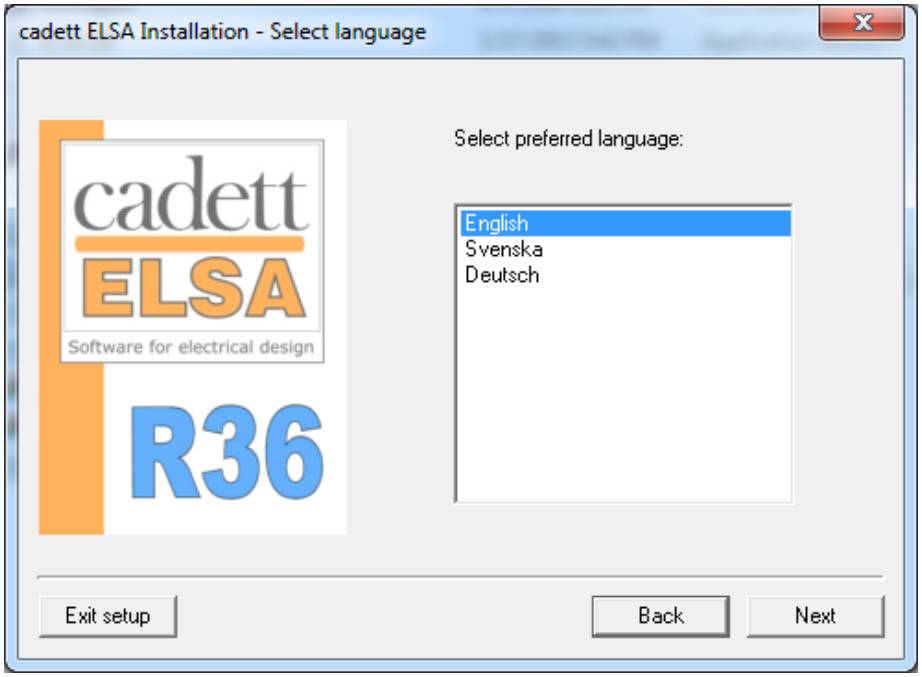

Figure 77: Language selection for the workstation setup.

Please select your preferred language for the workstation setup. The following description assumes **English**.

Then click **Next**.

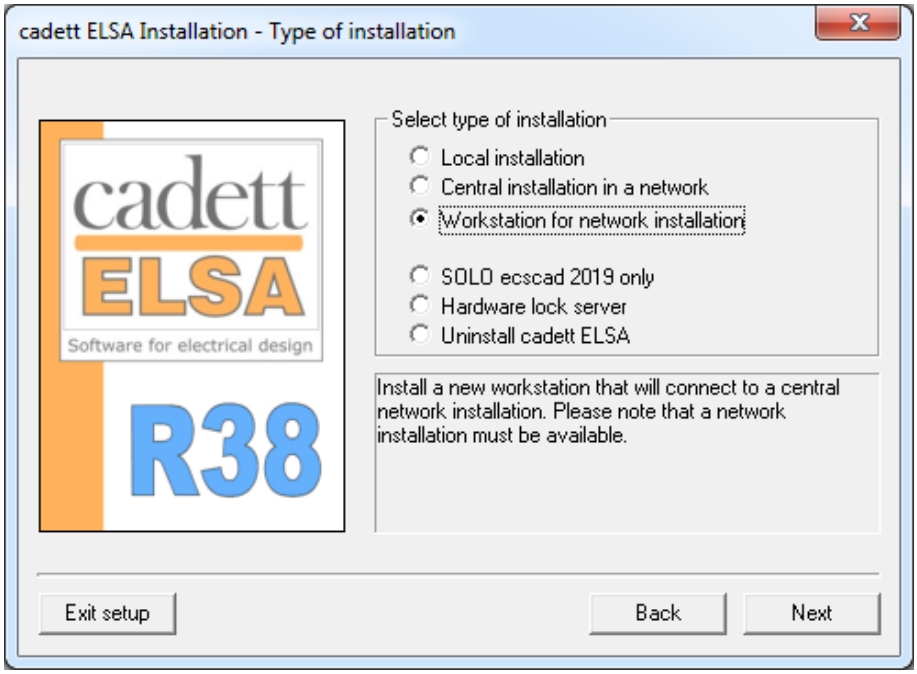

Figure 78: Selecting workstation setup.

When arriving at the installation type selection, please select the **Workstation for network installation**, and nothing else. Click **Next**.

7.3 Remove hardware lock Reminder

During the installation process of cadett ELSA, the appropriate drivers for the hardware-lock is automatically installed. For USB locks, it is necessary that the lock is not physically connected when this happens. Therefore, a reminder will be displayed, as shown in the picture below.

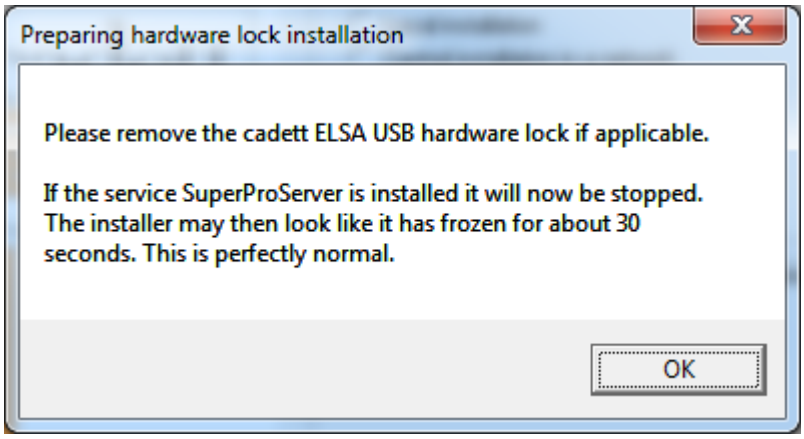

Figure 79: Reminder that no hardware lock must be connected during installation.

Please check that there is no USB lock connected to the workstation computer. If there is, please disconnect it.

Then click **OK**.

7.4 Selection of central network installation

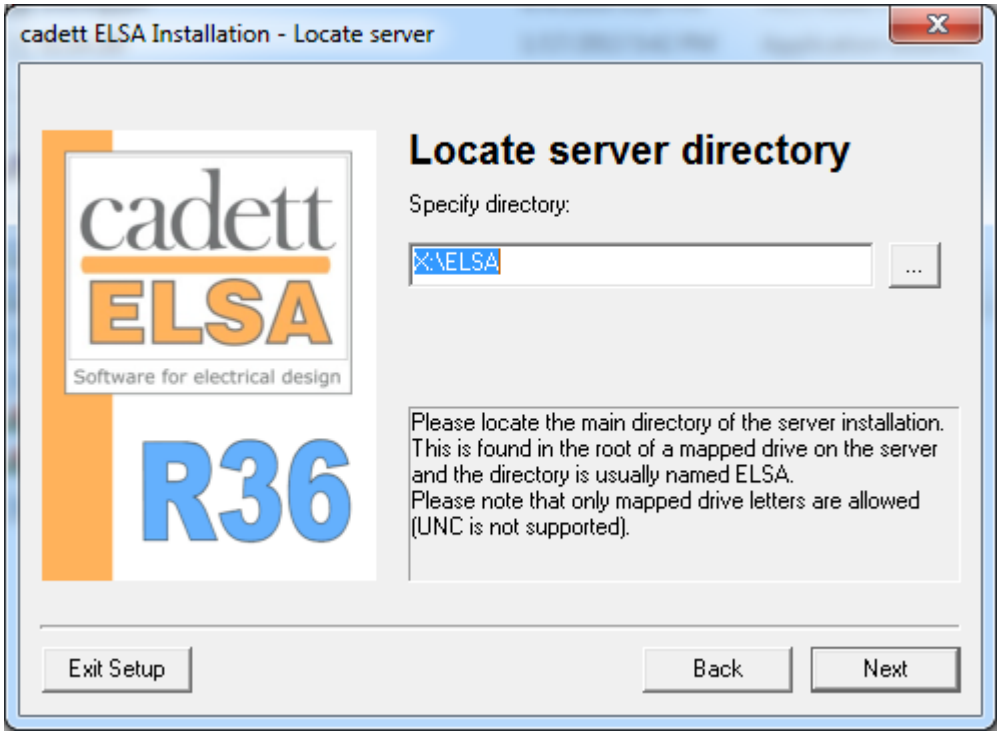

Figure 80: Selection of central installation to connect the workstation to.

Specify where the central installation of cadett ELSA is located by selecting the cadett ELSA main directory.

Example

In the example above, the directory **X:\ELSA** should be selected.

7.5 Full rights needed

In order to continue the installation process you need full access permissions to the central cadett ELSA installation. If you lack those permissions, you will be halted here.

7.6 Selection of workstation code

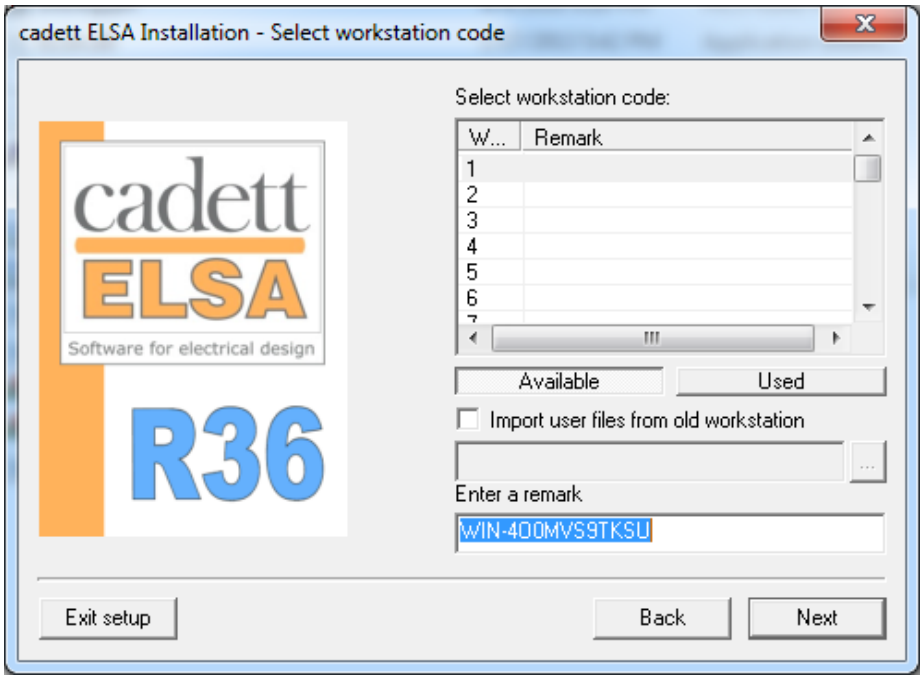

Figure 81: Selection of workstation code and entering of remark.

Next, you will receive a list of available workstation codes. Select one of them and enter a suitable remark that specifies which computer it concerns. The current computer name is presented as a default remark, which of course also might be satisfactory!

The workstation code is used to identify each specific workstation internally in cadett ELSA and will be returned when you need information for example about which workstation that is locking a specific object.

Workstation codes might be occupied by old computers no longer in use, if you have forgotten to make appropriate uninstallations of the associated cadett ELSA workstations. In such cases, it might be a good idea manually deactivating such workstations. Please be cautious however not to deactivate workstations that are in fact in use. Otherwise, you will kill them.

Disabling workstations is made from a running cadett ELSA. Enter the **Settings** module and activate the **Workstation definitions** tab. Select the workstation code to deactivate and click the **Deactivate** button. Follow the instructions given on the screen carefully. You will have to provide a password. If you do follow the instructions, you will be given information of how to obtain the password, otherwise not.

In general, the workstation code is a digit 1-9, a lower case letter a-z, or an upper case letter A-Z, with the exception of N and M, which are reserved for other purposes. Workstation code 0 (zero) is reserved for local installations.

Using the **Available** and **Used** buttons below the workstation code list, you can toggle between viewing available and not available workstation codes. The option to view used codes might come in handy to

find who is responsible for unintentionally occupied workstation codes, so that you can act appropriately to free them.

7.7 Import user files from an older workstation

If there already is at least one workstation installed on the current computer, the **Import user files from old workstation** alternative will be enabled, i.e. possible to use.

If you activate this function, you will be able to select an existing workstation directory from which local Script Sequences and local Report Definitions will be copied to the new workstation that is created.

7.8 Specifying the workstation directory

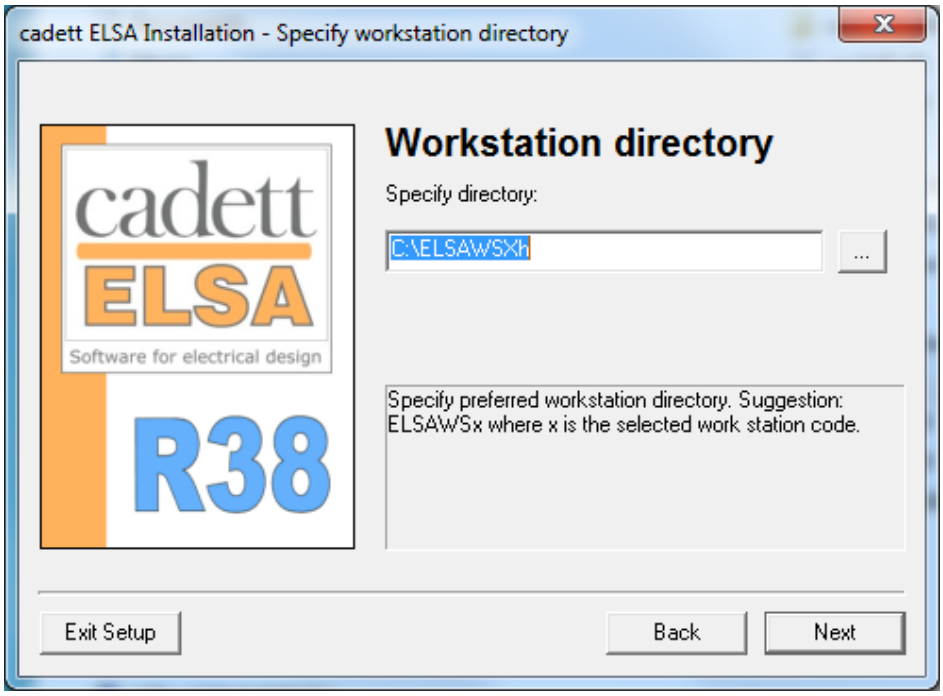

Figure 82: Specifying the workstation directory.

The next step is to specify the workstation directory or the so-called “WS directory”. Local and temporary files for the workstation are placed in this directory and its subdirectories. These files are local Script Sequences, Report Definitions, settings, temporary files and so on.

The workstation directory should be located on a local hard drive, for example **C:**. The default name is **C:\ELSAWSyx** where **x** is the current workstation code and **y** is the drive letter used for the server. You can use a different name for the workstation directory if you like. However, the name must follow the so-called DOS83 convention, which means that it may not contain more than 8 characters and the only allowed characters are the letters A–Z, the numbers 0–9, –, and _.

The default name is strongly recommended.

7.9 Product selection

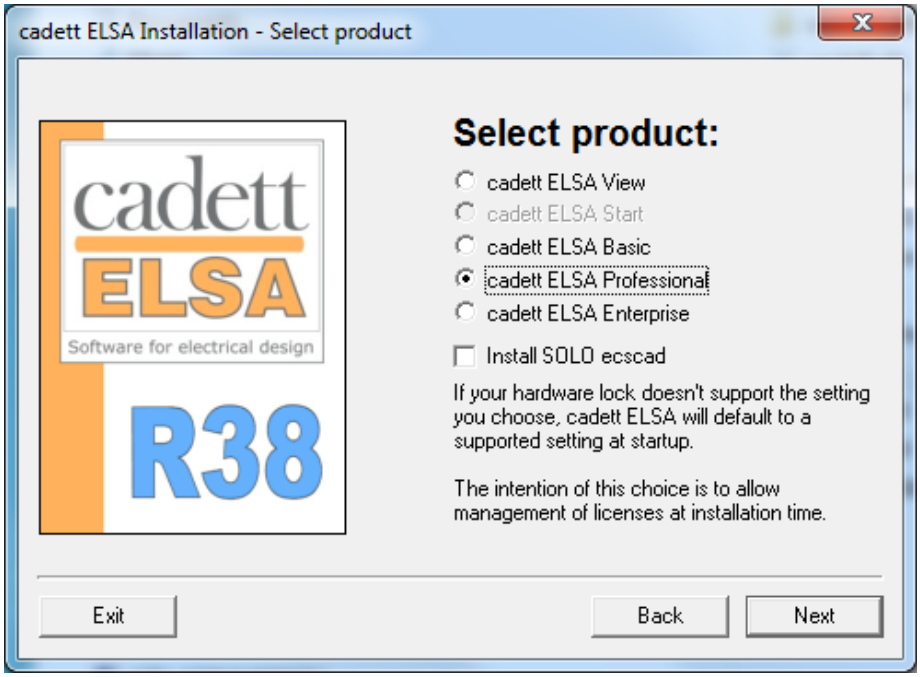

Figure 83: You select a product for each workstation separately.

The next step is to select a product. You can make different selections for different workstations using the same central network installation of cadett ELSA.

The available alternatives are as follows:

cadett ELSA View	The simplest alternative. View only. AutoCAD cannot be used.
cadett ELSA Start	The simplest step-in design alternative. Single user only. AutoCAD is needed. Cannot be used in this case.
cadett ELSA Basic	The standard Basic alternative. Multiuser network installations supported. AutoCAD is needed.
cadett ELSA Professional	The most commonly used alternative. AutoCAD is needed.
cadett ELSA Enterprise	The top-level product with additional functionality for large businesses like distributed workplaces, cloud usage, Super Project Report Generation and much more.

Please note that if you would select for example the *cadett ELSA Professional*, even though such a license is not available but a license of for example *cadett ELSA Basic* are, the program will start as a *cadett ELSA Basic* anyway. If you do not have an available license for the selection that you have made, an automatic selection of the "best available" alternative will be made. The installation will run without errors, but you cannot start the program without a license!

You can mix different product levels between workstations within the same network installation.

Another possible possibility (!) here is the option of installing the Solo ecscad, which is controlled by a separate check box, as shown in Figure 83 above. That option is available only if you have used the complete installation file with Solo ecscad included, when doing the server installation. If not, the **Install Solo ecscad** option will be grayed out.

Even if the **Install Solo ecscad** option is available, you might not be able to use it anyway. You also need to have a valid Solo ecscad license, which consists of two parts. You need an updated cadett ELSA hardware lock with support for the cadett ELSA Solo, and you need a separate Solo ecscad license installed on a Solo ecscad license server. This is all described in section 8.3, page 118.

If you do check this option, the Solo ecscad will be installed in the end of the workstation installation procedure. Please note, that it is also possible to make the Solo ecscad installation separately, either beforehand or afterwards. Please refer to section 8.2, page 111.

7.10 The workstation directory is created and files are copied

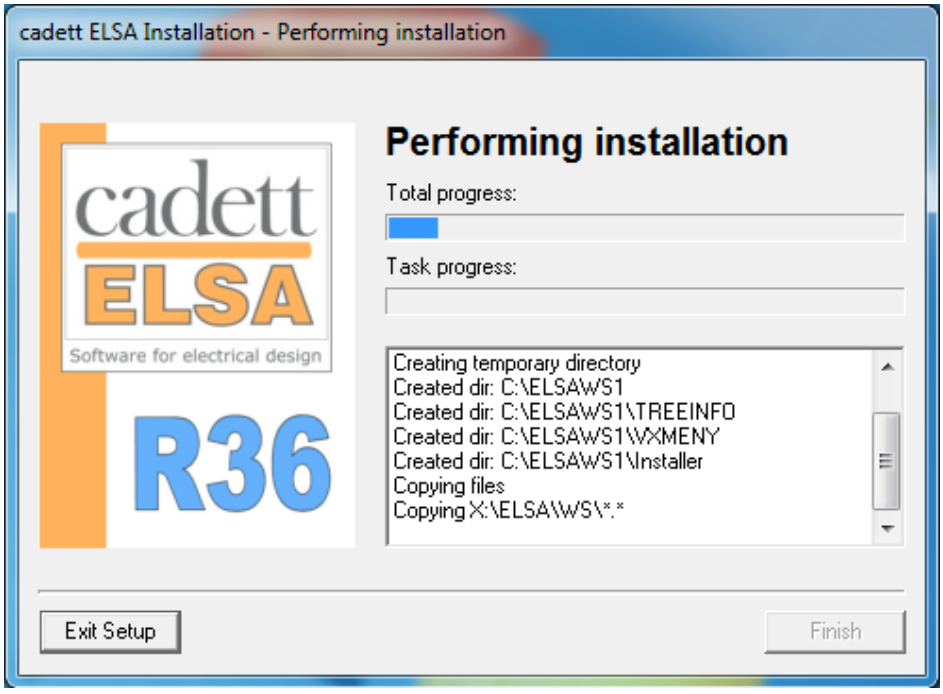

Figure 84: The files are copied to the workstation directory.

The workstation directory is created and the appropriate files are copied to it. Adjustments are made for the current workstation directory and the cadett ELSA main directory paths.

You can monitor the progress directly in the information window of the installation program.

In the end of the process the hardware lock drivers for possible use of a local hardware lock on the workstation is installed.

7.11 Solo ecscad installation

If you have selected to include installation of Solo ecscad, that will be done now, in the very end of the workstation installation procedure.

A detailed description of the installation of Solo ecscad is found in section 8.2, page 111.

Everything you need to know about Solo ecscad licensing is found in section 8.3, page 118.

7.12 The installation of the workstation is completed

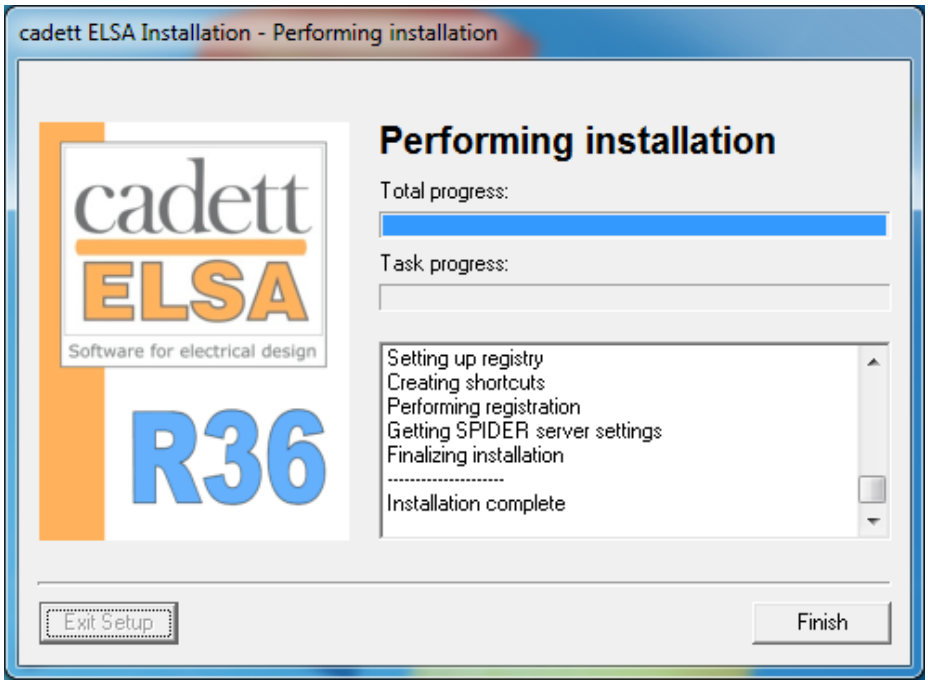

Figure 85: The installation of the workstation is completed.

At the end of the installation process, the program is registered in the registry.

When the workstation installation is finished, you will receive a notification of that and the **Finish** button that has been grayed out through the entire process will eventually be available for you to click.

Click the **Finish** button.

7.13 Connect hardware lock

To be able to run cadett ELSA, a hardware-lock of either network or local type is necessary. This lock must be connected and the necessary drivers must be installed before you can proceed to run the program.

When a workstation installation is made, the necessary drivers for a possible local lock are automatically installed. This means that if you are using a local hardware lock, you will normally not have to do anything else than connecting the hardware lock to the computer on which you have installed the cadett ELSA workstation.

The appropriate time to connect a local hardware lock is now. If you are going to use a network lock, please proceed to the next step.

Figure 86: A local hardware lock is connected to a USB port.

If you are using a network-based lock, in most cases no special measures are needed on the workstation. If the lock is already properly installed on the server, please proceed.

A detailed description of possible hardware-lock installation problems and solutions, including server based locks, is found in chapter 9, beginning on page 138.

The next step is to start cadett ELSA.

7.14 Running cadett ELSA

Start cadett ELSA, either by double-clicking the shortcut on your desktop or by using **Start menu / Program / cadett ELSA / cadett ELSA (X) WS[y]**.

Figure 87: Shortcut.

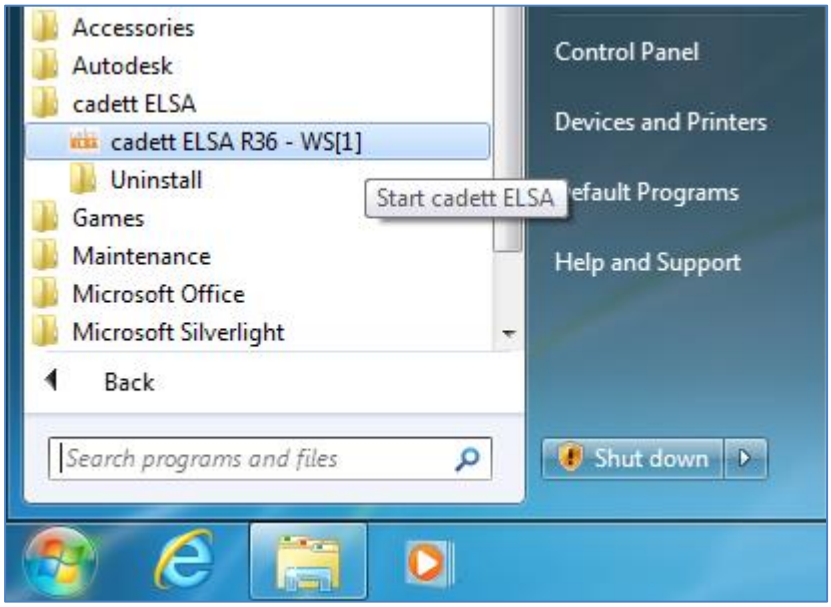

Figure 88: Start menu.

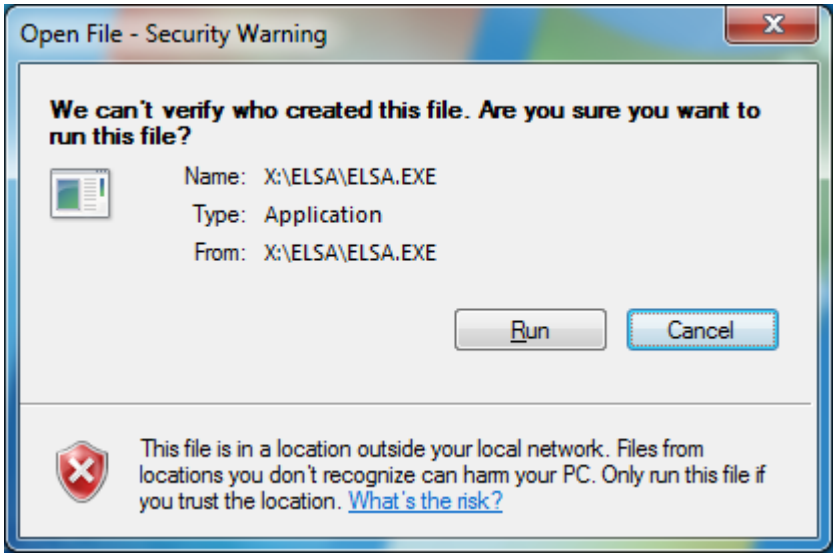

*Figure 89: A Security Warning. Continue by clicking **Run**.*

Depending on local and/or network security settings, a Security Warning like shown in Figure 89 above may be issued. If so, please click the **Run** button to continue.

If you get the warning that is shown in Figure 89 above, you can avoid that it will be issued every time you start cadett ELSA by making a simple configuration that is described in section 7.17, page 100, below.

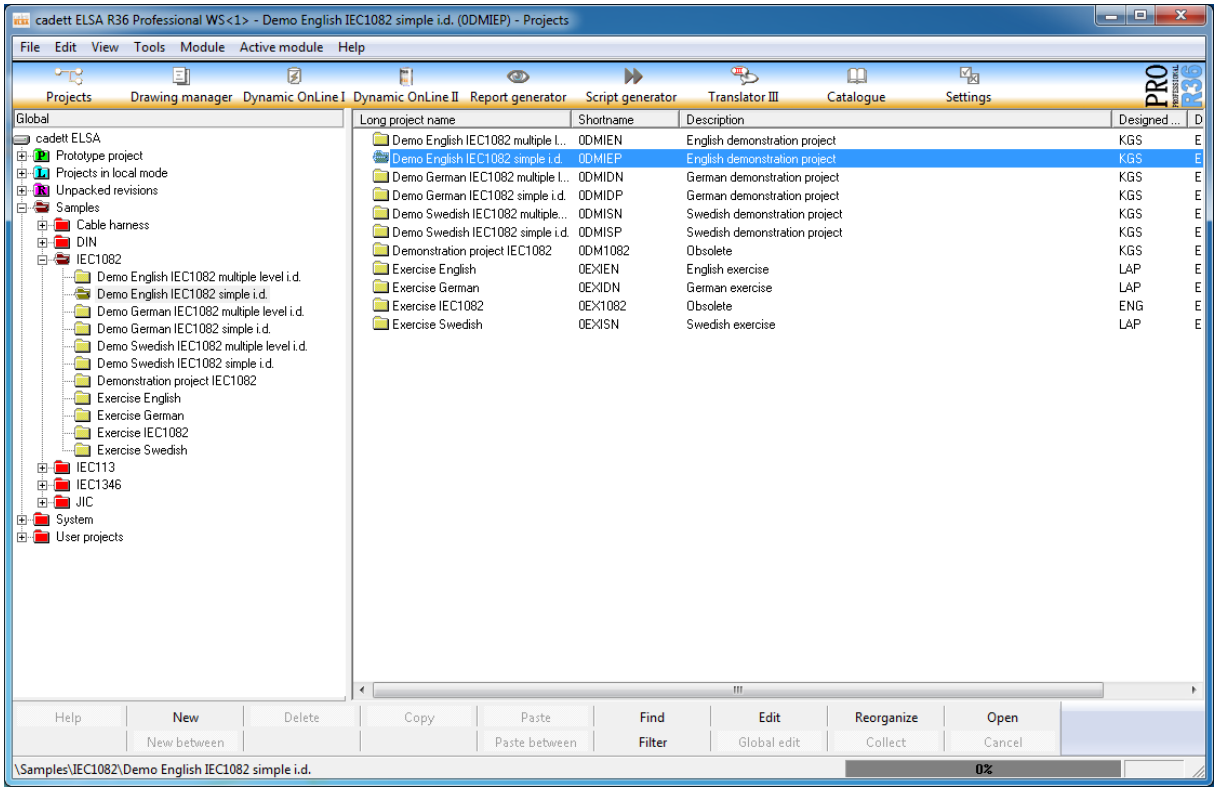

Figure 90: cadett ELSA when started after a completed installation.

If the hardware lock is working properly, the Spider and the firewall settings are correct, the user rights are set in a proper manner and everything else has been made properly, cadett ELSA starts and the main window will be shown like in Figure 90 above.

7.15 Configuration of the workstation

For a newly installed workstation, it is however very common that the connection with the hardware lock does not work the first time it is started. The reason is that the workstation has not yet been configured to find the hardware lock. The default setting might be sufficient, but in many cases, it is not. If so, you will find yourself in a situation like shown in Figure 91 below.

Figure 91: The cadett ELSA splash screen informs that a search for the hardware lock is currently being made.

If the settings are incorrect, the search will eventually time out and you will then be able to access the settings. That may however take several minutes, with some impatience being a likely consequence. *It is therefore possible to interrupt the search and continue directly to the settings by simply clicking the splash screen (a left mouse button click)*.

If the hardware lock is not found you will eventually be presented a dialogue box like the one shown in Figure 92 below, either after a time out, or after you have interrupted the hardware lock search manually by clicking the splash screen.

Figure 92: No hardware lock has been found.

The lock might in fact not be connected. In that situation the action required is obvious and no further explanations are needed! If the lock is in fact connected but the communication fails anyway, an adjustment of the configuration of how to find the lock might be needed.

Using the **Settings** button, you will then be given direct access to the **Alternatives** dialogue that is described below.

If cadett ELSA succeeds to connect to the hardware lock, you can manually access the **Alternatives** dialogue by selecting **Alternatives (Settings)…** in the **Tools** pull-down menu.

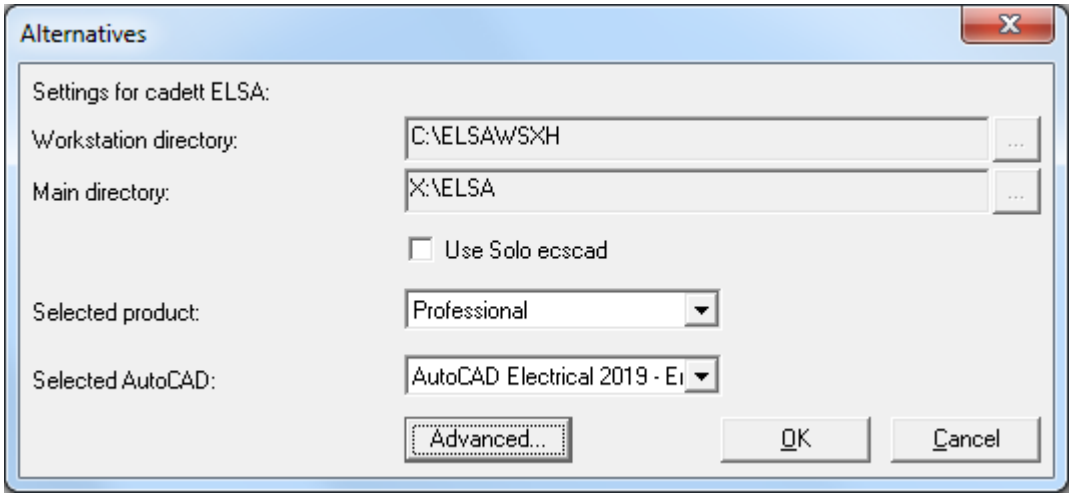

*Figure 93: The **Alternatives** dialogue box.*

There are two main options when it comes to which kind of AutoCAD to use with cadett ELSA. Either you have a separate license for AutoCAD, AutoCAD Electrical or a similar variant of AutoCAD, or you buy cadett ELSA in a Solo version, where an embedded CAD Engine is included. One example of such an embedded CAD Engine is the Solo ecscad 2019, which is part of cadett ELSA R38 Solo.

- If you are going to use the embedded Solo ecscad, please check **Use Solo ecscad**.
- If you are going to use a separate AutoCAD or similar, please uncheck **Use Solo ecscad**.

In the **Selected AutoCAD** field, you can then select which AutoCAD to use. Only AutoCAD versions that are installed and ready to use on your computer and which are supported by your version of cadett ELSA are shown in the drop-down list used for selection. It is also possible to select **None**, which means that no CAD Engine at all is used. For cadett ELSA View, that is for example a logical choice, since that product does not support AutoCAD.

A manual alternative is available but it should not be used under normal circumstances.

If the AutoCAD that you want to use, is not available in the drop-down list, please shut down cadett ELSA, start the desired AutoCAD separately, shut it down, start cadett ELSA again and re-open this dialogue box. If it is supported, the desired AutoCAD will then be available in the drop-down list.

> Technical note
> cadett ELSA examines available AutoCAD profiles in the registry to find out which AutoCAD versions are available. An AutoCAD program that has never been started lacks a default profile and is therefore not available for selection. This is the background for the described procedure above.

In the **Alternatives** dialogue box, you can also specify which cadett ELSA product to use. You can select between **View**, **Start**, **Basic**, **Professional** and **Enterprise**. You cannot use a more powerful license than you have purchased and updated your hardware lock for, but you can select a less powerful one. The latter may come in handy if you have a mix of different products and does not want to occupy one of your most powerful licenses, when you in fact only need a simpler one.

Finally, there might be reasons to take an extra look at the settings that are made using the **Advanced…** button. One of the most important settings that is located in the dialogue that is displayed when clicking that button, deals with the hardware lock communication. You can read more about these settings in section 9.1.1, page 139, below.

7.16 Spider problems

If the workstation fails to communicate with the Spider database server, an error message will be displayed as shown in Figure 94 below.

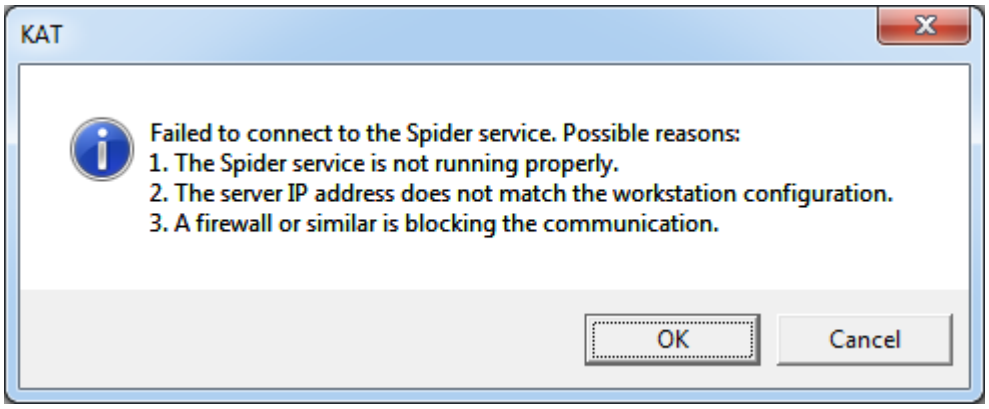

Figure 94: Error message displayed when starting cadett ELSA if the communication with the Spider service fails.

The dialogue box accurately describes the three most common reasons for the communication failing.

When creating a new workstation like described here, the one most common reason is a firewall blocking the communication.

If you click the **Cancel** button, cadett ELSA is terminated.

If you click the **OK** button, the initialization of the cadett ELSA workstation continues, but will take a long time (several minutes), and when it is ready, a number of important features will not work. Activating the Catalogue, for example, will give the result shown in Figure 95 below, when the catalogue databases cannot be accessed.

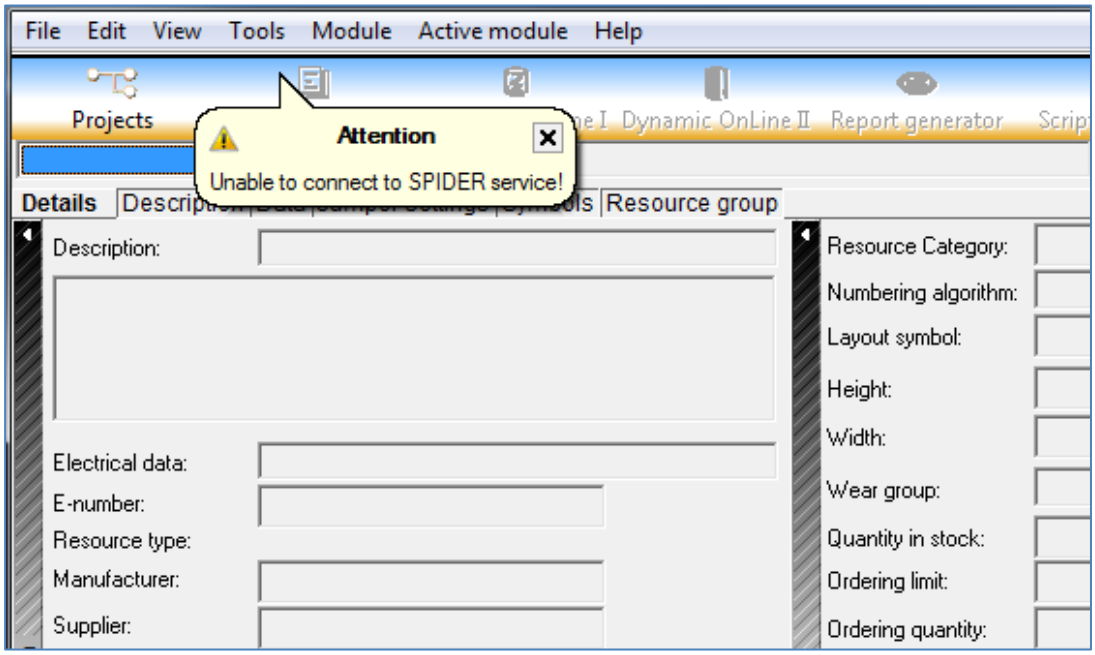

Figure 95: Error message in the Catalogue caused by failed Spider communication.

To fix this problem, please refer to section 6.3, page 70.

7.17 Avoiding a security warning when cadett ELSA is started

If you get a security warning as displayed in Figure 96 below when you start cadett ELSA, you need to make a simple configuration to get rid of that. How that is done is described here.

Please first start the Windows **Control Panel**.

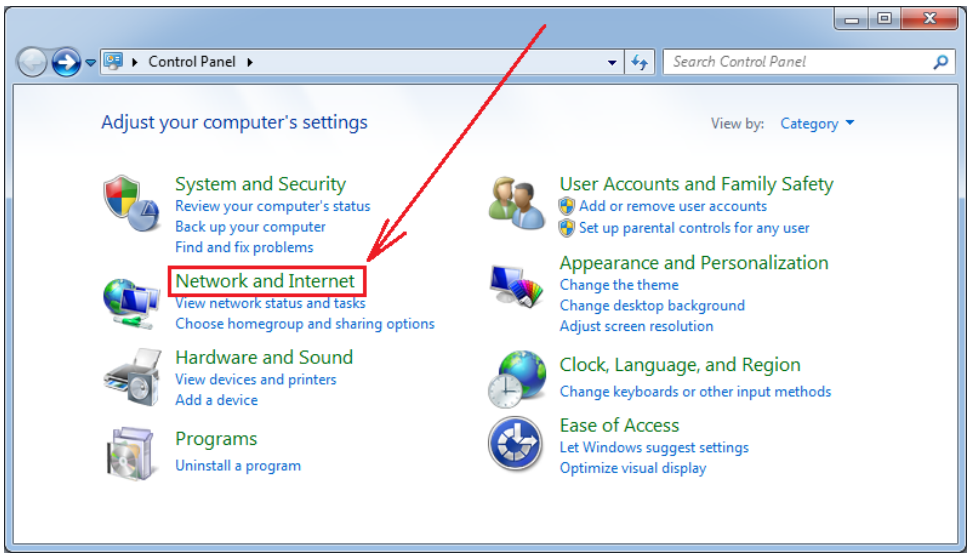

*Figure 96: In the **Control Panel, Network and Internet** is selected.*

Then select **Network and Internet**.

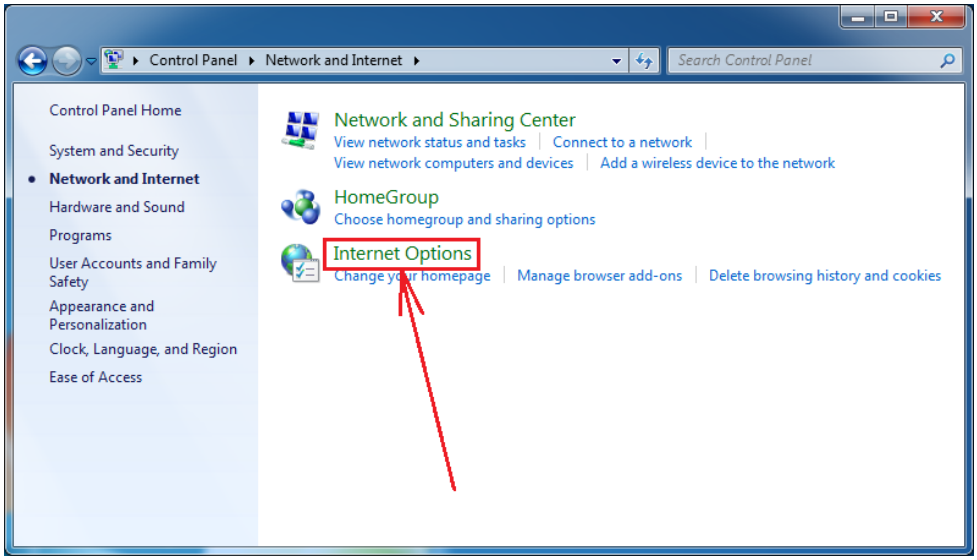

*Figure 97: Selecting **Internet Options**.*

After that, please select **Internet Options** and activate the **Security** tab.

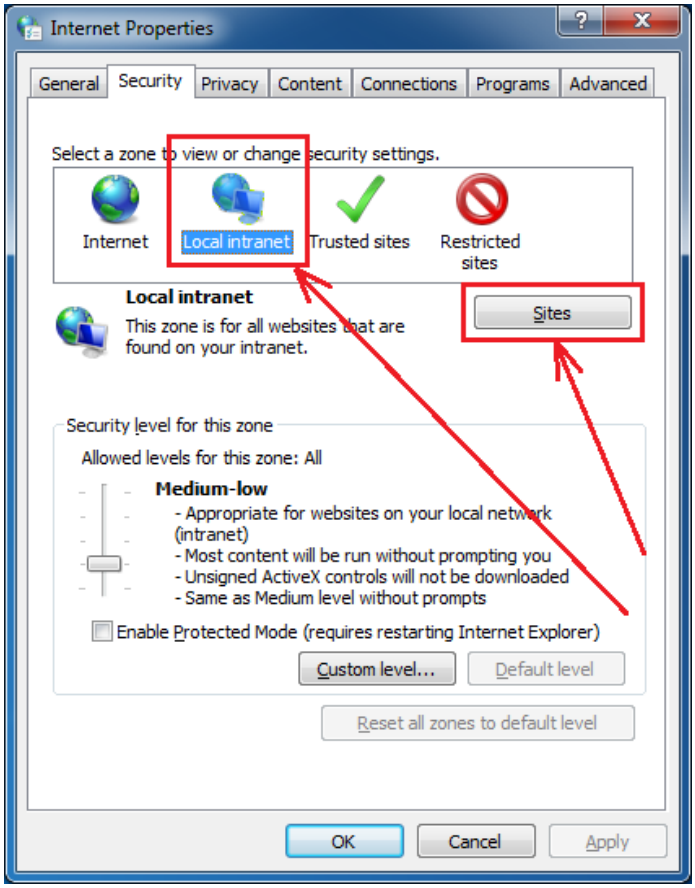

Figure 98: Starting to add the cadett ELSA server to a trusted zone.

Select **Local intranet** and then click the **Sites** button.

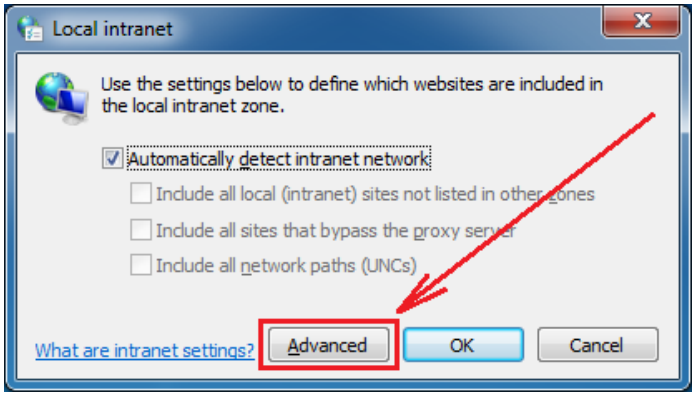

*Figure 99: By clicking the **Advanced** button, you will be able to specify the cadett ELSA server as trusted.*

Click the **Advanced** button.

In the upper field of the dialogue box that is displayed, please type the name of the drive that cadett ELSA is using. In our example here, that is **X:**, like shown in Figure 100 below.

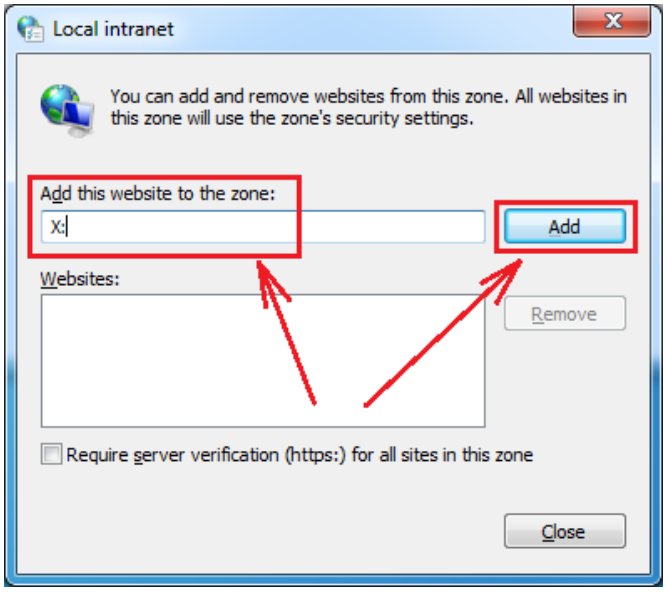

Figure 100: The cadett ELSA drive is typed and then added.

Click the **Add** button.

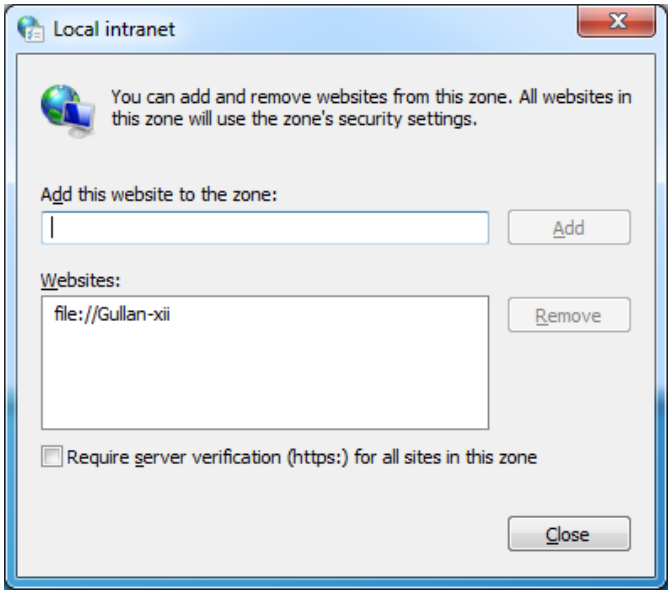

Figure 101: The cadett ELSA Server is now trusted.

The drive letter that you specified is automatically translated to a valid server name, like in the example shown above in Figure 101.

Simply click the **Close** button and the cadett ELSA server will be handled as a trusted zone avoiding irritating warnings when starting the software.

7.18 Verify that the workstation is working properly

To verify that the workstation is working properly, at least in the most basic way, you can do the following test:

- Restart the computer.
- Login as the user that is going to work with the workstation in question.
- Start cadett ELSA.
- Activate the **Catalogue**.
- Select a demonstration catalogue, like **DEM385**.
- Check that the content of the selected catalogue is displayed.
- Activate the **Project** module.
- Open a demonstration project, for example **Demonstration project IEC1082** located under **Samples / IEC1082**.
- Activate the **Drawing Manager**.
- Select one of the existing drawing sheets in the project.
- Click the **Open** button in the toolbar.
- Check that AutoCAD is starting and that the selected sheet is opened.
- Double-click one of the symbols.
- Check that an OnLine dialogue box is displayed.
- Check that pull-down menus are available.
- In the Tools pull-down menu, select the sub-menu **Dynamic OnLine I** and then **Device list**.
- Check that a device list is displayed.

If no problems occur when going through these steps, it is fair to say that the workstation is indeed working.

7.19 Additional actions

Additionally, depending on individual requirements, configurations for printing and PDF generation can be made.

Printer configurations for old style conventional printers (that print on paper) are made in AutoCAD.

To be able to create PDF files, which could contain hyperlinks and bookmarks, and even be searchable, a free software called GhostScript must be installed. Two virtual printers must also be configured in AutoCAD. All details are described in section 12, page 182.

7.20 Start using the workstation

It is then finally time to start exploring the functions and features of the program. A good orientation can be obtained from the cadett ELSA Tutorial.

8 AutoCAD or Solo installation

Most cadett ELSA products require either an AutoCAD or an embedded Solo ecscad CAD Engine. The only cadett ELSA product that does not have that requirement is the cadett ELSA View.

The table below describes the situation.

Product	AutoCAD requirements
cadett ELSA View	No AutoCAD is used.
cadett ELSA Start	A separate AutoCAD or AutoCAD Electrical is needed.
cadett ELSA Basic	
cadett ELSA Professional	
cadett ELSA Enterprise	
cadett ELSA Basic Solo	The Solo ecscad AutoCAD OEM based CAD Engine is included. No separate AutoCAD or AutoCAD Electrical is needed.
cadett ELSA Professional Solo	
cadett ELSA Enterprise Solo	

If you are using a cadett ELSA product that requires an AutoCAD or AutoCAD Electrical, you are recommended to install the needed AutoCAD on your workstations first, before you install the cadett ELSA workstations. The detailed procedure for installation of AutoCAD is described in the documentation provided by Autodesk. However, a number of very important advices are strongly recommended to follow for use of AutoCAD or AutoCAD Electrical with cadett ELSA. Those advices are found in section 8.1 below.

If you are using a cadett ELSA Solo product, the installation of the Solo ecscad is part of the cadett ELSA installation procedure. That particular part of the installation procedure is however described in section 8.2 below (page 111).

If you are using a server for thin clients, AutoCAD or Solo ecscad is installed on the Citrix server(s), not on the physical workstations. The same recommendations for the installation is however valid.

8.1 AutoCAD installation

Please refer to the AutoCAD documentation regarding installation and update of AutoCAD and AutoCAD Electrical. Additionally it is however extremely important to follow the advice specified below, which varies somewhat dependent on the particular version of AutoCAD you are using.

The reason that this advice is needed is described here.

Over the years, an ever-increasing number of “bells and whistles” – in many cases related to the internet – have been added to the installation package of AutoCAD. Unfortunately, these additional tools have had the disadvantage of decreasing performance and stability.

The difference in performance when comparing an AutoCAD where these tools are installed with one where they are not can in many cases be as much as a factor of 2 or more. Related to this decrease of performance are also a number of well-known serious stability issues.

Below you will find advice how to avoid these performance and stability problems.

- Please refer to section 8.1.1, page 107, for AutoCAD 2016, 2017, 2018 and 2019.
- Please refer to section 8.1.2, page 111, for other AutoCAD versions.

If you are using AutoCAD Electrical or another vertical, the provided information is still valid.

8.1.1 AutoCAD 2016, 2017, 2018 and 2019

Generally, please consider the following guidelines:

1. If possible, do not install any tools that you are not immediately going to use. Tools that you might want to use later can also be installed later.

2. Uninstall unused tools from older versions of AutoCAD.

Old AutoCAD's themselves do not constitute a performance problem and can therefore remain installed, if you are still using them. If not, please uninstall them as well.

Below you will find a detailed description of the procedure for AutoCAD 2016, 2017, 2018 and 2019.

8.1.1.1 Special problems

Autodesk 360 (A360 Desktop) causes some of the most significant problems that are discussed here. It is therefore very important not to install A360. If it is already installed, please uninstall it.

A feature called "AutoCAD InfoCenter" is also causing serious performance issues. Unfortunately, it is not possible neither to avoid installing it, nor to uninstall it. An easy way of deactivating it is therefore described below.

A predecessor of AutoCAD InfoCenter called AutoCAD Communications Center may cause similar problems and needs similar treatment.

8.1.1.2 Step by step guide for AutoCAD 2016, 2017, 2018 and 2019

Please follow these steps:

1. Install AutoCAD 2016, 2017, 2018 or 2019.
2. Install all available AutoCAD service packs.
3. Uninstall unnecessary tools.
4. Deactivate AutoCAD InfoCenter.
5. Deactivate AutoCAD Communications Center.

In detail, please do as described below.

8.1.1.3 Install AutoCAD

Install your preferred version of AutoCAD 2016, 2017, 2018 or 2019.

Please try to deselect as many auxiliary tools as possible already in the installation process, to avoid having to uninstall them afterwards.

Hints for AutoCAD 2016, 2017, 2018 and 2019:

- A360 Desktop (formerly Autodesk 360) and Autodesk ReCap should be unchecked.
- Please also click the arrow under Autodesk AutoCAD 2016, 2017, 2018 or 2019 and then uncheck Exchange App Manager, Exchange Featured Apps plug-in and Autodesk AutoCAD Performance Reporting Tool. For AutoCAD 2016 or 2017, please also uncheck Autodesk BIM 360 Add-in for AutoCAD 2016 or 2017.
- Uncheck Express tools. Select Installation Type Custom and uncheck Express Tools, Autodesk Seek and Migrate Custom Settings. You can keep the License Transfer Utility checked.
- Click the arrow under Autodesk AutoCAD 2016, 2017, 2018 or 2019 once again and then click the **Install** button in the bottom of the dialogue to start the installation.

8.1.1.4 Install all available service packs and Hotfixes

Using either Autodesk Desktop App or other means, install all available service packs and Hotfixes. Please note that this is very important! Without the service packs, AutoCAD will run poorly.

8.1.1.5 Uninstall unnecessary tools

1. Start the **Windows Control Panel**.
2. Select **Programs / Uninstall a program**.
3. Uninstall all Autodesk software that you are not going to use immediately thereafter, like the following:
    - A360 Desktop
    - Autodesk Advanced Material Library Image Library
    - Autodesk App Manager
    - Autodesk AutoCAD Performance Feedback Tool
    - Autodesk BIM 360 Glue AutoCAD Add-in 64 bit
    - Autodesk Content Service

- Autodesk Featured Apps
- Autodesk Material Library
- Autodesk Material Library Base Resolution Image Library
- Autodesk ReCap
- SketchUp Import

- Any similar software related to older versions of AutoCAD

You may have to restart your computer multiple times during the procedure of uninstalling all the software mentioned above.

When you are finished, the only Autodesk software that you hopefully have left, is AutoCAD itself, and maybe Autodesk Desktop App, which might be useful to keep your AutoCAD updated with the newest service packs and hotfixes, and eventually to handle the next version of AutoCAD.

8.1.1.6 Deactivate AutoCAD InfoCenter

AutoCAD InfoCenter is a spy software that is tracking your use of AutoCAD. It has a cost in performance and stability. To deactivate AutoCAD InfoCenter, you edit the registry to avoid that InfoCenter is started.

The disadvantages with this method are that it only works for the current user and that it is still possible for other software to start InfoCenter. Here is how you do it:

1. Please start the registry editor (REGEDIT).

2. Navigate to the following key:

   HKEY_CURRENT_USER
   Software
   Autodesk
   AutoCAD
   R22.0
   ACAD-1001:409
   InfoCenter

The key-path is unique for each version and language variant of AutoCAD. Instead of the “R22.0” version shown above, you might run into other version numbers. The “ACAD-1001:409”AutoCAD identity shown above could also be different for you.

3. On the right pane of the window, double click **InfoCenterOn**.

4. Enter a value of 0 (zero) and click **OK**.

If you have multiple versions of AutoCAD installed, you may have multiple registry keys for InfoCenter as well. To make sure that you do not miss any of them, you can search the registry for “InfoCenterOn”, instead of manually navigating to the appropriate key as described above.

Please note that this setting affects the current user only.

8.1.1.7 Deactivate Communication Center

Communication Center is another spy software.

Here is how you make sure that Communication Center is never started:

1. First, you need to find the location and exact filename of all Communication Center EXE files on the computer. Here is one way of doing that:

2. Open a command window.

3. Make the root of **C:** current, using the following two commands:

   C:
   **CD **

4. Then search the entire disk for Communication Center EXE files using the following command:

   DIR WSCommCntr*.EXE /S

5. A list of all Communication Center EXE files with their locations specified will be presented.

6. Please note that you might find more than one file, since older versions of AutoCAD might still be present. Please also note that Communication Center is not always present, so the list might be empty.

7. Please use the Windows File Explorer to rename all these files, for example by adding an underscore to the file type, thus making these executables unusable.

8. Finally, rerun the **DIR** command specified above to verify that there are in fact no more Communication Center EXE files present.

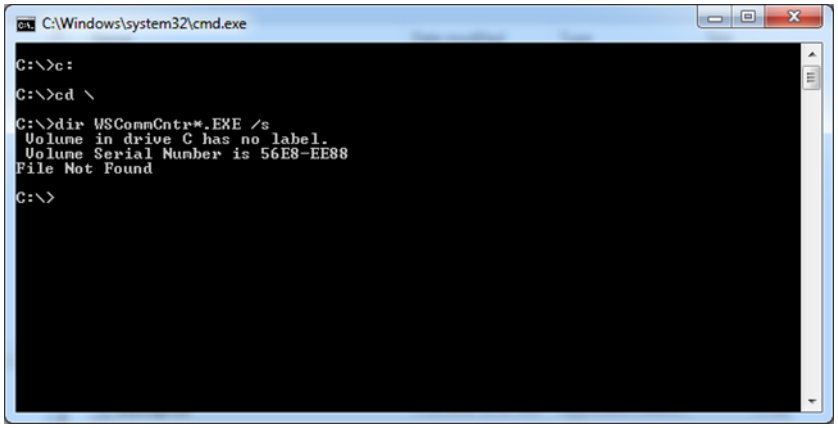

Figure 102: All Communication Center EXE files have been renamed.

8.1.2 Other AutoCAD versions

If your AutoCAD version is not described above, please contact cadett for updated information.

8.2 Solo ecscad installation

The CAD Engine of cadett ELSA Solo is provided in a cooperation between cadett, Autodesk and Mensch und Maschine of Germany. The internal name of the AutoCAD OEM based Solo CAD Engine is “ecscad”, which is also the way it will be presented on the screen, both in the installation process and when running the software.

The Solo ecscad installation is simple and straightforward.

8.2.1 Starting the Solo ecscad installation

The installation of Solo ecscad can be started specifically with an alternative in the main menu of the cadett ELSA installation program. It can also be run as part of either a local installation or a workstation installation of cadett ELSA.

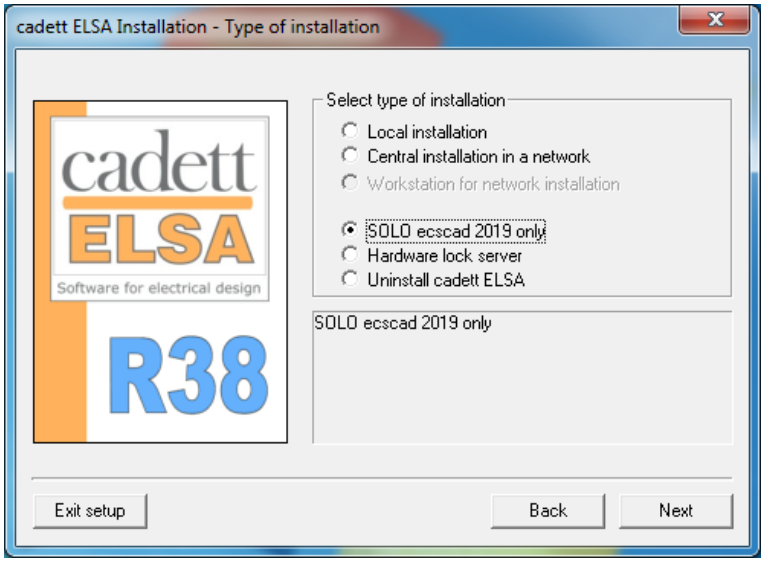

Figure 103: The option of making a Solo ecscad installation only.

Figure 103 above shows the menu option that specifically installs Solo ecscad and nothing more.

8.2.2 Procedure

Regardless of in which way the Solo ecscad installation procedure is started, it will be simple, but maybe a bit time-consuming due to the pure size of the software.

An obstacle that you might run into in the very beginning of the Solo ecscad installation procedure is shown in Figure 104 below. If a reboot of the computer is pending, like for a Windows Update or similar, the Solo ecscad installation is blocked, and a dialogue will inform you of this.

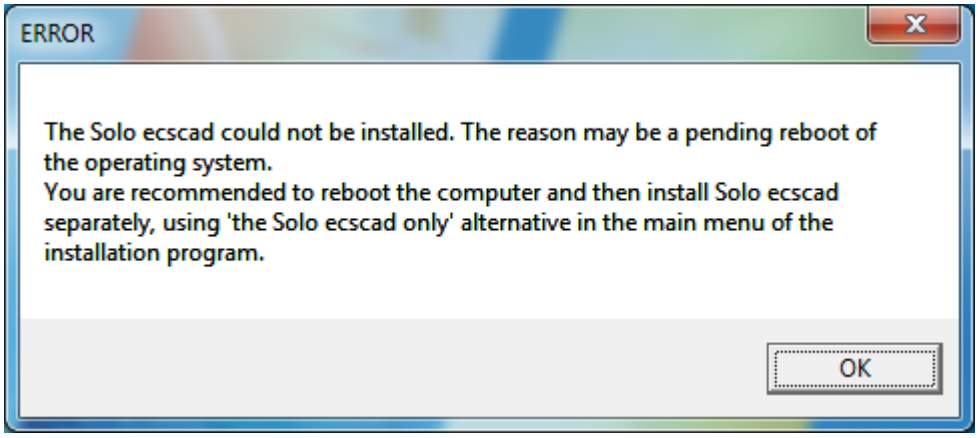

Figure 104: A pending reboot is blocking the Solo ecscad installation. Please reboot and try again!

In that case, you simply abort the installation, restart the computer and then restart the installation.

If no reboot is blocking the installation, the installation package for Solo ecscad is unpacked and prepared for use. That part of the procedure will be running in silent mode, without any questions or dialogue boxes to make configurations. Instead, while the unpacking is made, information about Solo ecscad itself and other features of the current cadett ELSA version is presented on the screen, like shown in the picture below.

Figure 105: The Solo ecscad installation package is unpacked in silent mode.

When the unpacking is finished, the dialogue will disappear for a brief moment, after which a dialogue will inform you about the initialization of the Solo ecscad installation as shown in Figure 106 below.

Figure 106: The Solo ecscad installation is initialized.

After the initialization, you are asked to continue the installation by clicking **Install** in the lower right corner of the dialogue, like shown in Figure 107 below.

*Figure 107: To continue the Solo ecscad installation, you click **Install** in the lower right corner.*

The installation will then proceed for a few minutes, as shown in Figure 108 below.

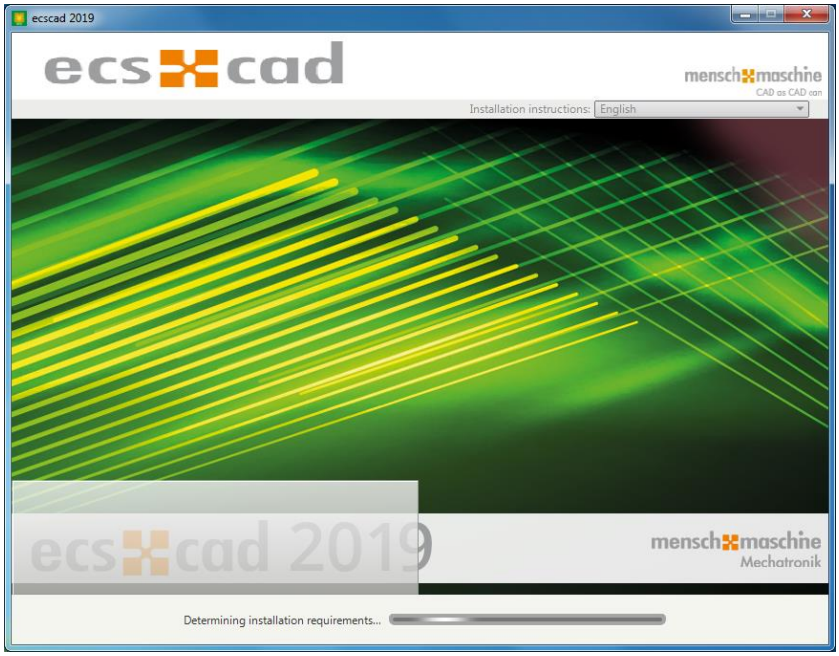

Figure 108: The installation continues.

The license agreement is displayed, as shown in Figure 109 below. Please select the current country, accept the terms by selecting **I Accept** and then click the **Next** button to continue.

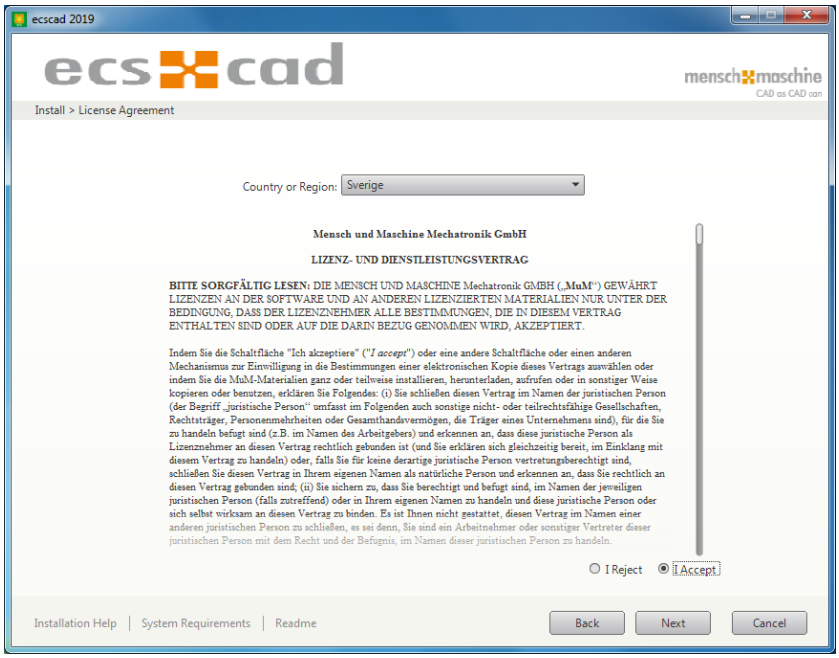

*Figure 109: Please select the current country, **I Accept** and then **Next**.*

You will be asked to adjust and confirm the selected folder in which to install the software sa shown in Figure 110 below. In almost all cases, it is best to accept the default.

Figure 110: The Installation path for the Solo ecscad is specified.

The longest delay during the installation procedure will follow, when the main part of the installation is performed, which will typically take a few minutes. A dialogue as shown in Figure 111 below will inform you of the progress.

Figure 111: The installation is proceeding.

You will be informed that the installation has succeeded by a dialogue like shown in Figure 112 below. Please click **Finish** to continue to the final steps.

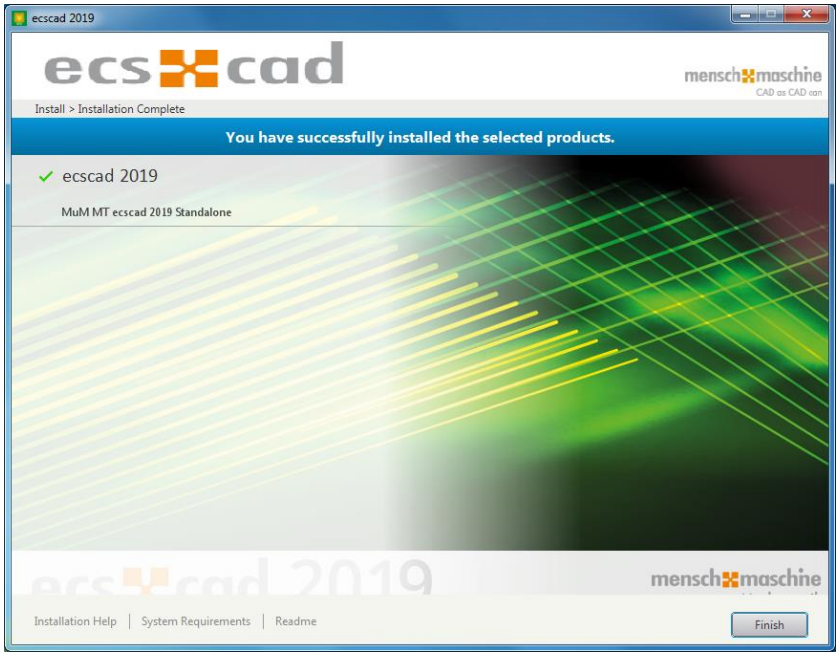

*Figure 112: The Solo ecscad installation is almost finished. Please click **Finish**.*

In some cases, a reboot is necessary to finalize the installation. In such cases, a dialogue like shown in Figure 113 below will be displayed. In that case, please click No and continue the installation until it is completely finished. Then reboot your computer.

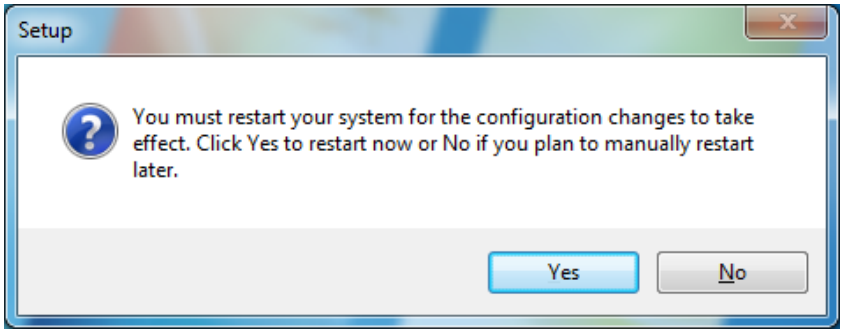

*Figure 113: If this dialogue turns up, please click **No** to restart later.*

A dialogue like shown in Figure 114 below, will inform you that the installation is completely finished.

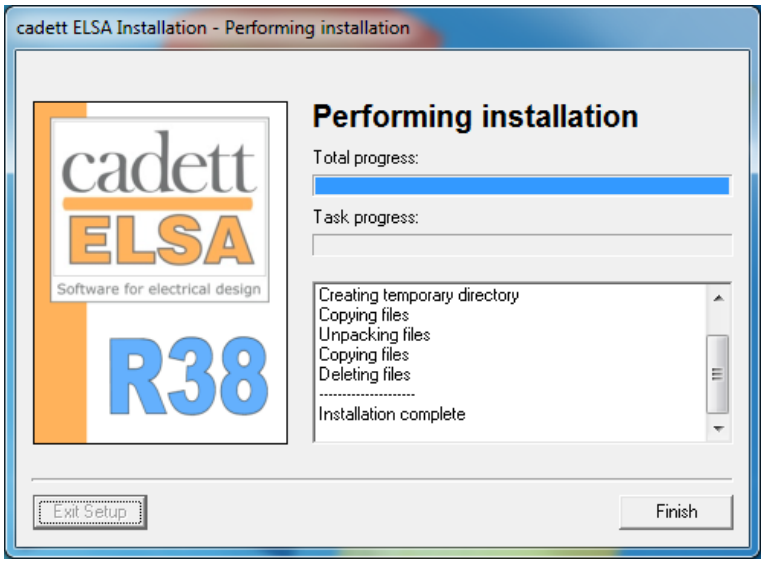

*Figure 114: The installation is completed. Please click **Finish** and then restart your computer.*

Please click **Finish** and then restart your computer, if you have been informed of such a need.

8.3 Solo ecscad licensing

To run Solo ecscad, you need two license keys:

- A cadett ELSA Solo license provided by the cadett ELSA hardware lock

- A Solo ecscad license provided by a license service installed on a license server

The license service for Solo ecscad is of the same type as the one used for network licenses of AutoCAD (FlexLM/LMTOOLS). If you already have a running license server of that kind, you can add the Solo ecscad licenses to that. If you do not have such a license server already, you need to create one. It can be installed on a server, which is the only practical solution if you have multiple licenses. It can also be installed on the workstation itself, which is a practical solution for local installations, where you want to bring the license along, when for example travelling or for other reasons not being connected to a network.

For the licensing to work, you need to:

- Install a license server
- Get a license file
- Configure the license server
- Configure the workstations

You will find the necessary instructions below.

8.3.1 Installing a Solo ecscad license server

First, you need to decide on which computer the license server should be installed. Typically, a Windows Server is used for this purpose, for instance the same server that is used for cadett ELSA and/or the license server for cadett ELSA.

However, using a Citrix Server as a Solo ecscad license server might create problems. Therefore, if you are using a Citrix solution, you are advised to separate the Citrix server and the license server.

After making a cadett ELSA server installation or a cadett ELSA local installation, you will find the installation file needed to install the license server here:

\ELSA\Installer\SOLO_ECSCAD_LICENSE

The name of the installation file is:

SOLO-ecscad_LicenseServer_Installer.exe

Using Windows Explorer, please navigate to the folder specified above. If you have decided to use another server as license server, please copy the License Server installation file to that server.

When the installation file is properly located somewhere on the Windows Server that you want to use as license server, please make sure that you are actually logged on with remote desktop or similar on that server.

(If the license server and the cadett ELSA server are in fact the same server, you do not need to copy the installation file. That is true also for local installations, where the workstation is actually acting as both cadett ELSA and license server, besides from being a workstation).

Please make sure that you have administrative rights for the following steps.

8.3.1.1 Installing the license server

Please start the installation by double-clicking the installation file.

Figure 115: The installation file located on the desktop.

Normally, depending on your Windows policies, you will immediately elevate to administrator, which may require additional access information to be entered.

Figure 116: The License Server Installer has been started.

Please click **Continue** to start the procedure (please refer to Figure 116 above) and then accept the terms of the license agreement (please refer to Figure 117 below).

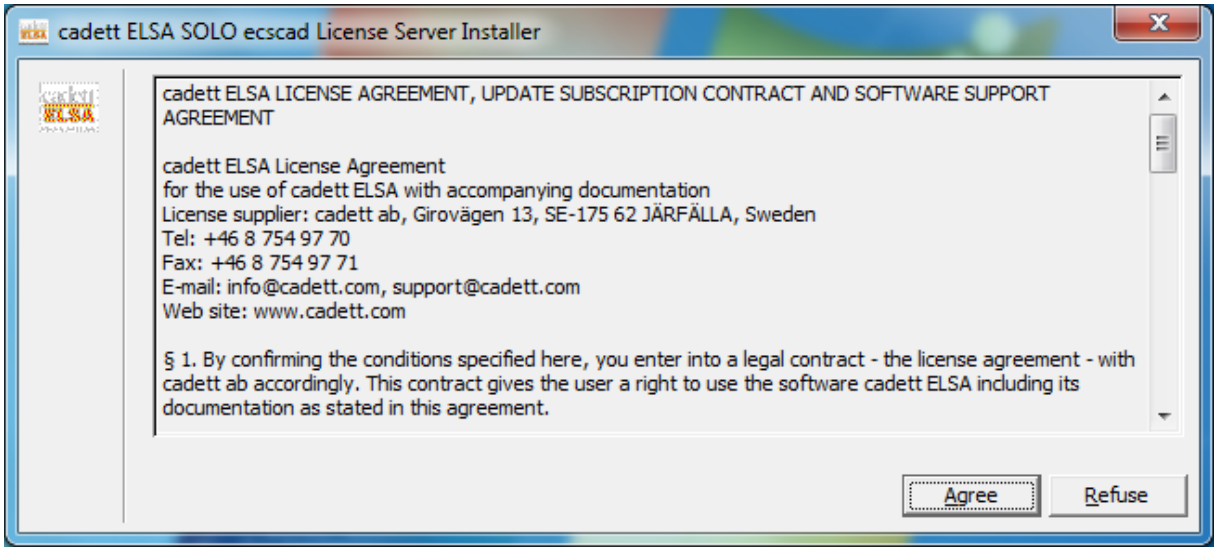

Figure 117: The License Agreement is confirmed. Please do not forget to check all the legal details with your lawyers!

Next, you will specify the directory in which the license server files should be placed. Please refer to Figure 118 below.

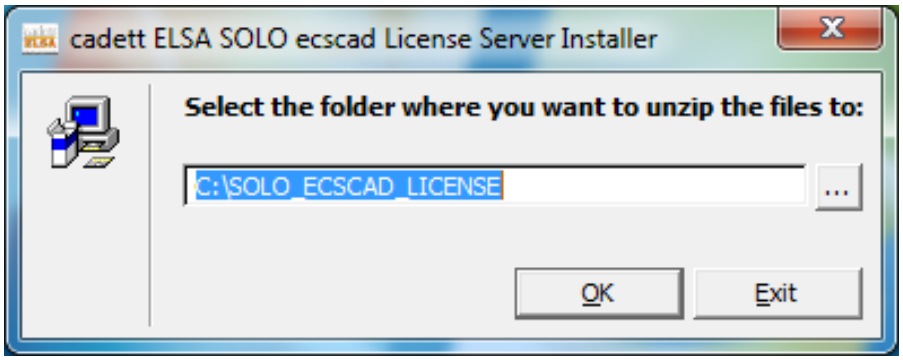

Figure 118: The directory for the license server is specified here. The default is recommended.

The default directory of the license server will do fine. You should not place the license server in the Program Files folder, since license files and log files will also be located in the same directory. The editing of those files, which is necessary, would likely be prevented by security principles if they were placed under Program Files.

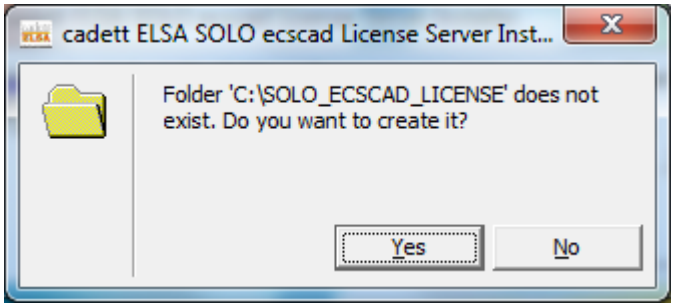

Figure 119: The creation of the specified directory is confirmed.

Please confirm the creation of the specified directory as shown in Figure 119 above.

When the installation procedure is ready, you will be presented with the dialogue shown below in Figure 120.

Figure 120: All files have been extracted and a shortcut has been created.

Please click **OK** and you are ready to make the necessary configurations, as described below.

8.3.1.2 Setting proper permissions to the SOLO_ECSCAD_LICENSE folder

To ensure a proper operation of the license server, the license server itself must have full access privileges to the SOLO_ECSCAD_LICENSE folder, including its subfolders.

Typically, you do that the following way:

- Right-click the **SOLO_ECSCAD_LICENSE** folder using the Windows Explorer.
- Select **Properties**.
- Activate the **Security** tab.

- Make sure that the **SYSTEM** account, or any other account used by the license manager software, has full access privileges to the folder. If it has not, please click the **Edit** button. (Please refer to Figure 121 below).

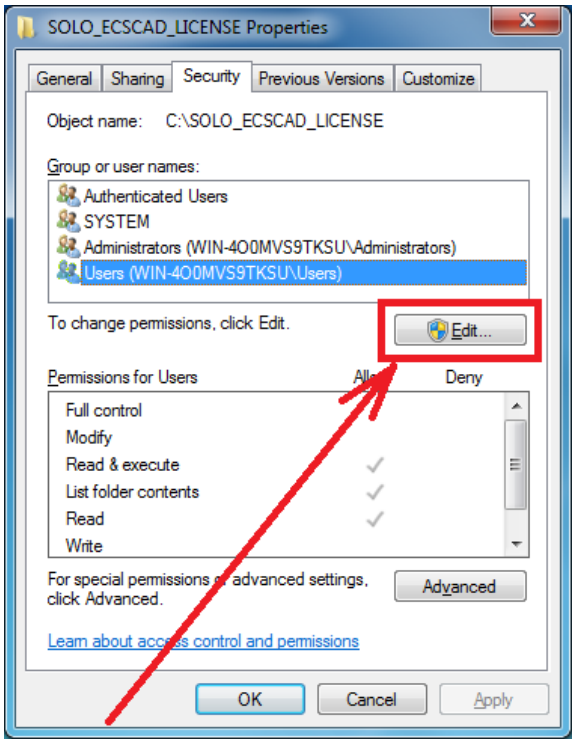

Figure 121: Edit folder permissions using the Edit button.

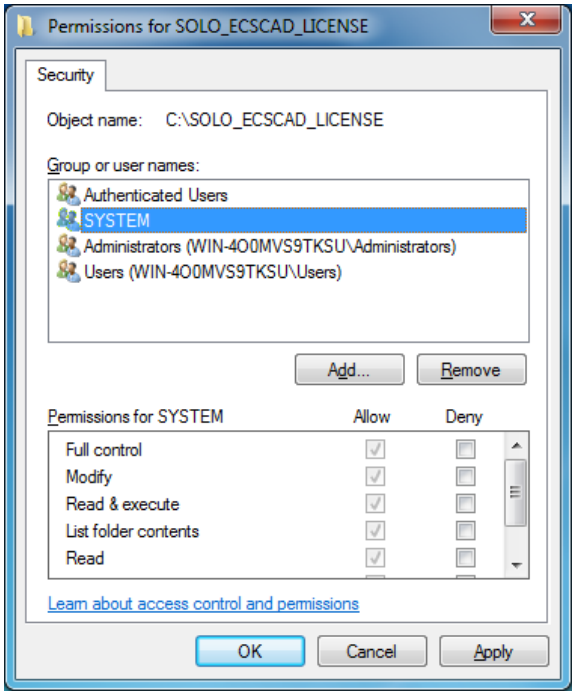

Figure 122: The SYSTEM account has been given full privileges.

- Under **Group or user names**, please select **SYSTEM** or any other account used by the license manager software.
- Check **Allow** for all permissions.
- Click the **Apply** button.

8.3.1.3 Configuring the firewall

To be able to access the license server from the workstations within the LAN, two ports must be opened on the server. How you do that, varies slightly depending on which version of Windows Server you are using and if you are using the standard Windows Firewall or not.

In any case, you need to enable access with two “Inbound Rules” for the TCP Ports 1180 and 27000–27009.

On a Windows Server 2012, you typically do that here:

Control Panel /
System and Security /
Administrative Tools /
Windows Firewall and Advanced Security
If you are using another kind of firewall, the procedure might be somewhat different.

Please note that if you only have one Solo ecscad license and you therefore have placed the license server on the workstation, you do not need to make any firewall configurations.

8.3.1.4 Collect data needed to request a license file

Please start the License Manager TOOLS software (LMTOOLS). You will find the **SOLO ecscad License Manager** shortcut under **All Programs / cadett ELSA**.

Figure 123: The shortcut for the License Manager.

Please start the program. The License Manager Tools program will then elevate to administrator and you will be presented with the dialogue shown below in Figure 124 below.

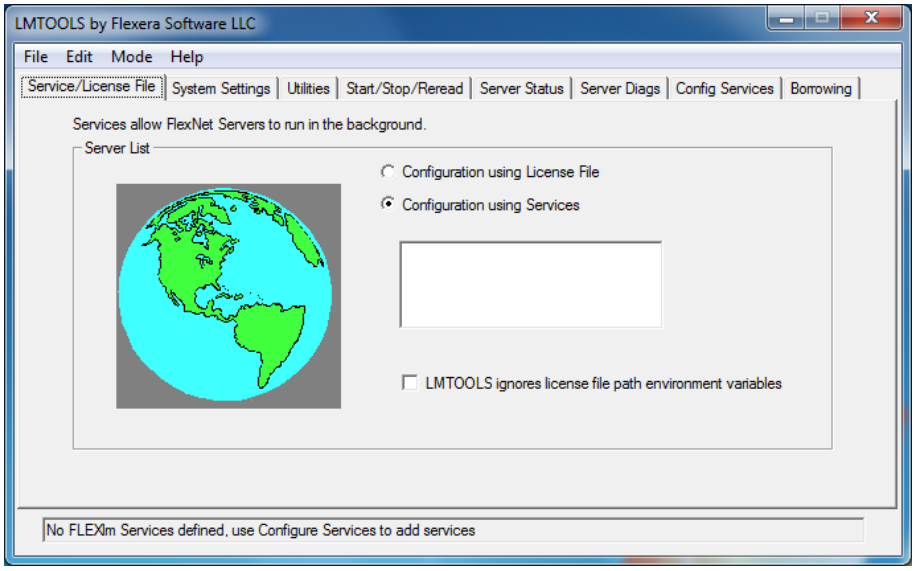

Figure 124: The LMTOOLS main dialogue.

Please activate the **System Settings** tab, as shown below in Figure 125 below.

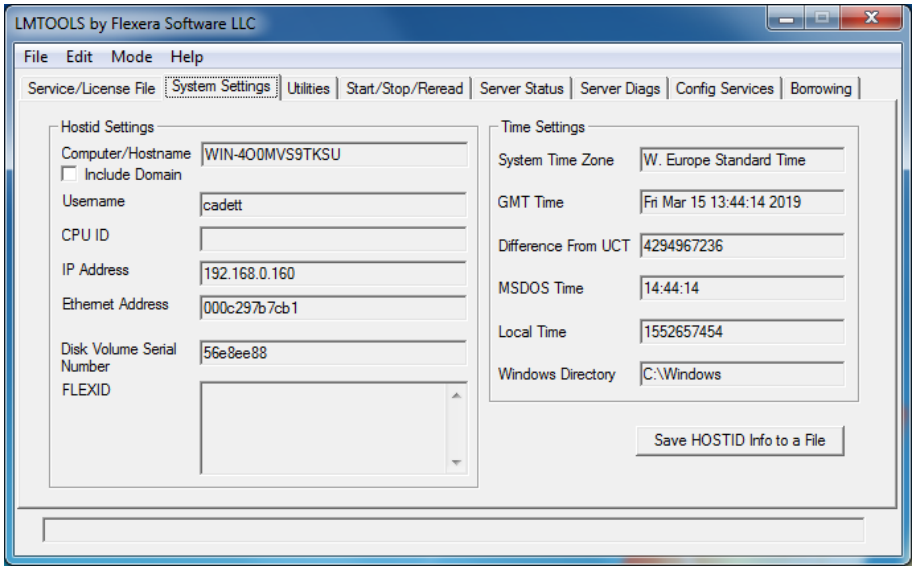

Figure 125: The System Settings tab where you can collect the information needed to request a license file.

The **Computer/Hostname** and the **Ethernet Address** will soon be needed. Either you can copy them directly from the dialogue box, or you can save the information to a text file using the **Save HOSTID Info to a File** button.

Please assemble an e-mail with a request of a proper license file. Send that e-mail to:

license@cadett.com

The following information must be included in the e-mail:

Information item		Example
E-mail address for delivery of the license file		myname@company.com
Company name		Electrical Devices Ltd.
Contact person, first name		Buzz
Contact person, last name		Lightyear
Full postal address	Street/number	Shortcut street 230 V
	Zip code	SE-123 45
	City	Stockholm
	Country	Sweden
MAC address (from LMTOOLS)		000c297b7cb1
Host name (from LMTOOLS)		LICENSE_SERVER_1
Licenses to include in license file		5 licenses Solo ecscad 2019
License number(s)		123-4567890

Please allow for around 48 hours for the license file to be delivered to the specified e-mail address.

8.3.1.5 Place the received license file in the proper folder

When you receive the license file (a file with extension ".lic"), please copy it to the License folder located here:

C:\SOLO_ECSCAD_LICENSE\LMTOOLS\License

If the License sub-folder of the LMTOOLS folder does not exist, please create it.

8.3.1.6 License service configuration

Please start the **License Manager TOOLS** software (LMTOOLS) using the shortcut in the Start menu (**All Programs / cadett ELSA / SOLO ecscad License Manager**).

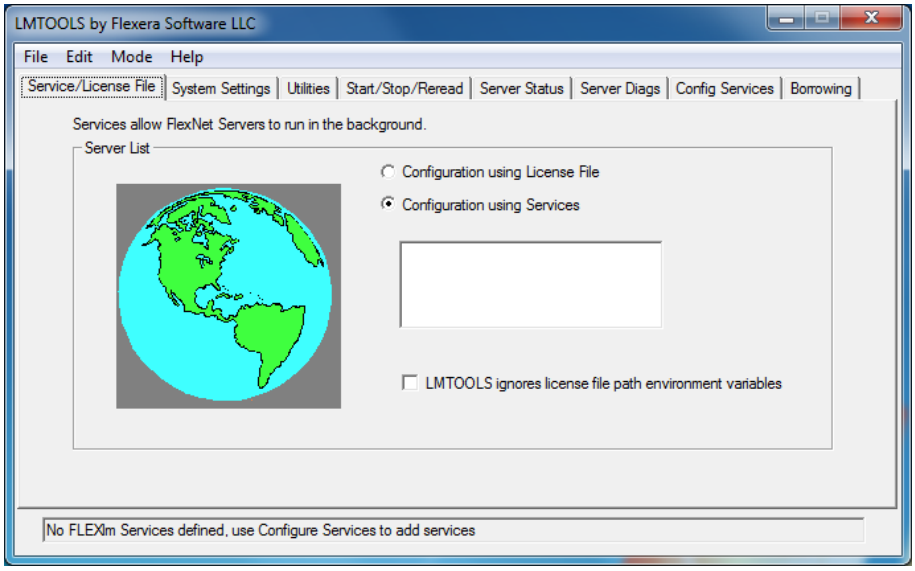

Figure 126: The License Server main dialogue.

A dialogue box with multiple tabs is displayed. It might look a bit complicated, but it is easier to handle than it seems. Please simply follow the steps described below.

First, activate the **Config Services** tab as shown in Figure 127 below.

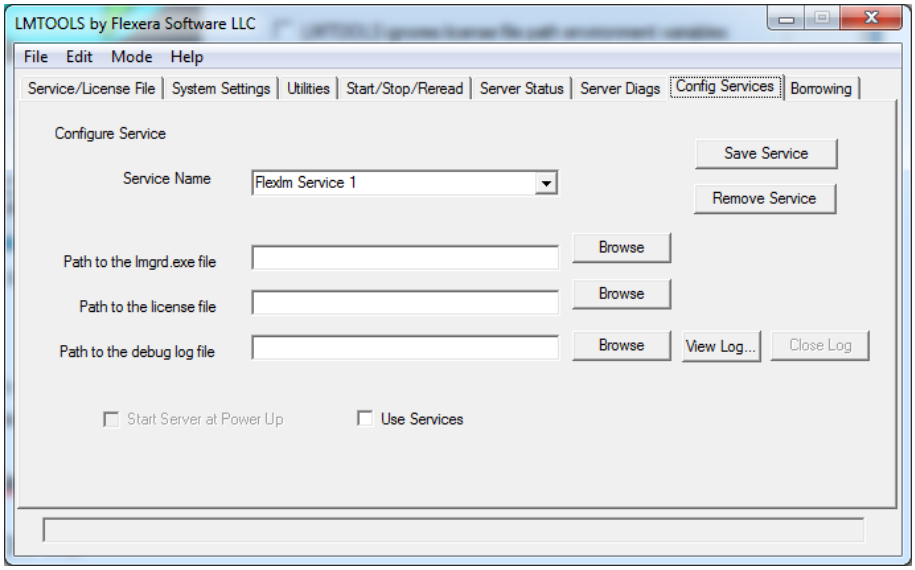

*Figure 127: The Config Services tab where you perform the first configurations. Please note that the default **Service Name** shown above should not be used!*

The first thing to decide then is what the **Service Name** should be.

The name of this service can be chosen freely. The default is however not a good option. Names like "**cadett ELSA Solo**" or "**Solo ecscad**" are instead recommended. In that way you can separate these licenses from possible other licenses, for example standard AutoCAD or other products from other suppliers. Simply type a suitable name in the **Service Name** field.

An example is shown in Figure 128 below.

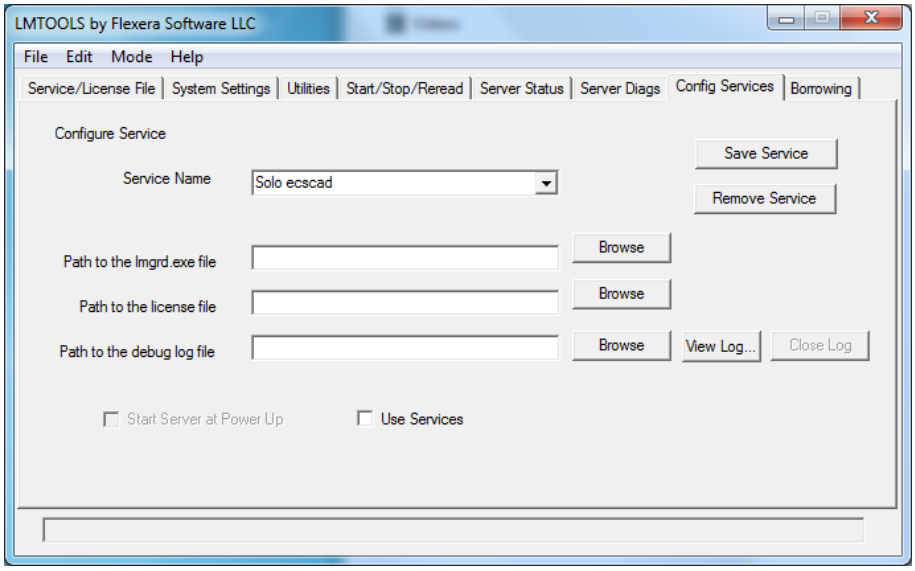

Figure 128: A proper Service Name has been entered.

The second thing to do is to specify the location of the **lmgrd.exe** file. That is done using the **Browse** button to the right of the second field counted from the top.

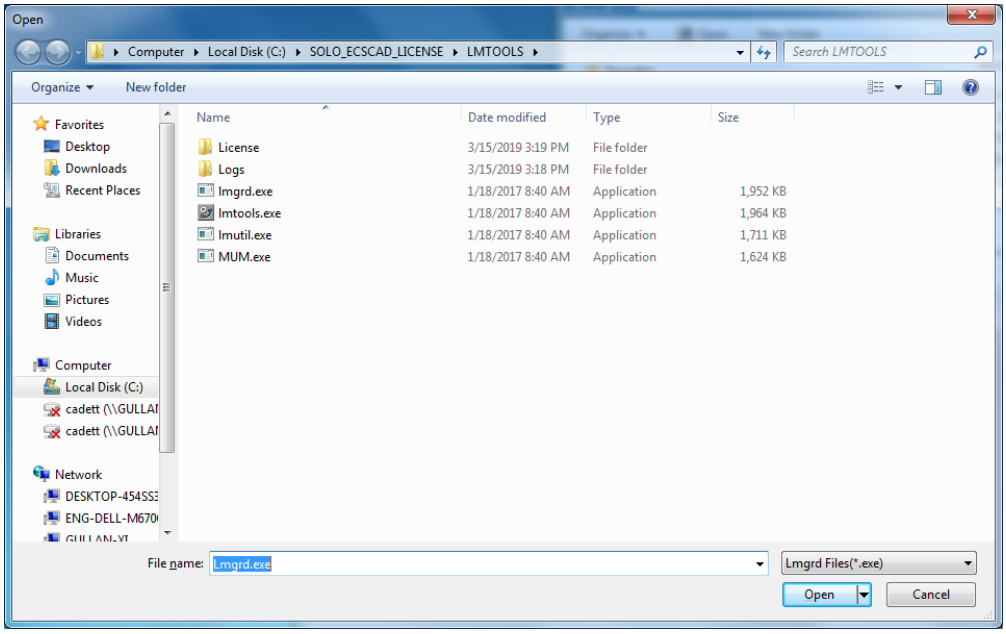

Figure 129: Browsing for lmgrd.exe.

When you click the **Browse** button to locate the **lmgrd.exe** file, by default you will open the correct folder, so it is very easy for you to find and select the file. Simply click the **Open** button. Please refer to Figure 129 above.

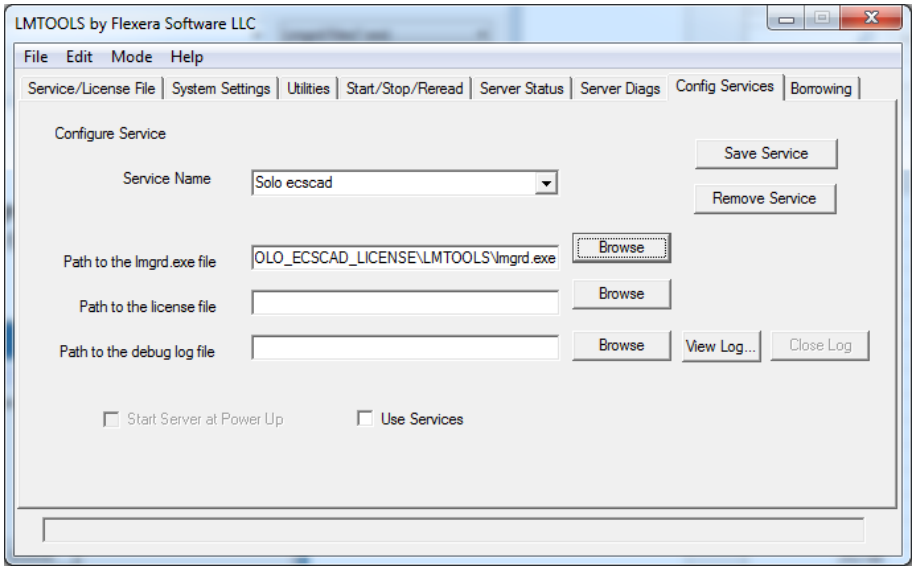

Figure 130: The path to the lmgrd.exe has been specified. The next step is to specify the path to the license file.

The next step is to select the license file, which by then should be placed in the License folder. Please click the License file **Browse** button and navigate to the License folder and there to the license file itself.

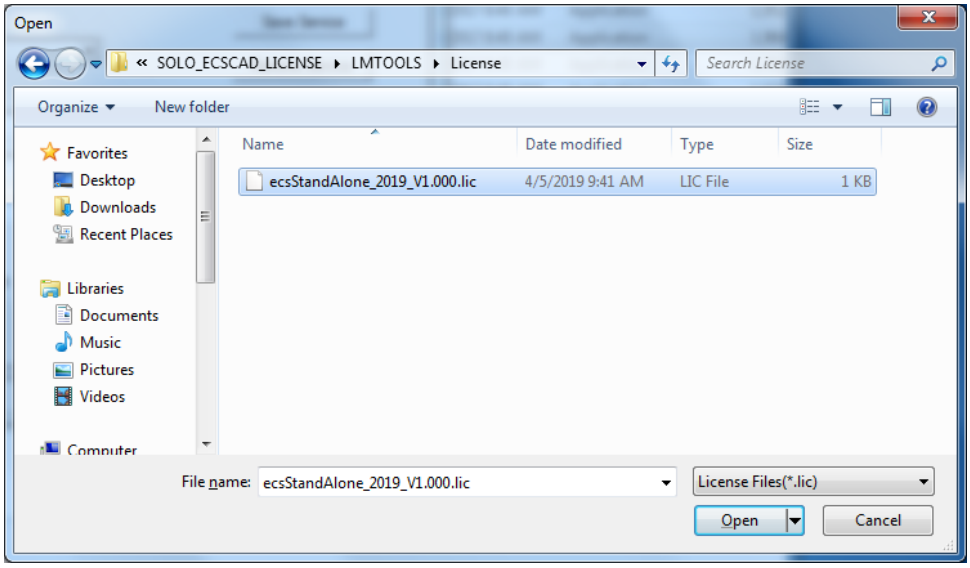

Figure 131: Browsing for the license file.

After selecting the license file and clicking the **Open** button, as shown in Figure 131 above, the full path to it is displayed in the main dialogue box, like shown in Figure 132 below.

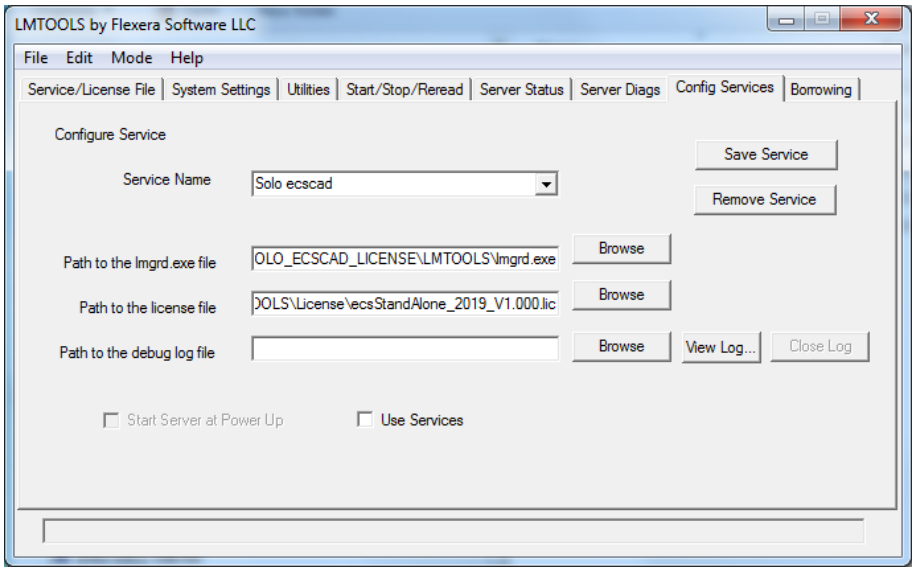

Figure 132: The license file path has been specified. The next step is to specify the debug log file name and path.

Continue with the third and final path specification, the name and location of a debug log file, which is a file with file extension ".log". An empty log file is already in place in a suitable folder named Logs, so you can simply navigate to that folder and that file using the **Browse** button.

C:\SOLO_ECSCAD_LICENSE\LMTOOLS\Logs\LOGFILE.log

If, for some reason, that empty log file does not exist, or maybe even the folder for it does not exist, please create both the folder and the empty file manually, before selecting the file as described.

Please select the LOGFILE.log and then click **Open**.

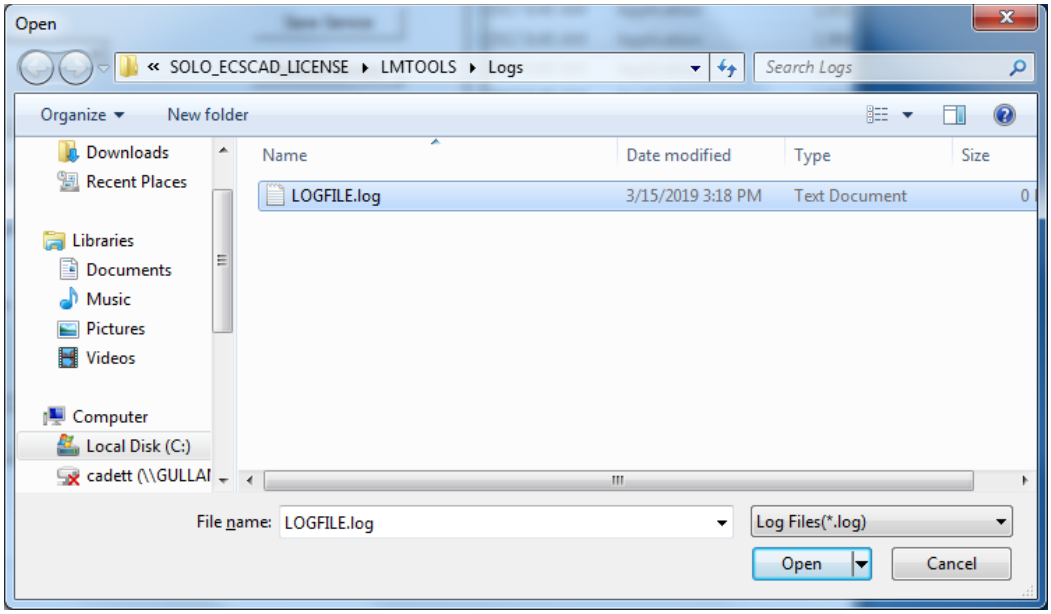

Figure 133: The LOGFILE.log in the Logs folder is selected. If the file does not exist, please create it manually.

Please activate **Use Services** and **Start Server at Power Up** using the two check-boxes found in the lower part of the dialogue as shown in Figure 134 below.

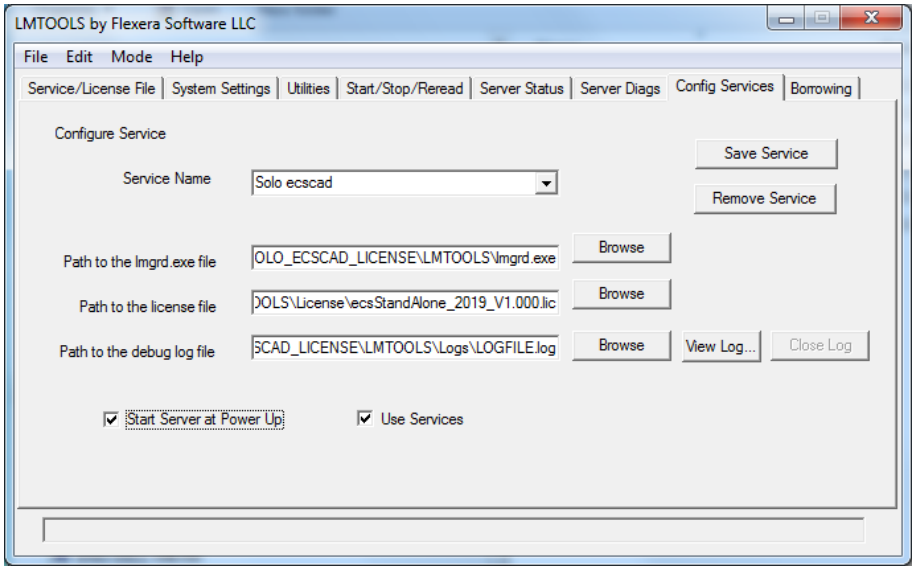

*Figure 134: Activation of **Use Services** and **Start Server at Power Up**.*

Finally, click the **Save Service** button in the upper right corner of the dialogue box.

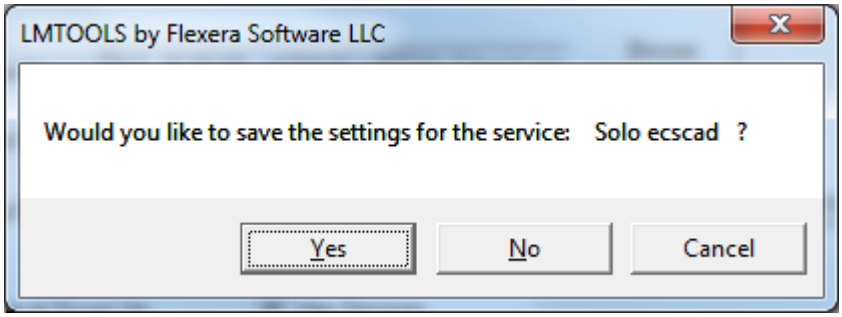

Figure 135: Confirmation of saving the settings.

You will be presented with a dialogue where you are supposed to confirm that the settings you have made are saved, as shown in Figure 135 above. Click **Yes**. The configuration of the service has then been saved and another dialogue as shown in Figure 136 below will be displayed.

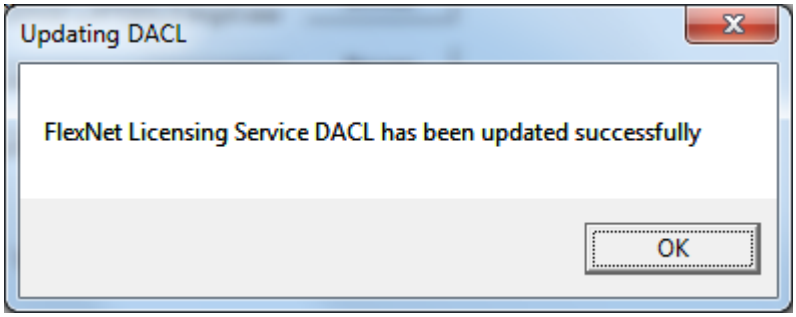

Figure 136: The Licensing Service has been updated successfully.

The next step is to restart the newly configured service. For that purpose, please activate the **Start/Stop/Reread** tab as shown in Figure 137 below.

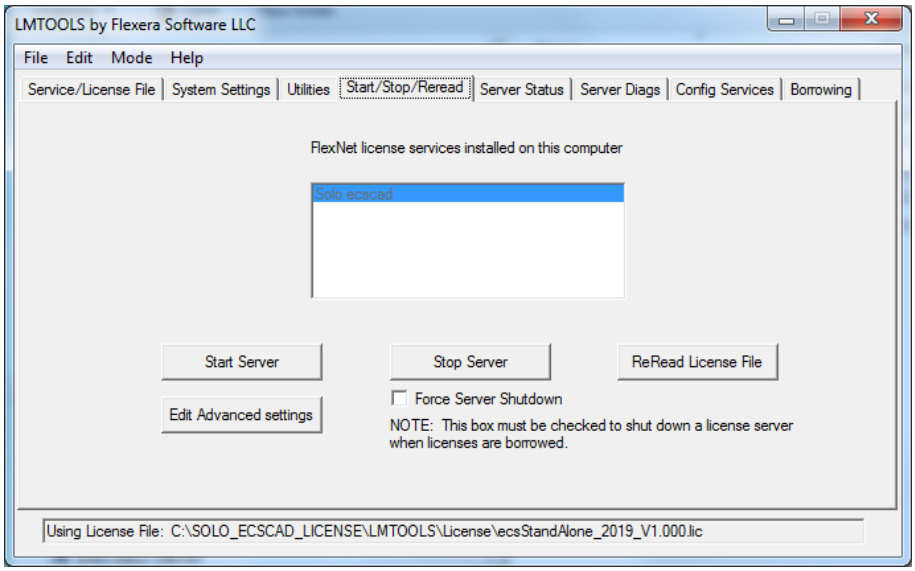

Figure 137: The Start/Stop/Reread tab.

To be sure, even if you believe that the service is not running, stop the service by first activating **Force Server Shutdown** and then click the **Stop Server** button.

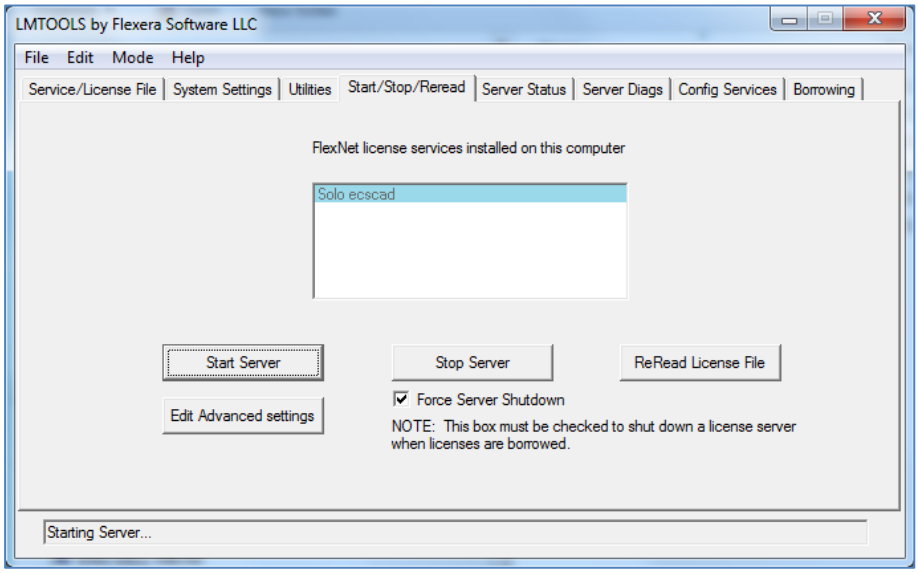

Figure 138: Starting the License Server.

Wait a few seconds and then restart the service by clicking the **Start Server** button as shown in Figure 138 above.

To verify that the service is running properly without errors, please activate the **Server Status** tab, and click the **Perform Status Enquiry** button.

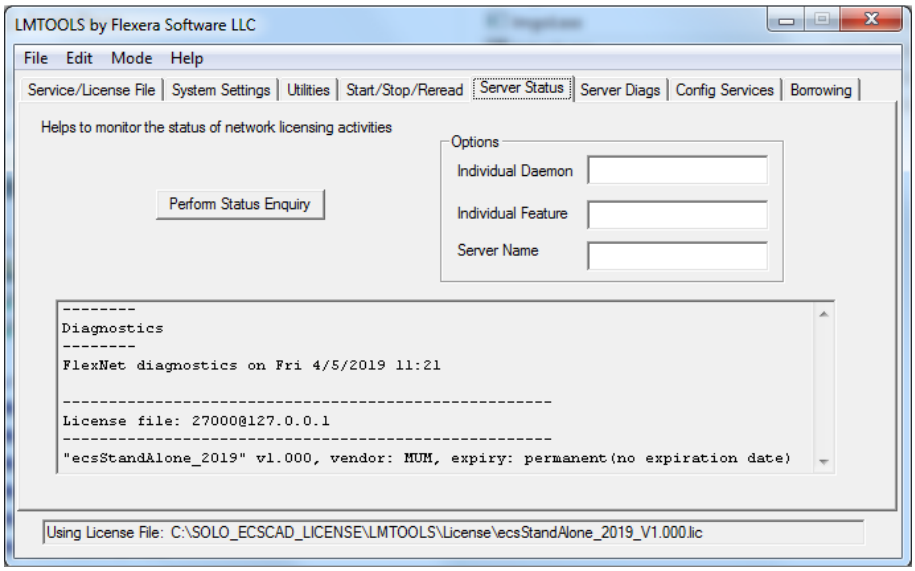

Figure 139: Result of a Status Enquiry.

If the status is displayed in the way shown in the picture above, the service is running correctly.

8.3.2 Workstation configurations

When the license server is running correctly on a server and the firewall on the server is properly configured to allow communication with the workstations, you need to configure workstations as well.

You need to do the following on each workstation:

- A firewall configuration might be needed on the workstation, in a similar way as was done on the server.
- You need to specify the name of the server where the license server is running.

If you only have one license and you have therefore placed the license server on the workstation, you do not need to make any firewall configurations.

8.3.2.1 Firewall settings

To be able to access the license server from the workstations within the LAN, the port that is used must be open for that communication. Therefore, you might need to configure the firewall on the workstation to enable this access with an "Outbound Rule" for TCP Ports 1180 and 27000 – 27009 within the domain.

To make this configuration, administrator rights are needed.

A typical way of accessing the configuration for the firewall is the following:

Control Panel /
System and Security /
Windows Firewall /
Advanced settings

Please note that this may vary depending on which operating system you have on your workstation, and if you are using the original Windows Firewall or something else.

Technical note
If you are using any standard Autodesk products on the same workstation and need to communicate with a license server for them as well, you typically also need to open port 2080 for that purpose.

8.3.2.2 Select license server

The first time you open a drawing sheet from the Drawing Manager, meaning the first time that you start the Solo ecscad after installation, a dialogue will be displayed where you are supposed to enter the name of the Host computer (server) where the License Server is running. The dialogue looks like shown in Figure 140 below.

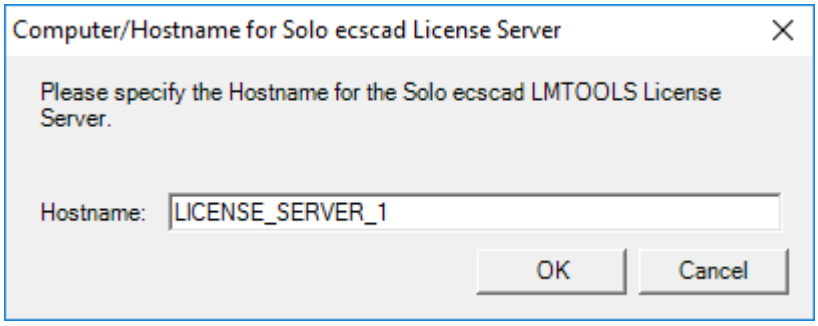

Figure 140: Specification of the Hostname for the License Server.

Please enter the **Hostname** as shown above. The Hostname should be identical to the Hostname that you retrieved in section 8.3.1.4 beginning in page 125 above.

After you have done that, the Solo ecscad will start and you are up and running.

If your License Server is located directly on the workstation, you can simplify this configuration by entering “127.0.0.1” (a so-called local loopback) instead of the name of your own computer.

9 License management / hardware locks

cadett ELSA is protected from unauthorized use with a so-called hardware lock.

Regardless of the number of available licenses, cadett ELSA can be installed legally without any reservations on an unlimited number of workstations. It is however forbidden to use the program on more computers at the same time than there are available licenses.

As an easy way to enforce the compliance of the above stated rules and to prevent unauthorized use, hardware locks are used. There are two types available:

Local locks

Local hardware locks always contain one single license per lock. The hardware lock is connected to the workstation where the license is to be used. If you want to move the license to another computer, you simply move the hardware lock to that computer.

The hardware lock is connected to a USB port of the computer. (An older type is also still in use in some places, connected to a parallel port).

Network locks

This type of hardware lock is connected to a server, usually but not necessarily the same server where cadett ELSA is installed, and does always contain more than one license. The licenses do not have to be for the same product. It can be a mixture of different cadett ELSA products.

The lock itself is connected to a USB port of the server. (An older type connected to a parallel port is also still in use in some places).

The communication between the server and the workstations uses the TCP/IP protocol.

A license calculator on the server makes sure that no more than the maximum available licenses in the hardware lock are running in the network at the same time.

Two programs are installed on the server for this management. One of them is a driver for communication with the physical lock. (The same type of driver that is used on the workstations when using local hardware locks). The other is a service that controls the communication with the workstations and contains the license calculator mentioned above.

Regardless of the selected hardware solution, the lock (or locks) will give access to the specific number of licenses and license types you have purchased. The locks are therefore unique and dependent on the selection of available products you have bought.

- If you for instance have a lock for *cadett ELSA Basic,* you cannot use the functions that only exist in *cadett ELSA Professional*.

The simple logic is that you can always use a simpler solution than you have purchased, but never a more advanced.

The cadett ELSA licenses are always “floating”, regardless of whether you have selected a local lock or a network based lock. This means that you can move licenses between computers as desired. The technical management of this varies however. A local lock must be moved physically. For a network lock, the only action needed to move a license from one workstation to another, is to shut down cadett ELSA on one computer and then start the software on another. This is of course more convenient in a network, but has the drawback of not allowing the software to be used without a network connection (for instance on a stand-alone laptop).

You can freely mix the different lock types in the same cadett ELSA installation, and have some licenses in a network lock and some in local locks. This is often the optimal compromise, benefiting from both solutions at the same time.

Worth mentioning, and sometimes important to note is that the selection of hardware lock solution is completely independent of the type of installation of cadett ELSA. The software can be installed either locally or as a network installation. Regardless of the installation type, you can freely select between local hardware locks and network locks, and vice versa. All combinations are possible.

Another important note is that the hardware locks are to a large extent backwards compatible with older versions of cadett ELSA. The current hardware locks can therefore be used all the way back to cadett ELSA 7.0, which was released in 2002.

9.1 Installation

Depending on the type of hardware lock you are using, some extra steps might have to be performed during the installation in order for the hardware lock routines to work properly.

This is described below.

9.1.1 Configuring the hardware lock search

By default, a cadett ELSA workstation or a local installation is configured to search for both local and network locks. Searching for locks that does not exist may in some cases cause problems such as un-necessary delays or other issues.

Obstacles or other circumstances in the network may also in some cases make it necessary to specify the IP address of the license server manually in order for the communication to work.

The configuration is made using a dialogue box that can be accessed in two different ways:

1. If a hardware-lock does not provide a valid license when cadett ELSA is started – for whatever reason – a dialogue box will tell you this. In that dialogue, you click the **Settings** button. Another dialogue is then displayed where you can click a button designated **Advanced…**. The appropriate dialogue box for the configuration in question is then displayed.

2. If you have succeeded to start cadett ELSA properly, you can access the same dialogue box from the **Tools** pull-down menu where you select the **Alternatives (settings)…** and then click the **Advanced…** button.

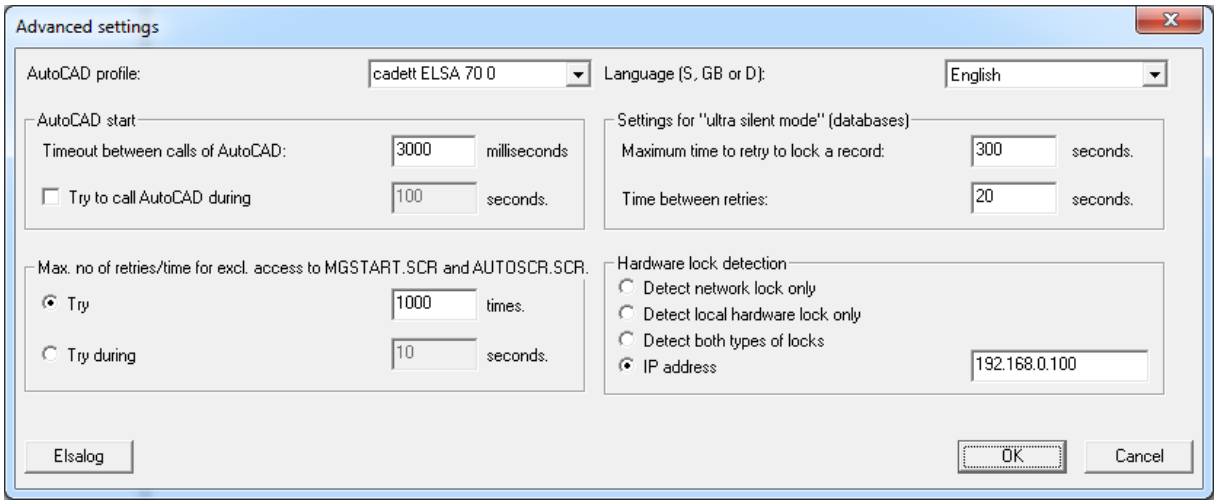

Figure 141: The Advanced settings dialogue box.

The **Advanced settings** dialogue box is shown in Figure 141 above.

The relevant section of that dialogue box is found in the lower right corner and is designated **Hardware lock detection**. That section is specifically shown in Figure 142 below.

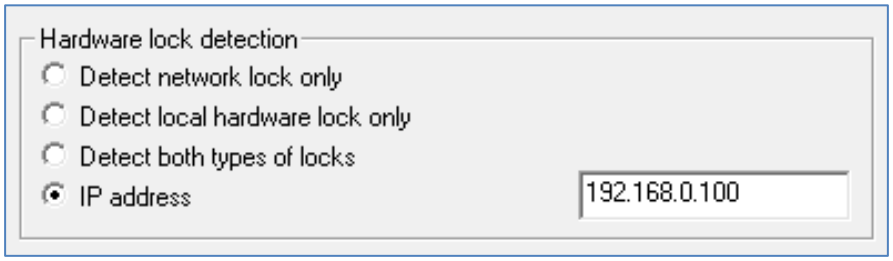

Figure 142: The Hardware lock detection section of the Advanced settings dialogue box.

You can select four different alternatives using radio buttons. These alternatives are described below.

Detect network lock only — No search for a possible local lock is made. The network is searched for license servers with locks using broadcast technology. No further configuration is necessary. Security limitations

	in the network however in many cases does not allow for this method. In such cases, the **IP address** option should be used instead.
Detect local hardware lock only	No search for network locks is made. If no local lock is connected, you will be given notice of this directly. If the network would also be searched for a possible lock and such would not exist, a substantial delay would occur before a message could be displayed. That delay is avoided with this setting.
Detect both types of locks	This is the default setting. First, a search is made for a local hardware lock. If such is not found, a search for a network lock is made using broadcast technology. If that search also fails, a second attempt to find a local lock is made, before the software gives up and displays an error message.
IP address	Only the server with the specified IP address is searched for a license server with an available license. This method will work fine even if broadcasts are blocked. Please note that a genuine IP address must be specified such as “192.168.0.100” in the example shown in Figure 142, page 140.

9.1.2 Local USB-lock

If you have a USB-lock, the handling is identical with the parallel port lock. In other words, normally you do not need to install any driver manually. This is done automatically during the normal installation procedure.

Please note however that the USB-lock must not be connected when the installation is made. If it is already connected, simply disconnect it before running the installation. When the installation is finished, you connect the USB-lock to any USB port of the computer. The program is then ready to use.

If problems with the hardware lock should occur, please read about trouble shooting in section 9.3 page 145.

9.1.3 Network lock

As mentioned above, the driver for a local hardware lock is installed automatically during the standard cadett ELSA installation. This is true for network locks as well. When making the central installation on a server, all necessary drivers to use the same server as a license server are automatically installed.

In some cases, it might be beneficial to use a separate server for the licenses. The license server must then be separately installed on that server. This could for example be a good idea when using a virtual server for cadett ELSA. A separate physical server can be used for the license server and the hardware

lock. (There are also solutions available where a USB lock is connected to a virtual server). The procedure to install a separate license server is described in section 9.3.3, page 147.

A network hardware lock is technically different from the local locks. In other words, it is not possible to use one type instead of the other or the other way around.

9.2 Updating hardware locks

For each new version of cadett ELSA, the hardware lock needs to be updated. This prevents unauthorized usage of versions when no license has been purchased.

If you are using a network based hardware lock and need to add new licenses, you might not need to get a new physical hardware lock. An update of the existing hardware lock, like for new versions, might be sufficient. The procedure is the same.

Each network hardware lock has a maximum number of licenses that it can contain. As long as the total number of licenses is lower than or equal to that maximum number, you can add licenses without physically replacing the lock.

9.2.1 General procedure

To avoid unnecessarily interrupting production, please proceed as follows:

1. Send a request for a hardware lock update to license@cadett.com. The most important information that you need to provide in your e-mail is the serial number of the hardware lock. The serial number is a four digit hexadecimal number (in the interval 0000 – FFFF) which is printed on the physical lock or on a label attached to it.

2. You will get a reply containing a license code. Using that code, you can update the hardware lock.

3. If the number of licenses is changed in the update, the license server needs to be restarted. If the number of licenses is unchanged, no restart is needed. When updating cadett ELSA on the license server, a restart of the license server is made automatically, so no additional measures needs to be taken. If the license server is not located on the same computer as the cadett ELSA installation, you need to restart the license server manually when applicable. The same is true if the reason for the hardware lock update is not a new version but for instance an increased number of licenses.

4. When all your hardware locks are updated and working, it will be time to update the software.

9.2.2 Using FieldExUtil.exe for hardware lock updates

How you update a hardware lock, is described in practical terms below.

First, you must make sure to use the console of the computer to which the hardware lock is attached.

- For a local lock, you simply run the procedure on the computer to which the lock is connected.
- For a network lock, if you cannot, or do not like to, physically access the server, you therefore need to use remote desktop or similar to be able to execute the update procedure on the server itself.

The procedure is as follows:

- Use Windows Explorer to find and start **FieldExUtil.exe**. The location of that file is **\ELSA\HWLOCK\LICENSE_UPDATE**.
    - For a local hardware lock in a local installation that would typically mean that you double-click **C:\ELSA\HWLOCK\LICENSE_UPDATE\FieldExUtil.exe**
    - For a local hardware lock in a network installation that would typically mean that you double-click **X:\ELSA\HWLOCK\LICENSE_UPDATE\FieldExUtil.exe** (or similar).
    - For a network lock, it would typically mean that you double-click **C:\CADETT\ELSA\HWLOCK\LICENSE_UPDATE\FieldExUtil.exe** (or similar).
- A dialogue box like the one shown below in Figure 143, page 143, will be displayed.

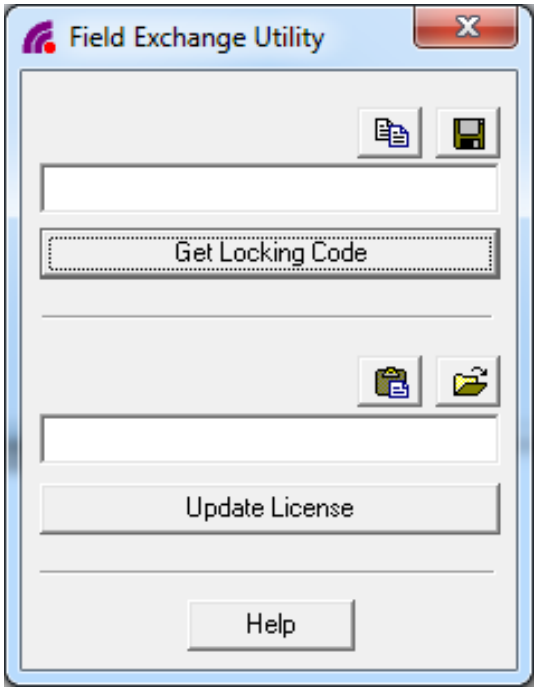

Figure 143: The FieldExUtil hardware lock update utility.

- Click the **Get Locking Code** button to verify that the communication with the hardware lock is working. A code should be displayed, like shown below in Figure 144, page 144.

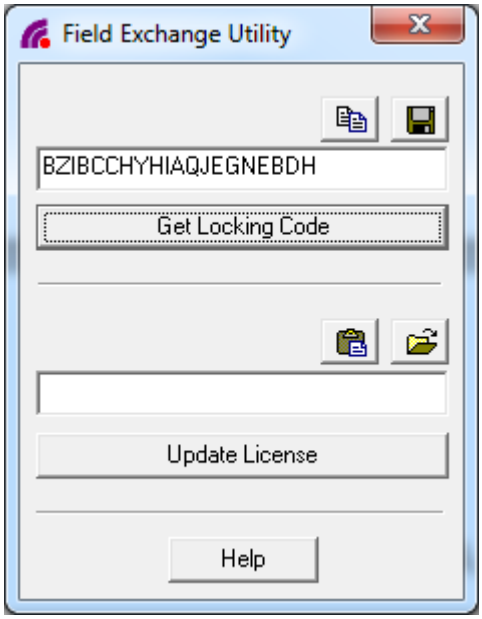

Figure 144: The Locking Code is displayed.

- In cases where the hardware lock communication fails, the text “Error” is instead displayed. That typically happens when you are executing the utility on the wrong computer, like on the workstation when the hardware lock is connected to a server.

- In some cases, you need to send the code to cadett, but in most cases that is not necessary. If needed you will be asked for it.

- The so-called “License Code” will be sent to you in an e-mail from license@cadett.com.

- Copy the License Code from the e-mail and paste it in the field directly above the **Update License** button. Please make sure not to add any additional characters like linefeeds or similar. The entire License Code, which might be quite long, must be in one single line.

  Example of a typical License Code:

  EDHOGOJDBIJCAFJTAFHKFXBRDOGUDWFYDJHHDAHSEEAGFHBHHYBFFMHGIYIMIYIDDFJMDMJTJNJUEMGTFRCYDLGSCBJPBFFOCWAKIZFDAKHNCAGYAZGVJACXBYAKBNGQIRJPALEKJKICFVAZHQCJJACIHUBNFCIKMQ

- Click the **Update License** button.

- If the update is successful, a message will tell you so. Otherwise, an error message will be displayed.

- A possible reason for the update failing is codes and hardware locks being mixed up. Each code can be used for one particular hardware lock only and cannot be used for any other physical hardware lock than the one for which it is intended.

9.2.3 Restarting the license server

When exchanging or updating a network-based hardware lock, you will sometimes need to restart the license server in order for the changes to take effect.

- The easiest way to restart the license server is a restart the server computer.
- If you for one reason or the other would like to avoid a reboot of the server, you can instead restart the license server separately.

How you restart a service without restarting the computer differs slightly depending on the operating system you are using on the server. You should try to find the **Services** feature, normally located under **Administrative Tools**, which in turn might be found in the **Control Panel**, but this differs.

In a conventional server installation there are three services running that are associated with the hardware lock management:

- Sentinel Keys Server
- Sentinel Protection Server
- Sentinel Security Runtime

Typically, the **Sentinel Protection Server** needs to be restarted in situations similar to the one described above.

You restart a service by right-clicking it and then selecting **Restart** in the context menu that appears.

9.3 Special circumstances and troubleshooting

The handling of local hardware locks is of natural reasons simpler than the handling of network locks. If malfunctioning, the troubleshooting is therefore also simpler in the local case. Below you will therefore find separate sections for local and network locks, as well as common sections for them both.

9.3.1 Local hardware lock troubleshooting

If the local hardware lock is not working, there can typically only be two explanations. The lock is either not working properly or the program is not communicating with the lock in the correct way.

Which one of these two main reasons that is causing the trouble you are experiencing can easily be settled right from the start, since the error messages are different.

In the two pictures below, the two most common error messages are shown.

Figure 145: No contact with the hardware lock.

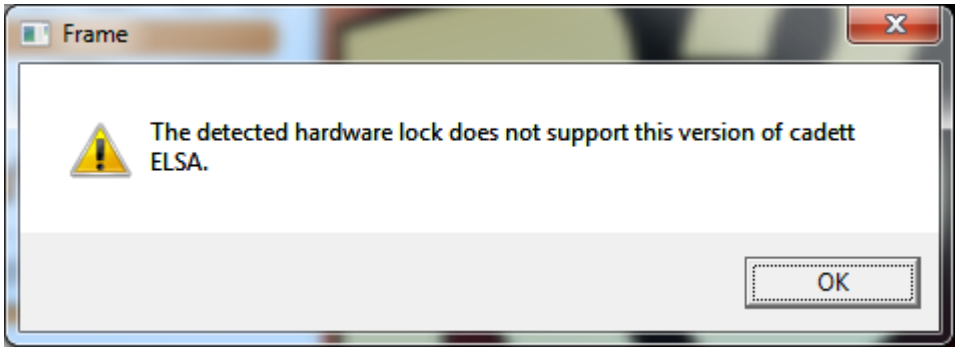

Figure 146: Hardware lock communication is fine but the lock is not.

A hardware lock driver supplies a link between cadett ELSA and the hardware lock. If this driver is communicating with cadett ELSA properly, the error message will look like shown in Figure 145. Possible causes for the error message can then be:

- The hardware lock is not connected. Investigate if the lock is properly attached to the USB port.
- The USB port is not working. Check the configuration of the USB port in the computer BIOS setup first. The reason might be simple - the USB port may be inactivated.
- The computer has not detected that the hardware lock is connected. Try connecting it to another USB port.
- The hardware lock is not working properly. It could have been damaged by for example static electricity. If you have several licenses, you can try to swap locks with a working workstation and see if the problem follows the lock, to determine if this is the case.

If the driver is not working, for instance if it is not installed correctly, cadett ELSA will not be able to connect to the driver and an error message will show up according to Figure 146 above.

- Investigate if the driver is installed. If it is not working properly, you can try to install the driver manually, possibly after uninstalling it first.

- The hardware lock is intended for an older version of cadett ELSA than the version you are trying to use. The error message will tell you so in that case.

9.3.2 Network lock troubleshooting

When a network-based hardware lock is not working properly, there is an error somewhere in a long communication chain. Understanding the different links in that chain is a very good starting point for the troubleshooting. Let us therefore spend some paragraphs and a few moments of contemplation over this.

1. A physical **hardware lock** is connected to a USB port of a server of some kind. The first link is the lock itself.

2. The hardware communication between the hardware lock and the server is made through a **USB port**. The USB port is the chain's second link.

3. A **driver** handles the communication with the hardware lock through the USB port on one side, and a service that is administrating the licenses on the other. The driver is the chain's third link.

4. A **service** is communicating through the above-mentioned driver with the hardware lock on one side and with the workstations through the TCP/IP protocol in the other. This service is the chain's fourth link.

5. The communication between the service on the server and the software cadett ELSA on the workstations goes through the **network** drivers and **TCP/IP protocol**. The network communication with the TCP/IP protocol and the physical network makes the chain's fifth link.

6. The sixth link of the chain is the **cadett ELSA** software on the workstation.

No chain is stronger than its weakest link. In addition, if one link is missing it is easy to figure out what the result will be.

The troubleshooting should hence be targeted on investigating the different links of the chain to find the flaw, so that adequate measures can be taken. Please note that more than one link in the chain might be malfunctioning.

9.3.3 Automatic separate driver installation

As described above cadett ELSA's installation program will automatically install suitable hardware lock drivers on the same computer where the software is installed, regardless of whether it is a local installation, a workstation in a network or a server installation.

If you plan to place a network hardware lock on a different server than the one where cadett ELSA is installed, you however will have to perform a separate driver installation, which fortunately is easy to do.

Simply copy the standard cadett ELSA installation file to the computer on which you intend to install the hardware lock. Then start the installation by double-clicking the file. Continue in the same ways as during an ordinary network installation, described in section 4.2, page 41.

When you reach the **Type of installation** selection, the dialogue shown below in Figure 147 is displayed.

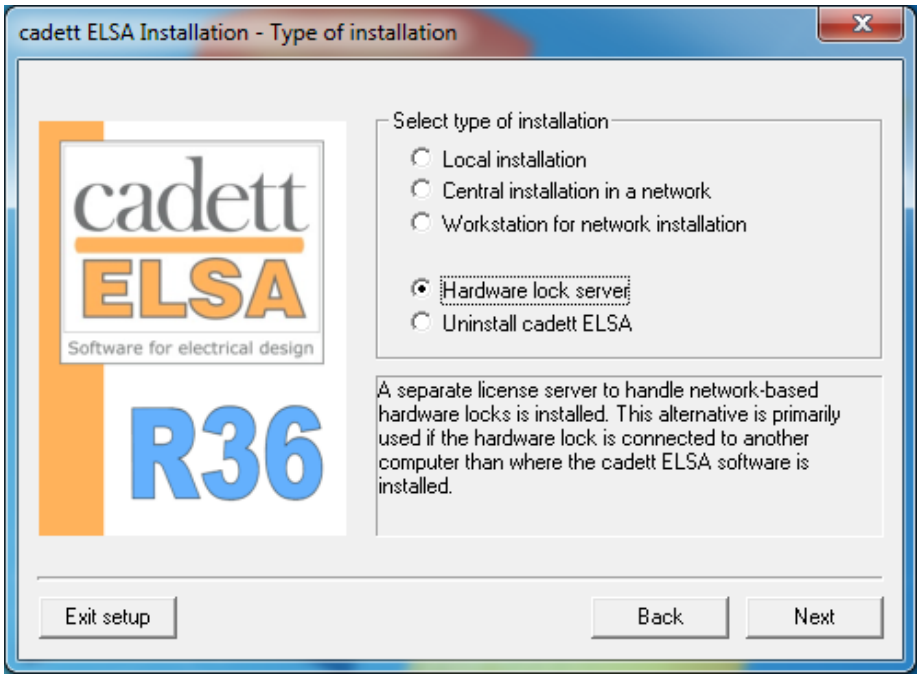

Figure 147: Selection of Hardware lock server installation.

Simply specify that you want to install a **Hardware lock server**.

The appropriate driver is then installed.

9.3.4 Manual separate driver installation

The hardware lock drivers can also be installed manually using a separate installation program. In some cases, this procedure enables you to install a newer driver than the one embedded in the general installation program of cadett ELSA. The manual procedure also enables you to make additional detailed adjustments of the installation. Sometimes these additional possibilities may help you to solve problems.

Please use the Windows Explorer to check the directory specified below:

\ELSA\HWLOCK\Sentinel Protection Drivers 7

In that directory, you will find complete drivers for separate installation. The installation is started by simply double-clicking the desired driver.

Please note that not only the newest driver is normally present in the directory in question. Therefore, be careful to select the correct one.

In some cases, even newer drivers are available to download from cadett ELSA's homepage:

http://www.cadett.com

9.3.5 Compatibility Checker

In the directory specified below, you will find a utility that can be used to check the compatibility with your current environment.

\ELSA\HWLOCK\Tools to find and fix problems\Compatibility Checker Utility

9.3.6 Error finding Tool

In the directory specified below, you will find a tool called **AdvancedMedic** that can be used to monitor how the hardware lock is working or not.

\ELSA\HWLOCK\Tools to find and fix problems\AdvancedMedic

This tool is first installed and then used for error finding purposes.

9.3.7 Uninstalling hardware lock drivers

To be able to install a new driver it is sometimes necessary to first uninstall older versions. Please also note that other software packages than cadett ELSA might have installed Sentinel drivers that might interfere.

The standard procedure to uninstall Sentinel drivers is to use the Control Panel in an ordinary fashion. We recommend that method to be tested first.

However using the Control Panel is not always successful in this respect. Therefore, there are also special driver removal utilities available, which will search the computer for any interfering old drivers and remove them.

Please check the directory specified below:

\ELSA\HWLOCK\Tools to find and fix problems\Cleanup

It contains two sub-folders, one for 32 and one for 64 bit operating systems.

In each one, you will find both a PDF instruction file and the utility itself.

10 Updating cadett ELSA

If the installation you are making is an update, in other words a replacement of an earlier version with a new, the procedure begins with installing a “clean” version of the new program. After that, all user data are transferred from the old installation to new installation using a supplied feature called **Import from other cadett ELSA**.

Two main methods of making such an update exist, and they differ quite a lot from each other.

- One method is to make the new installation in the same main directory as the old installation (for example \ELSA).
- The other method is not doing so.

Those methods are described separately below.

10.1 A different main directory than the old installation

If you are updating an existing local installation on the same computer as where the old installation has been used, using this method is **NOT** the best way. The preferred method in such cases is described in section 10.2, page 152. However, if the new installation is made on a different computer than the old installation, this is the correct way to do it.

If you are updating an existing network installation of cadett ELSA using the same server as before, this is normally NOT the best way to do it. The preferred method in such cases is described in section 10.2, page 152. However, if the new installation is made on a different server than the old installation, this is the correct way to do it.

To use a different directory name for the new installation than was used for the old installation, perhaps even on another computer or server, is fully possible but is more complicated and time consuming, especially for workstations in network installations:

- When using the same directory name as for the old installation, the workstations are automatically updated.
- When using a different directory name, the workstations must all be reinstalled.

In these situations you make a new installation of the new software as described in section 3, page 15, for local installations and section 4, page 40, for network installations. You will then make sure that you have access to the old installation or to a copy of it.

Finally you manually start the import from the old cadett ELSA, as described in section 11 on page 155 and import the user data from the old installation.

The import itself is performed as described in section 11, page 155.

10.2 The same main directory as the old installation

The new installation can also be placed in the same directory as the old installation. This is the preferred way of installing an update of cadett ELSA, both for local and network installations. This method has many advantages, the most important ones being that it is both easier and faster.

In this case, you install the new software "on top" of the old version. The main directory of the old program will automatically be renamed in the process, so that a backup thereby will be retained. Practically this means that after renaming, a new ELSA directory is created. After finishing the installation and starting the cadett ELSA program again, the **Import from other cadett ELSA** function will automatically launch and the renamed, old version will be pre-selected as the default cadett ELSA installation to import from.

The import itself is performed in the way that is described in section 11, page 155, below.

10.3 Sole access limitation

When updating an existing installation, especially if you are using the same main directory as the old installation, it is necessary to ensure that nobody is accessing the old installation in any way. It is not only forbidden for anyone to run cadett ELSA, even using the File Explorer to view any of the directories of the installation is out of the question. Any such access will prevent the installation from being made.

In local installations, this is rarely a problem. If you would run into that problem, there is always an easy way out, namely to simply restart your computer.

In network installations, the situation might be somewhat more complicated. It is not unusual to run into problems because of this restriction. In some cases it might be difficult to find who the offender (or offenders) is (are). In such cases, it will be necessary to use some force to throw the users out. An easy way of doing that is temporarily removing the share of the directory in which the cadett ELSA main directory is located. When doing so, anybody accessing the installation will be thrown out. The share can then be immediately restored.

10.4 Important performance issue

When the installation is finished, you will start cadett ELSA. When doing so, an import of user data from the renamed old installation will automatically start. In local installations, there are no further considerations to make because of that. In network installations there however are.

The obvious way of starting cadett ELSA after the installation is to start one of the existing ordinary workstations. That will work fine, but there is a disadvantage with doing so, since the first workstation to start is the one to run the import. If an ordinary workstation is used for the import, the import will be made over the network, which unfortunately can be very time-consuming, especially if the amount of projects is large. It is not uncommon with an import taking many hours to perform when thousands of projects are imported. An easy way of speeding this process up with a typical factor of at least 10, is to run the import directly on the server. To be able to do that a workstation must be created directly on the server so that cadett ELSA can be started there.

- If you are using a network hardware lock, cadett ELSA can easily use a license from that.

- If you are using local hardware locks for your workstations, it is not as easy to transfer a license to the server. You might disconnect a hardware lock from one of the workstations and connect it directly to the server, but in many cases that is practically difficult, especially if you are using a virtual server.

  It has therefore been made possible to run cadett ELSA on the server in a limited mode, where no hardware lock is needed. That limited mode enables you to do one thing only, namely to perform the import. All other features are disabled. To start cadett ELSA in the import only mode, please manually adjust the shortcut on the desktop to add a switch called "**/Import**", like shown in Figure 148 below. Please note that the switch is case sensitive.

  cadett ELSA in the extremely limited import only mode is shown in Figure 149, page 154.

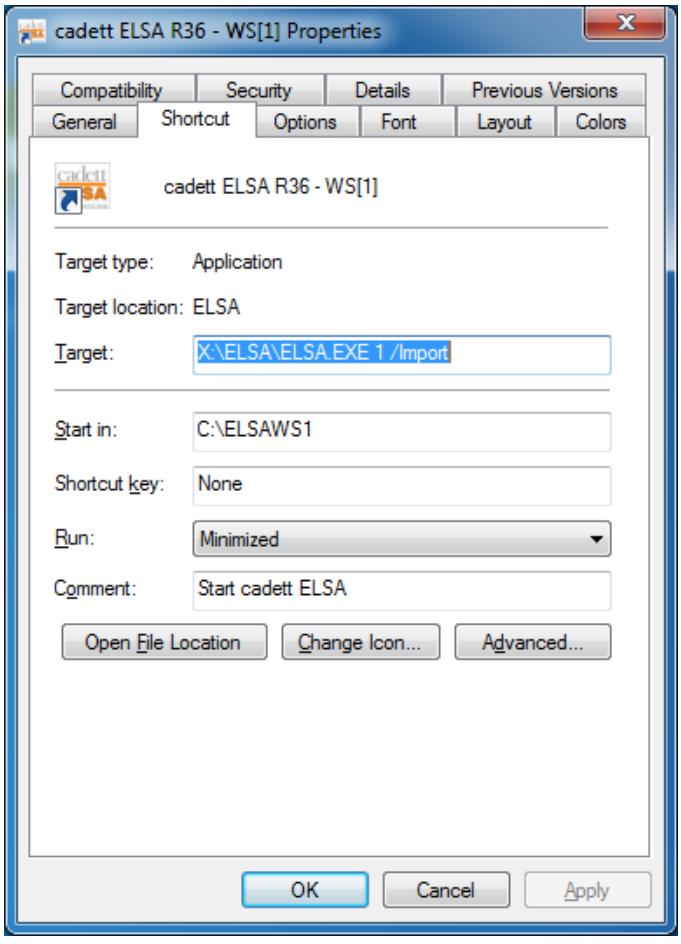

Figure 148: Shortcut modified to start cadett ELSA in import only mode.

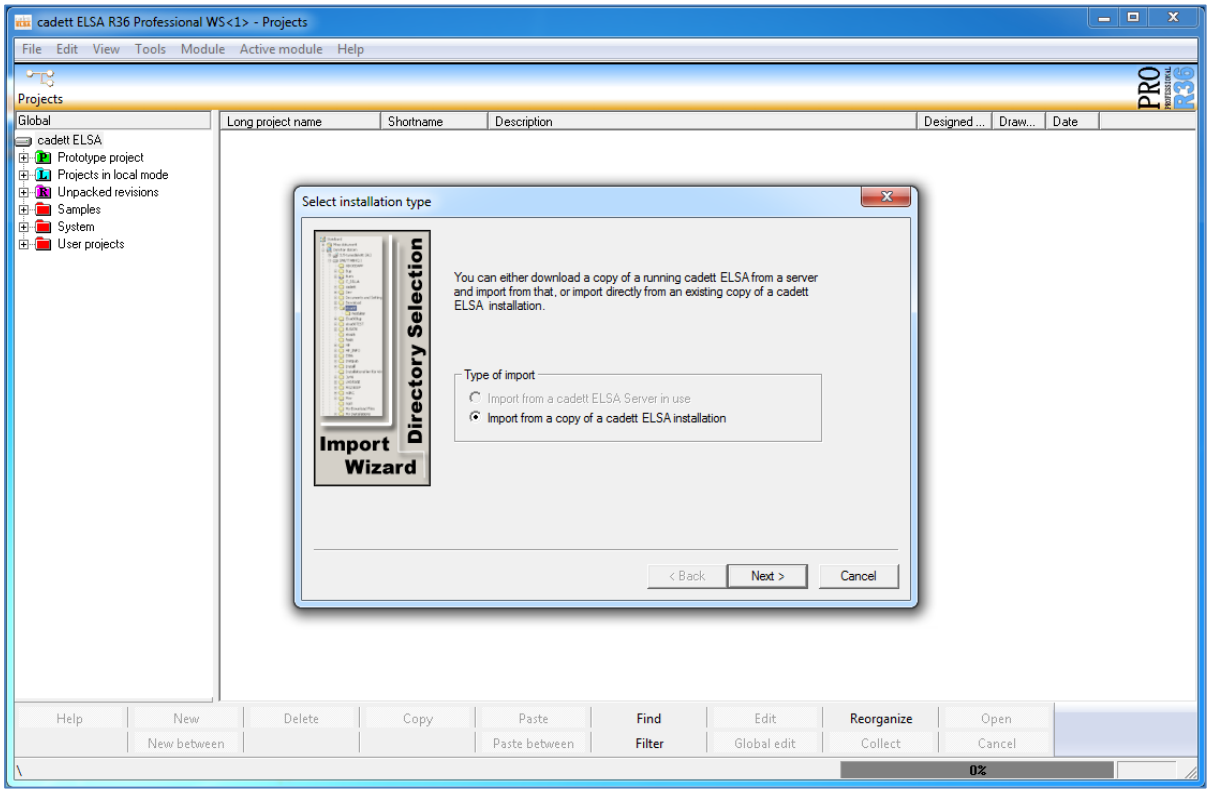

Figure 149: cadett ELSA in the limited import only mode.

10.5 Procedure

Please follow the general procedure described here to make the update:

- Make the installation as described in section 3, page 15, for local installations and section 4, page 40, for network installations.

- Start cadett ELSA.

  When doing so, if it is a network installation, please carefully consider the performance issue described in section 10.4, page 152, above.

- Import desired user data from the old installation as described in section 11, page 155.

11 Import from other cadett ELSA

At any time you can import freely selected, user defined data from any desired other cadett ELSA installation or copy of other installation. This applies irrespective of the version of the old installation being imported from. This function is usable in many situations, not the least in a situation when updating from an older version.

Examples of the type of data that you can import are user defined symbols, projects, Catalogue data, Report Definitions, Script Sequences and much more.

11.1 Start the import

If you have a local installation of cadett ELSA, you begin by starting it.

If you have a network installation, you first have to check that no other workstation is running cadett ELSA. In other words, you have to be the sole user of cadett ELSA when you are running the import function. Then you start your cadett ELSA.

Please note however that running the import from a workstation in a network is rather slow if the amount of data to import is big. If the number of projects is in the thousands, it might be wise to consider using a workstation directly on the server, a method that will speed up the import process by a typical factor of at least 10.

If you have just installed "on top of" an old installation with the same directory name as the old installation was using, the import function will launch automatically. If not, you have to start it manually. In the latter case, please select the function **Import from other cadett ELSA…** in the **Tools** pull-down menu.

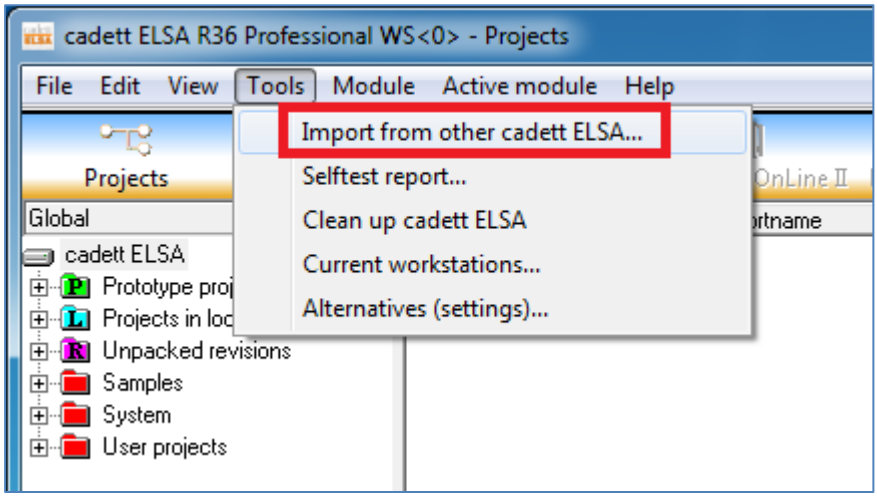

*Figure 150: Manual start of the **Import from other cadett ELSA** feature.*

11.2 Type of import

There are two types of import. Only one is applicable for updates, and that is the **Import from a copy of a cadett ELSA installation**. The other one, the **Import from a cadett ELSA Server in use**, is only available in cadett ELSA Enterprise and is used for completely different purposes, documented elsewhere.

Please select **Import from a copy of a cadett ELSA installation** and then click **Next >**.

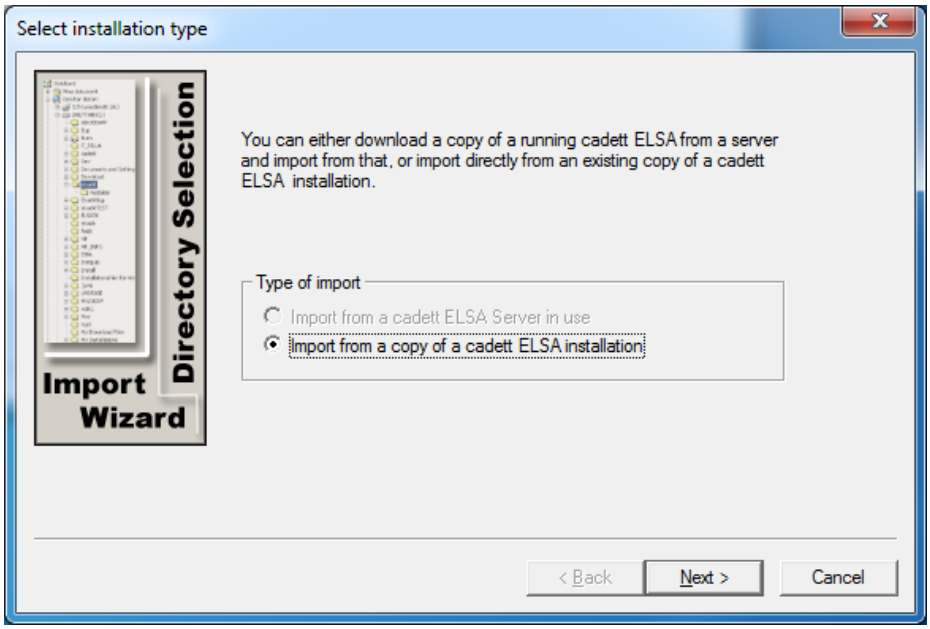

Figure 151: Selection of import type.

11.3 Selection of installation to import from

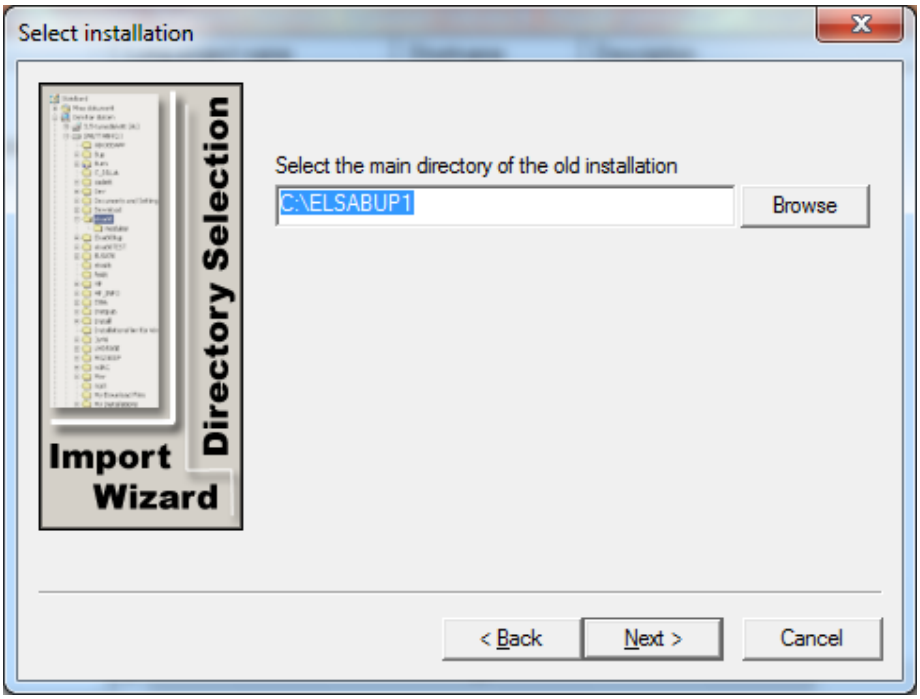

Figure 152: Selection of main directory of the installation to import from.

Here you specify the main directory of the installation that you would like to import user data from.

If you have installed “on top of” an old installation, the renamed directory of the old installation will be pre-selected. If not, you have to manually type or select the main directory name of the old installation from which you would like to import data.

You can type the directory name or browse the directory tree with the **Browse** button.

Please note that the installation to import from does not have to be a functioning installation or one in use. It can even be a backup copy of an old installation that has not necessarily to be placed in its original location.

However, if you select a working installation, nobody must use it when the import takes place. If anybody is running a workstation connected to the cadett ELSA that you import from, the import itself will not be prevented, but reading some of the data to import will. For example it will not be possible to import data from any catalogues in use.

When you have selected the installation to import from, click the **Next >** button.

11.4 Selection of objects to import, part 1

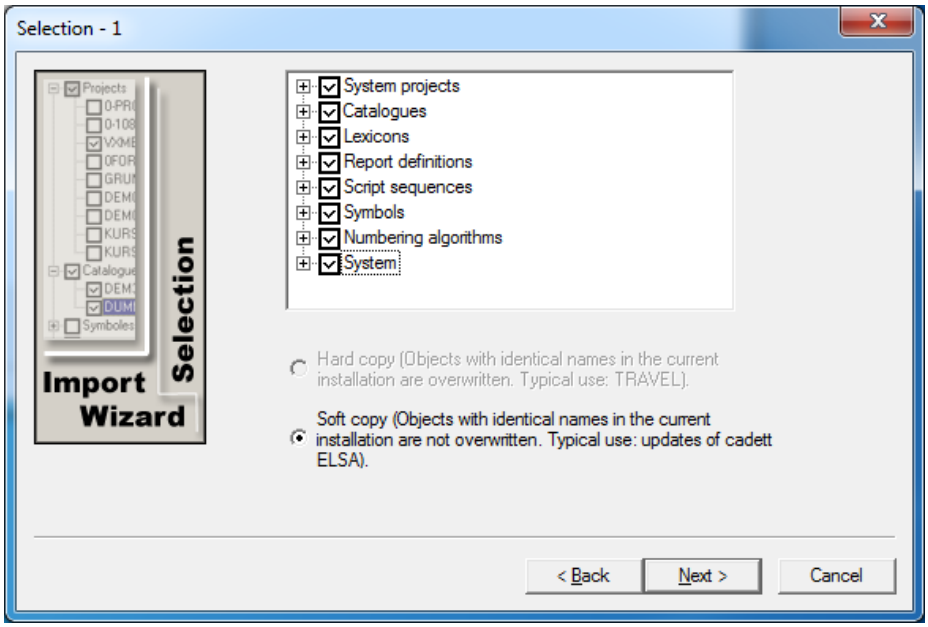

*Figure 153: In this dialogue, you select what to import and if the import should be hard or soft. Typically you select all objects and **Soft copy**.*

You will be presented a dialogue – see Figure 153 above – where you can select the objects to import and whether the import should be hard or soft. Hard import is available in cadett ELSA Enterprise only and is not intended or useful for updates. Therefore, please select **Soft copy**.

When the selection of objects to import is concerned, that selection is made from the objects that are available in the installation of cadett ELSA that you have specified to import from. You make these selections simply by checking the squares beside the objects that you want to import.

Each type of object can be selected in more detail before import. When it comes to for example symbols, you can select exactly which symbol libraries you would like to import. In each symbol library it is possible to specify exactly which symbols to import. When it comes to catalogues, you can select which catalogues to import. You can refine your selection in this way with all types of objects.

A detailed description of the refined selection possibilities is found in section 11.8 below.

In an update situation you typically select everything – or almost everything – with only exception for objects that you specifically would like not to import for one reason or the other.

When you have made your selections, you proceed by clicking the **Next >** button.

11.5 Selection of objects to import, part 2

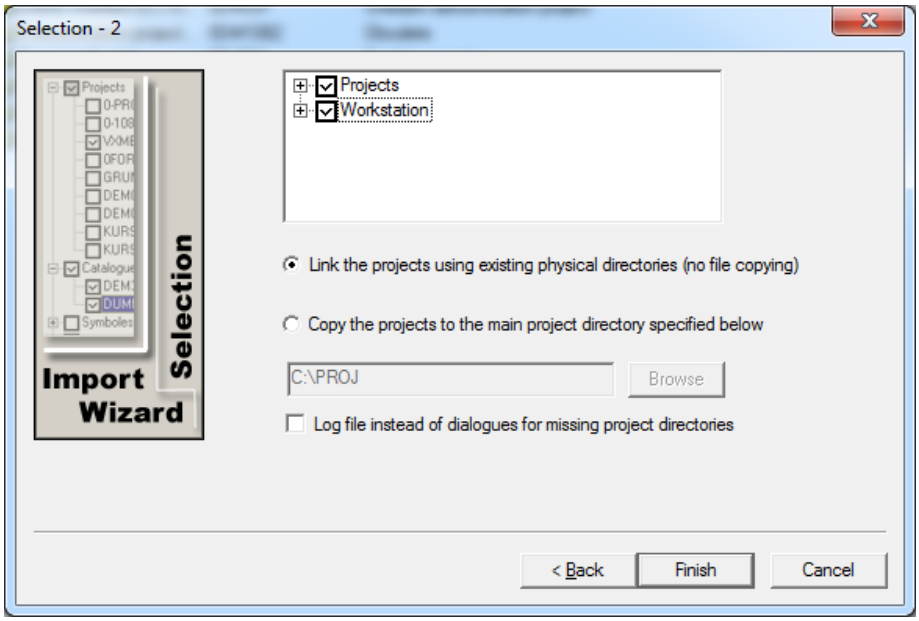

Figure 154: Selection of projects and workstation settings.

The next dialogue gives you the opportunity to select which projects to import, how that should be made, and what kind of workstation prototype settings you would like to import. Please refer to the detailed description that follows, for more specific information.

For projects, there are a couple of special selection possibilities available. Directly below the object-window you will find two radio-buttons and one checkbox to control this:

- **Link the projects using existing physical directories (no file copying)**

  In the most common update situation where you install the new version “on top” of an old one, you would typically select this option, which is described in detail in section 11.8.9.1, page 177.

- **Copy the projects to the main project directory specified below**

  This option is not as commonly used, but it is nevertheless described in detail in section 11.8.9.2, page 177.

- **Log file instead of dialogues for missing project directories**

  With this check-box you can control what should happen during project import for projects where the project directories are missing. Either you get a dialogue box asking you what to do for each such case, or the import will simply carry on after making a note in a log file.

  Please beware that these dialogue boxes can be very annoying, if the number of projects with missing directories is large. Therefore, the log file option is strongly recommended.

A detailed description of this options is found in section 11.8.9.3, page 178.

11.6 The import is performed

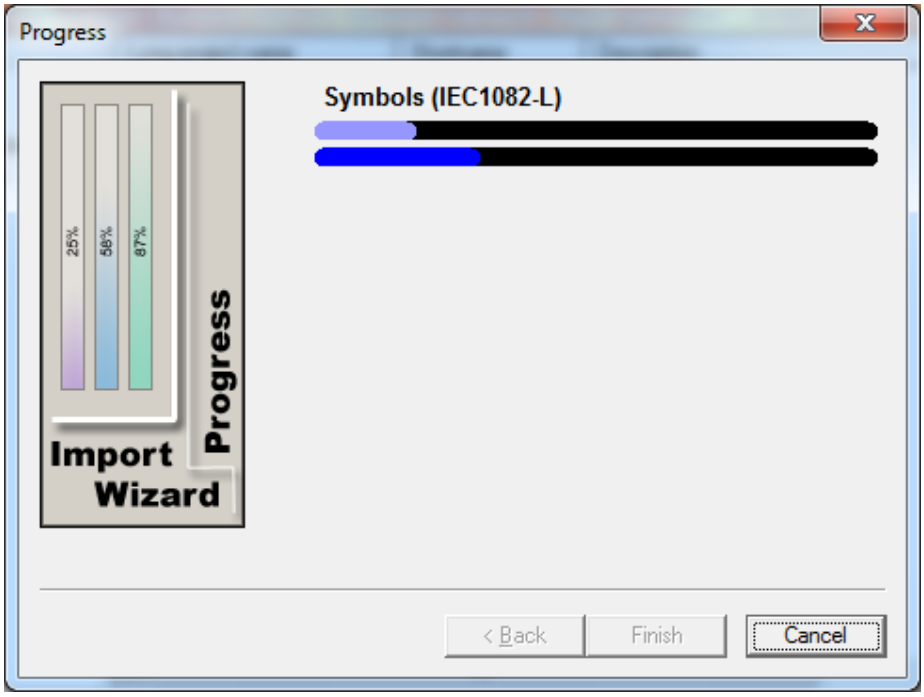

Figure 155: The import is performed.

When you are satisfied with your selections of objects to import, you click the **Next >** button and the import starts.

The import will proceed automatically without any user interference, with a few exceptions where you will have to answer a couple of questions. You will find more details about those questions in the detailed description below, especially section 11.8.6 about importing symbols, page 168, where the question showed in Figure 156 below is explained.

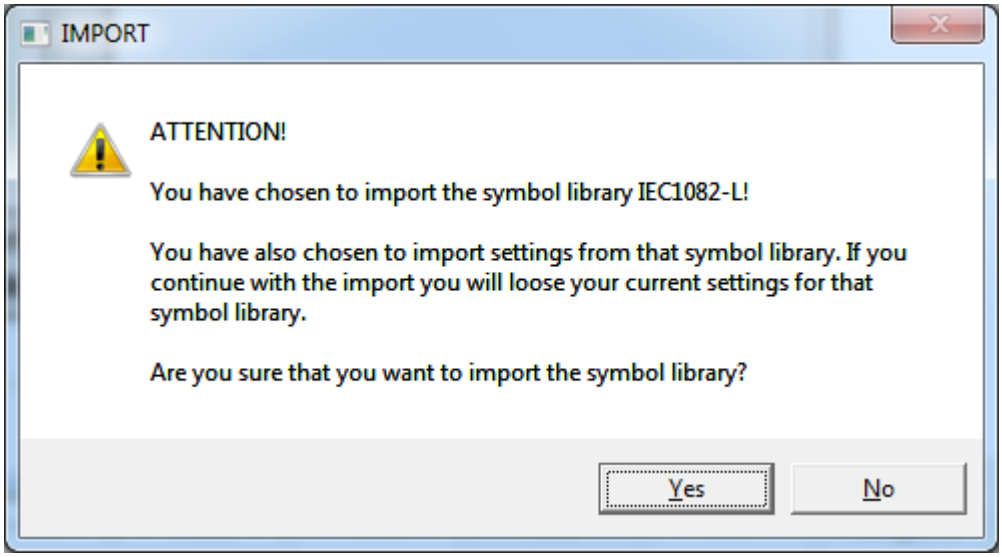

Figure 156: This warning is issued when importing symbol libraries.

11.7 The import is finished

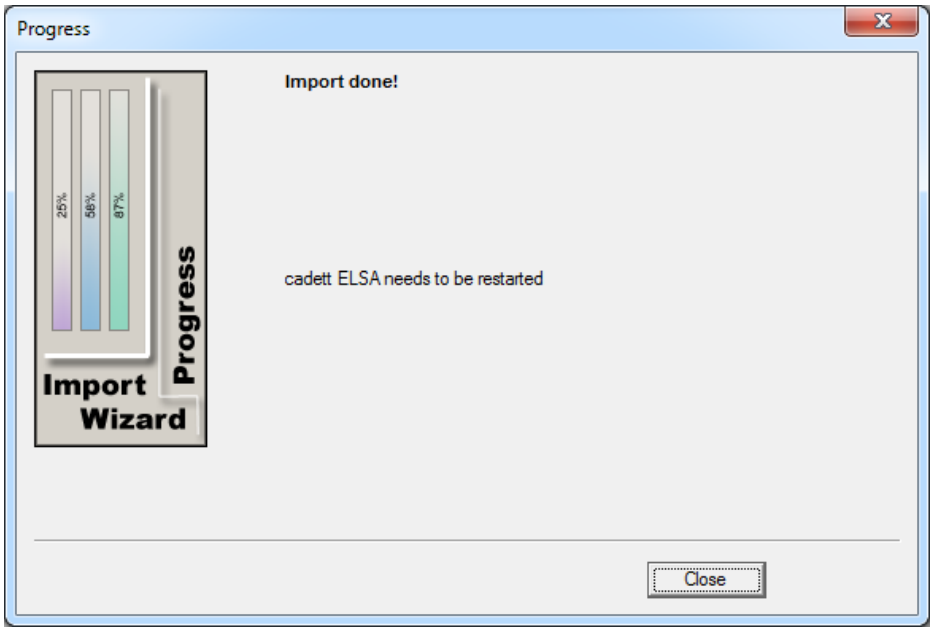

Figure 157: This is what it looks like when the import is finished. In many cases a restart is required.

When the import is finished, a dialogue box like in Figure 157 above is displayed. In many cases, a restart of cadett ELSA is required.

Click the **Finish** button, exit cadett ELSA and start it again if that is requested.

Directly after you have done that, you will be able to use all imported objects. If you are using a network installation, this is the perfect time for other workstations to start cadett ELSA again.

11.8 Detailed description of refined selections

The objects possible to import are divided into 8 + 2 = 10 groups:

- System projects
- Catalogues
- Lexicons
- Report definitions
- Script sequences
- Symbols
- Numbering algorithms
- System

- Projects
- Workstation

Under each group, you will find subgroups, which in turn sometimes also are divided into subgroups. You can select by checking a whole group, or make a more detailed selection by clicking the plus sign to the left of a group, which opens it up and enables you to reach the subgroups and specify in detail the ones you want to add to the import.

Below you will find a more detailed description of available selection possibilities for each group.

11.8.1 System projects

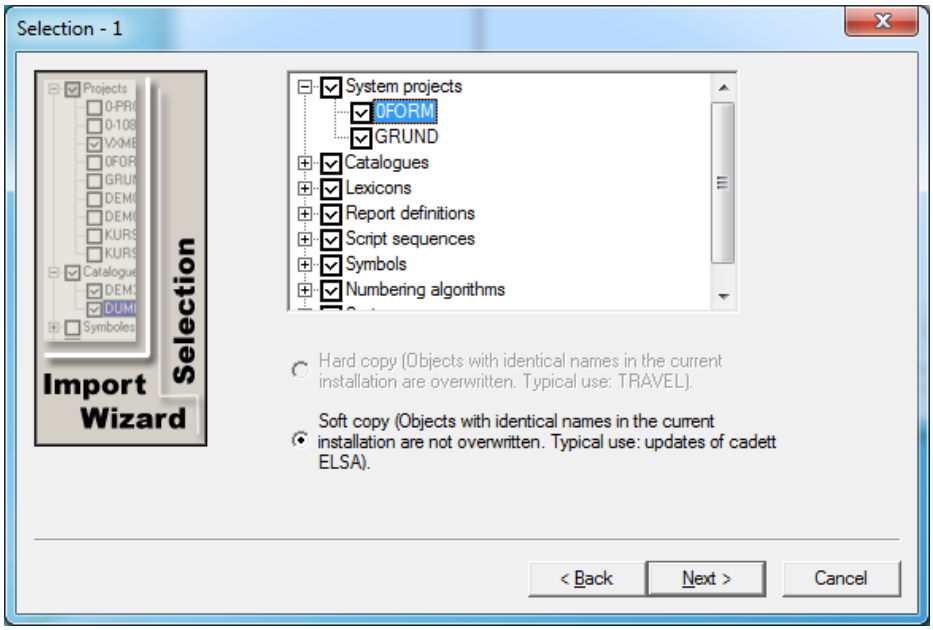

Figure 158: System projects are used for administrative purposes. Select all of them.

System projects are administrative projects, like for drawing frames and report generator forms.

Typically, you would find two, the 0FORM and the GRUND.

- 0FORM contains report generator forms (DXF files), both standard and user defined.
- GRUND contains drawing frames (DXF files), both standard and user defined.

When updating, please always select all of them.

11.8.2 Catalogues

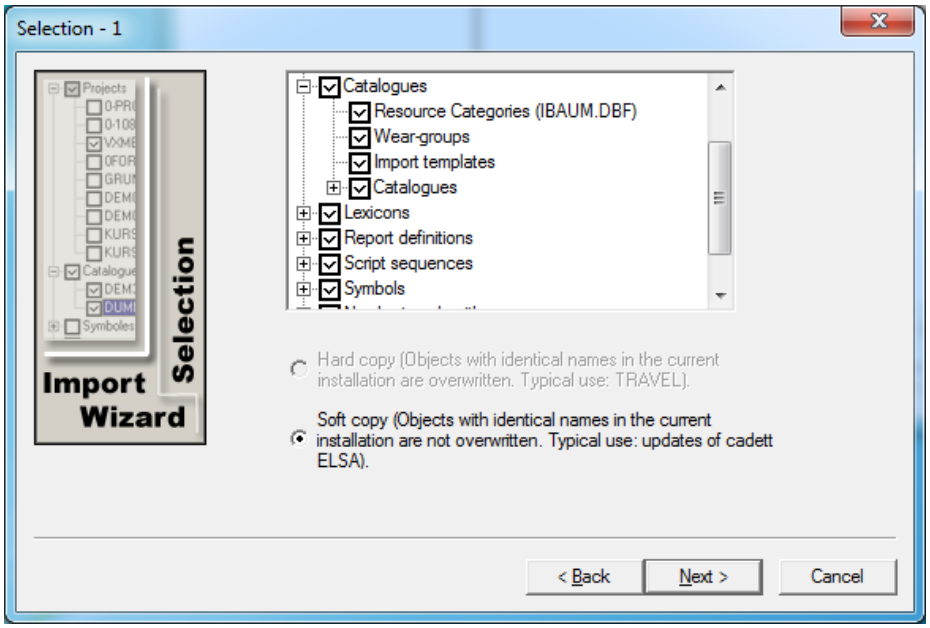

Figure 159: Import of catalogues, import templates, wear-groups and resource categories.

You can import the Catalogues as they are, import the definitions of Resource Categories that are found in a particular database (IBAUM.DBF), import description texts for Wear-groups (saved in the older format VG.TXT or the newer VG.DBF), and import templates for the catalogue import feature.

11.8.2.1 Catalogues

If you import a catalogue and a catalogue with the same name already exists in the installation you are importing to, the resources (articles) from the catalogue that you are importing from is copied to the existing catalogue. If resources with the same indexes already exist, no overwriting takes place. Hence, only resources that are missing in the receiving catalogue are copied.

11.8.2.2 Import templates

Templates for Catalogue Import (MLL files) are imported or not imported, as specified here. When updating, the import is soft. Standard templates will therefore be reset to original status if you have altered them. User defined templates on the other hand, will be copied as they are into the new version.

11.8.2.3 Wear-group descriptions

For Wear-group descriptions, the import is “hard”, i.e. if you have made changes or added anything to the standard descriptions, the import will bring them in, even if you have initially selected **Soft copy**.

The import supports both the old VG.TXT file format and the new VG.DBF format.

11.8.2.4 Resource Categories

When it comes to the Resource Categories, the import is always “hard”, even if you have initially selected **Soft copy**. This means that if there is a Resource Category defined in both the older version you are importing from and in the newer you are importing to, the data from the old version will overwrite the new version. As a result, if you have made any changes to the standard Resource Categories in the old cadett ELSA installation, these changes will be imported.

11.8.3 Lexicons

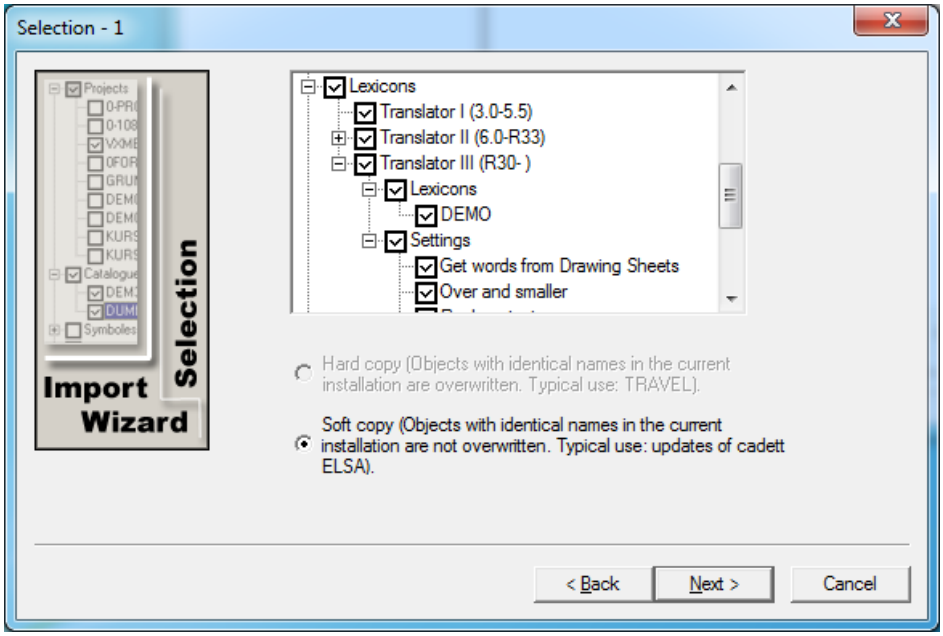

Figure 160: Selection of which Lexicons and Settings to import.

In cadett ELSA 5.5 and earlier and in MG-CAD 4.2 and earlier, there was one and only one lexicon (AUTODIC). It was limited to five languages. In the first subgroup, you will find this older type of lexicon. This was the Translator I, the first translator generation.

Starting with the release of cadett ELSA 6.0 and MG-CAD 2000, a new type of lexicon structure was introduced with the second translator generation, called Translator II. With that structure, each cadett ELSA installation can contain an unlimited number of lexicons, and up to 20 languages can be used in each lexicon. The second subgroup comprises those lexicons.

The current translator belongs to the third generation, which was originally released in cadett ELSA R30. It is therefore named Translator III. The lexicons of Translator III share many properties with the ones from Translator II, like the fact that there might be an unlimited number of them and that each one may contain up to 20 languages. One important difference though, is that Translator III supports Unicode, meaning alternative character sets, like Russian or Chinese.

Translator III definitions of how to make translations, called Translator Settings, can also be imported.

The Translator I and II are no longer available in cadett ELSA. Therefore, it is not possible to use those lexicons directly, even if it is in fact possible to import them. It is however possible to convert old lexicons to new ones using an import feature available directly in Translator III (the **Module** pull-down menu). That is what makes importing old style lexicons meaningful.

For Translator II lexicons, the import is made softly word by word when applicable. Hence, if a specific Translator II lexicon is found in both the old and the new installation, the import will be made on a word-by-word basis. This import is "soft", meaning that only words that do not exist in the new lexicon that will be imported from the old lexicon. The key language is LANGUAGE01, which means the second language. In the LEXICON case – the demo-example that is included in the standard installation – this is Swedish.

For Translator III Lexicons, the import at an update situation (soft import) is made soft by lexicon as a whole. No mixing of words from one lexicon with another is made. Therefore, additions or alterations made to the DEMO lexicon in the old version will not be imported, but any user-defined lexicons will be imported as they are.

The principle for Translator III Settings is identical. Any changes made to standard settings will be lost, but all user defined settings will be imported as they are, completely unchanged.

11.8.4 Report definitions

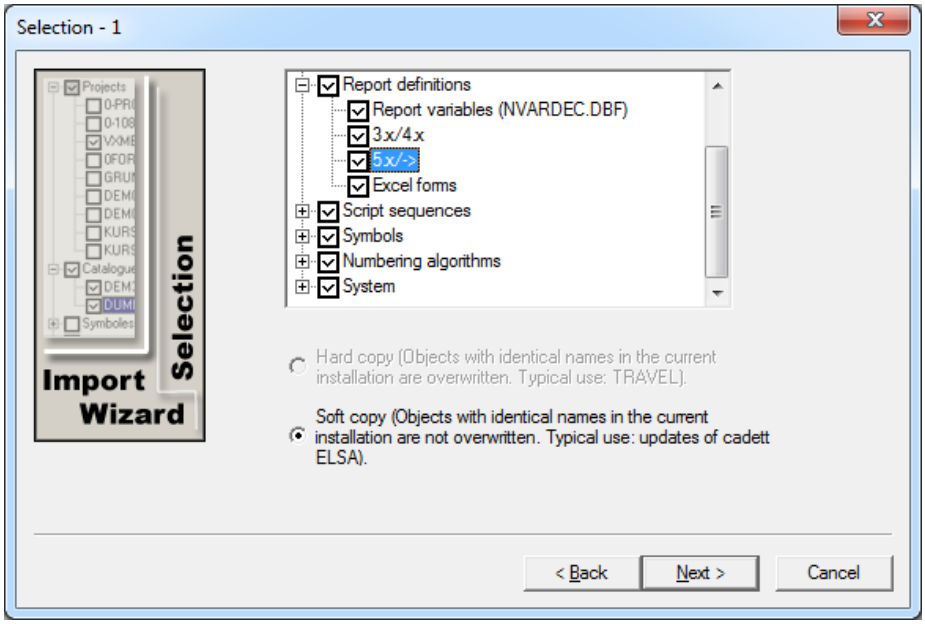

Figure 161: Selection for import of Report definitions, Report variables and Excel forms.

Here you will find four subgroups:

- Report variables from the variable declaration database NVARDEC.DBF.

- Older type Report definitions from cadett ELSA 3.X, 4.X and early revisions of cadett ELSA 5.0, and from MG-CAD 4.2NT and previous versions.
- Report definitions from cadett ELSA 5.0 and later and from MG-CAD 2000 (.REP files).
- Excel forms used in the current generation of the Report Generator.

Importing Report variables means that user-defined Report variables are imported to the new installation. The new installation has priority, meaning that the Report variables that already exist in the new installation will not be overwritten. (The import is “soft”).

For Report definitions of old and current type, you can select to import all of them or to import none of them. (You can take care of the imported reports later in the Report Generator, both old and new). The import of new Report definitions is soft, meaning that any changes made to standard Report definitions are lost, while user defined Report definitions are imported unchanged.

When importing new Report definitions (5.X/->), the FMT forms used for text and Excel reports will be imported as well. That import will also be soft, meaning that any changes made to standard forms will be lost, while user defined Report definitions will be imported unchanged.

Excel forms are imported using an identical principle. Any changes made to standard Excel forms will be lost, while user defined Excel forms will be imported unchanged.

11.8.5 Script Sequences

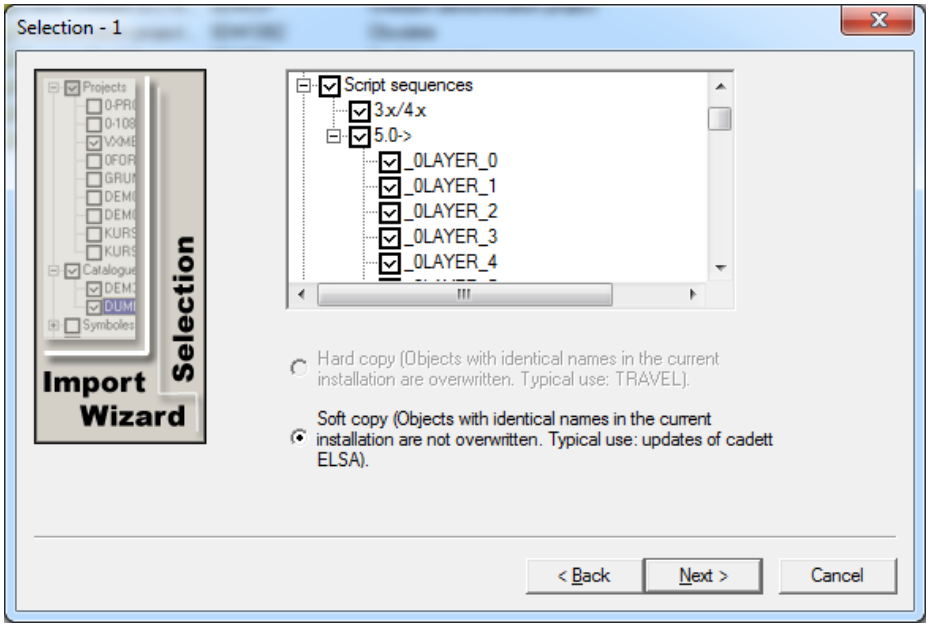

Figure 162: Selection of Script sequences to import.

The Script Sequences are divided in two subgroups:

- Script Sequences from cadett ELSA 4.15 and earlier, early revisions of cadett ELSA 5.0 and MG-CAD 4.2 and earlier versions.

- Script Sequences from late revisions of cadett ELSA 5.0, cadett ELSA 5.5 and later and MG-CAD 2000.

When importing the older type of Script Sequences, you select all or none. (You can handle them individually later in the Script Generator).

When importing Script Sequences of the newer type, you have the possibility to specify which Script Sequences to import individually. The Script Sequences are listed with their Script Sequence names. If you move the mouse pointer over them, the description will show up as a tooltip.

The import of the newer type of Script Sequences (ESC-files) is performed by copying the ESC files "soft" to the receiving installation. An automatic collect is made the first time the Script Generator is started after the import. Since file names and Script Sequence names are necessarily equal, there is a possibility for a situation with several ESC files defining Script Sequences with the same Script Sequence name. This conflict is detected during the collect whereby an error message is displayed and the user is asked to decide how to resolve the naming conflict, for example by renaming one of the Script Sequences or by deleting one of them.

11.8.6 Symbols

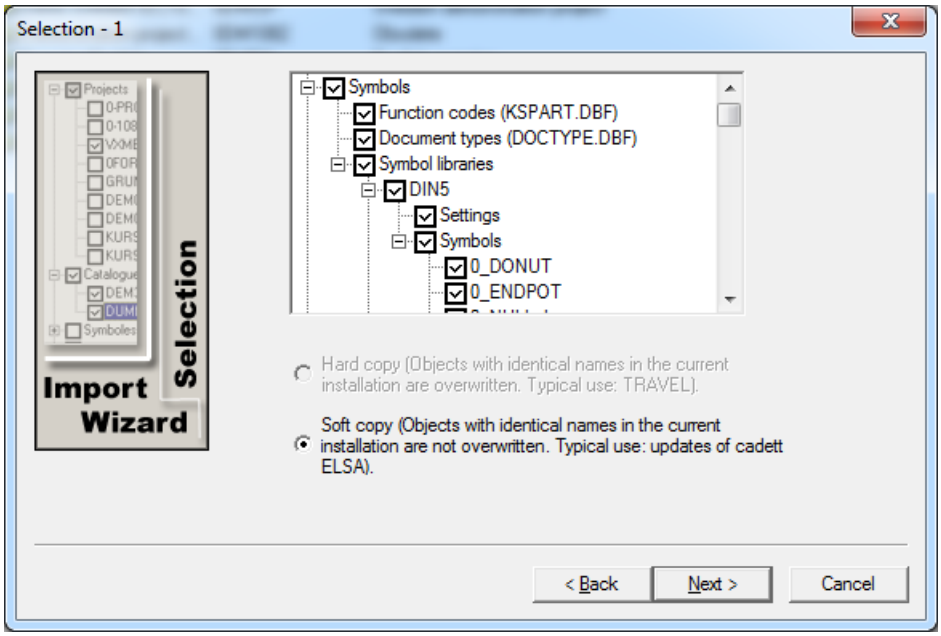

Figure 163: Selection for import of symbol data.

Here you find three subgroups:

- Function codes
- Document types
- Symbol libraries

The function codes and document types are the same for all symbol libraries. They can either be imported or not.

Each symbol library contains a large number of symbols and settings. You can select which symbol libraries to import from and even what to import from each symbol library.

11.8.6.1 Function codes

Function codes divide different help symbols according to their function. “Make” and “break” help contacts are two well-known examples of that. The import when updating is “soft”, meaning that user-defined function codes are copied, but if you have made changes to standard function codes, these changes will be lost.

Technical note
The function codes are stored in a database file called KSPART.DBF located in the \ELSA\SYMBOLE directory.

11.8.6.2 Document types

Document types define different types of drawing sheets, like circuit diagrams, cabinet layouts, external connection diagrams, block diagrams and so on.

The document types are handled similar to the function codes. You either import them or not. The import is “soft”.

Technical note
The document types are stored in a database file called DOCTYPE.DBF located in the \ELSA\SYMBOLE directory.

11.8.6.3 Symbol libraries

For each symbol library, you can select if settings and/or symbols should be imported. For symbols you also have the possibility to specify each individual symbol to import. When updating, the import of symbols is “soft”. Therefore, any changes made to standard symbols will be lost while user defined symbols will be imported unchanged. On the other hand, the import of settings is “hard”. Changes made in the settings will therefore be imported and transferred unchanged.

All this requires further explanations, which are offered below.

Each symbol library contains a large amount of symbols and a number of settings for AutoCAD and for the symbol macros in the Drawing Environment. The settings for AutoCAD control such things as the default GRID and SNAP, as well as the DXF file format used when saving drawing sheets. The settings for symbol macros control for example the graphical layout of terminals and boundary boxes. These settings varies between different industrial standards and therefore also between different symbol

libraries. The industrial norm (standard) concept and the symbol libraries are intimately connected to one another. The actual settings are saved in so-called INI-files (text files written in a Windows standard format), located in the symbol library itself.

When importing a symbol library, you can control the import of settings and symbols separately:

- When importing directly after an update, you should of course import both symbols and settings, to be able to use your symbols and settings as before.

- If you on the other hand are importing symbols to an installation already in use, for example from an installation on a separate computer, maybe a laptop that has been used during travelling work, you should absolutely not import the settings. Doing so could cause a sudden change of behavior of the software; for example the terminals and cables could start to look different than they did before. Please be aware of this!

You select to import settings and/or symbols by simply checking the appropriate alternatives. Please refer to Figure 163, page 168 above.

As you can see in Figure 163, page 168 above, you can check each symbol separately and thereby select if it should be imported or not.

It is completely possible to use this function to import one or a few symbols from another installation without affecting anything else in the receiving installation. Just stay focused when you select what to import, and you will find this being a very powerful and effective aid to your work!

11.8.6.4 Dialogue box displayed for each symbol library

The import as a whole is made more or less “silent”, meaning that no questions are asked during the process, which may take some time to finish. However, during symbol library import, which takes place in the beginning of the overall process, one dialogue box is displayed for each symbol library, if you have selected to import settings.

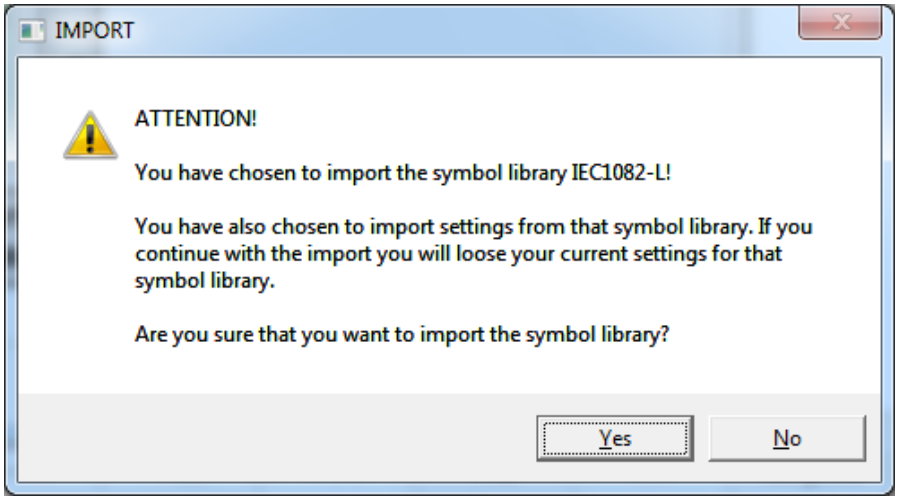

Figure 164: Dialogue box giving you the opportunity to cancel the import of a symbol library.

So, provided that you have selected to import the settings for a certain symbol library, a warning will be issued during the import process itself before the actual import is made. Please refer to Figure 164 above (page 171) for a picture of the message box in question. The reason for this message is to make the user aware of the fact that the current Drawing Environment settings will be overwritten with data from the installation from which import is made, which of course is the correct thing to do when making an update.

Please click the **Yes** button to perform the selected import. If you on the other hand would click the **No** button, the entire symbol library would be omitted from the import, leaving you without your user defined symbols. If you accidently end up in that situation, you can simply run the import again, and click **Yes** instead.

11.8.7 Numbering algorithms

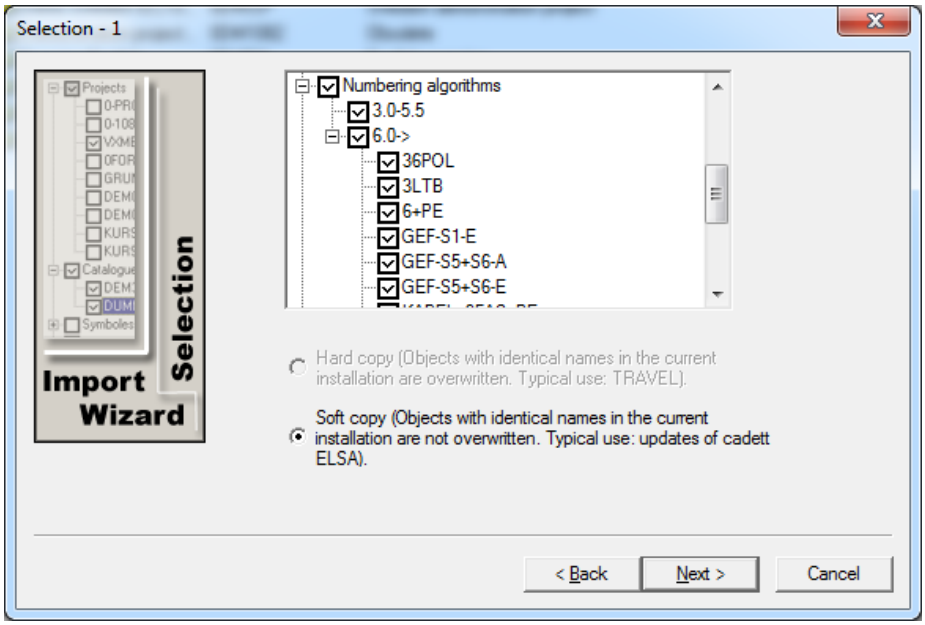

Figure 165: Selection of numbering algorithms to import.

The numbering algorithms are divided in two subgroups.

- One subgroup contains a legacy type of numbering algorithms originating from cadett ELSA 5.5 and previous versions, and MG-CAD 4.2NT and previous versions.

- The other subgroup contains the type that was introduced with cadett ELSA 6.0 and MG-CAD 2000 and which is the one that is still used in the current version.

When importing the older type of numbering algorithms, you can only select all or none. (You can specify which ones to keep directly under the **Numbering algorithms** tab in the **Settings** module after the import is finished).

When importing the newer type of numbering algorithms, you can select which ones to import one by one directly. The numbering algorithms are identified with their names. If you move your mouse pointer over any of them, the description will pop up as a tooltip.

11.8.8 System

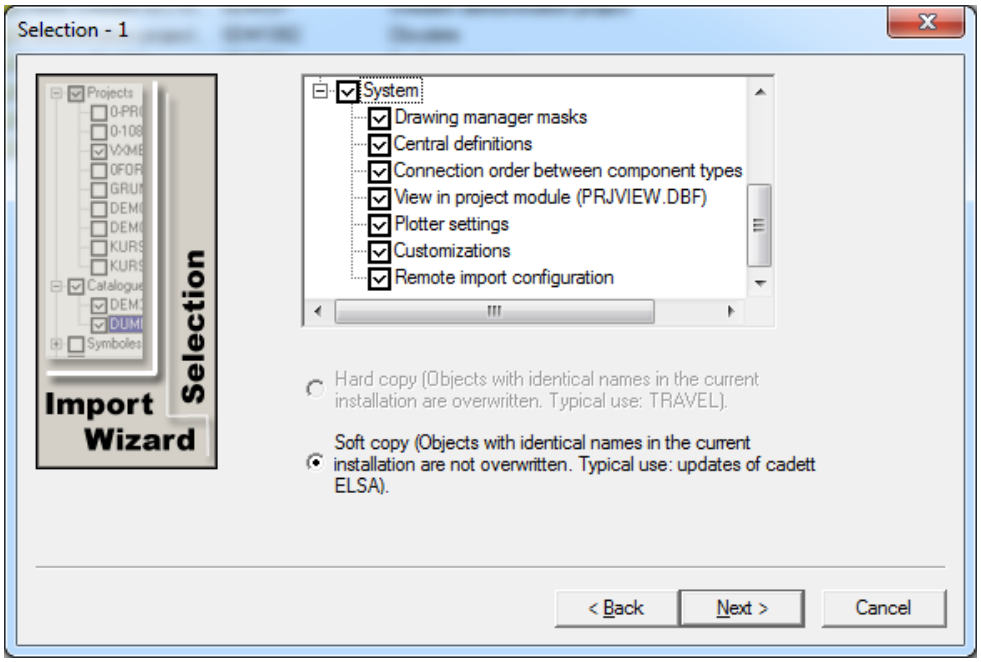

Figure 166: Selection of system settings and data to import.

The last group in the first part is the most diverse. Here you will find no less than seven subgroups. There are however no further options; you can only select which of the seven subgroups you want to import.

Several of the subgroups that are described below are useful when importing from local installations only. The corresponding settings and data of course also exist in network installations, but there they are saved individually for each workstation. When making updates of network installations in the recommended way, the workstation directories however remain. Therefore, no import of this data is required.

11.8.8.1 Drawing manager masks

Drawing manager masks concerns masks and mask files used by the Drawing Manager. To be specific, it is the mask definitions in the database file MASKEN.DBF that are imported together with the referenced mask files (MSK files).

These masks are defined in the **Settings** module in the **Masks** tab.

The import at update is “soft” (without over-writing).

11.8.8.2 Central definitions

The **Central definitions** concerned are the following:

- Central document code definitions
- User defined project parameter settings
- More

Document codes are used by the Drawing Manager, like the Drawing Manager masks described above.

They comprise definitions that among other things are used for categorizing and naming new drawing sheets in the Drawing Manager. Document codes can be defined both by project and centrally on the server. Central definitions are used as default for new projects. It also possible to copy document codes in both directions between the definitions stored in a project and the ones stored centrally on the server.

Central document code definitions are saved in a particular database file named **DocumentCodes.DBF**.

Document codes, both central and project based, are handled in the Drawing Manager. The central and the local editors are both accessed from the **Module** pull-down menu.

The import of document codes under the update conditions that are described here, is “soft”. This means that standard definitions of document codes present at delivery of the software are merged with user defined document codes in the old version that import is being made from. That merge is “soft”, meaning that any changes made to standard document codes will be lost. Any added user defined document codes will however be imported unchanged.

User defined project parameter settings refers to central definitions of user defined project parameters stored in a configuration file called USERPROJPAR.INI located in the SYSTEM subdirectory of the cadett ELSA main directory (typically X:\ELSA\SYSTEM or similar).

A complete description of user defined project parameters is found in **cadett ELSA Additional Manual – New Features in R33 – Edition 2.pdf**, chapter 10, page 139. The central definitions that are referred here are specifically described in section 10.3, page 147.

“More” refers to central definitions other than the two ones described above. What that may be is dependent on which versions of the software that are involved. No considerations with respect to this are however needed.

11.8.8.3 Connection order between component types

Connection orders between component types concerns the database file NZ.DBF where the default order between component types used by the automatic wiring numbering processing is defined.

This database file is located in the workstation directory (WS directory) and is therefore individual for each workstation. The file that is imported is the prototype file that is used when creating new workstations. In a local installation that would typically never happen. This file is rarely changed from the default setting. Therefore, this selection only seldom makes any difference.

11.8.8.4 View in project module (PRJVIEW.DBF)

View in project module concerns the database PRJVIEW.DBF where user specific settings of how projects should be displayed in the tree view of the Project Module is stored. This database file is located in the workstation directory and is individual for each workstation.

- The file that is imported is the prototype used when creating new workstations, which typically only happens in network installations.
- This default is normally never changed, even if changes can be done.
- Whether this file is imported or not will therefore rarely make any difference.
- It is not harmful in any way to import it.

11.8.8.5 Plotter settings

At delivery the PLOT subdirectory of the cadett ELSA main directory (typically X:\ELSA\PLOT or similar) contains standard plot settings, like ELSA_A4.CTB and other similar files.

CTB files contains definitions of colours, line types and colours for printing.

A sub-directory of PLOT is called PC3 and may be used to store plotter configurations (PC3 files). This directory is typically called X:\ELSA\PLOT\PC3 or similar.

Depending on AutoCAD configurations, these directories may or may not be used directly by AutoCAD. The standard setting of AutoCAD when used with cadett ELSA, is to read CTB files from this directory which is common for all workstations in a network installation. Therefore this is also the best place to store user defines CTB files.

Importing **Plotter settings** means that a soft copy of all files in the PLOT sub-directory is made, so that user defined settings are brought along to the new version when updating.

11.8.8.6 Customizations

Customizations in the sense referred to here are additional software modules for cadett ELSA created as additions to cadett ELSA in order to provide customized functionality of some kind. Customizations of this type are located in a directory named CUSTOM, which in turn is a subdirectory of the cadett ELSA main directory. An especially important file for this kind of customization is the HOOK.INI, which contains the basic configuration.

- The import of customizations is basically “soft”.
- All files in the CUSTOM directory are copied “softly” (with no over-writing).
- The HOOK.INI is however copied “hard”, but any existing HOOK.INI is renamed to HOOK.BAK, to keep a backup of it.

11.8.8.7 Remote import configuration

Remote import is a feature available in cadett ELSA Enterprise only. With Remote import you can use the Import from other cadett ELSA feature to import data from a cadett ELSA installation in full use, and not be limited to doing the import when all workstations has shut down, as is normally the case. The remote import can also be done over a slow IP connection, and even without direct access to the file system of the server. Furthermore, the remote import also provides the opportunity to make a "hard import", as opposed to the "soft import" used for updates. The typical use of hard remote import, is for travelling (the extended TRAVEL feature), when a local installation on a portable computer is used to bring a copy of the entire environment together with certain projects along when travelling outside the reach of the local network. Being able to repeatedly import the environment, consisting of catalogues, symbol libraries and more, to have it up to date, is key to a successful TRAVEL management.

The remote import is configured to optimize download speeds, using a configuration file on the server, located in the cadett ELSA main directory. Activating the import of this configuration, simply means that the configuration file – ELSACOPY.INI – is copied as a whole.

11.8.9 Projects

All projects, including their project parameters, drawing sheets, revisions and other files can be imported.

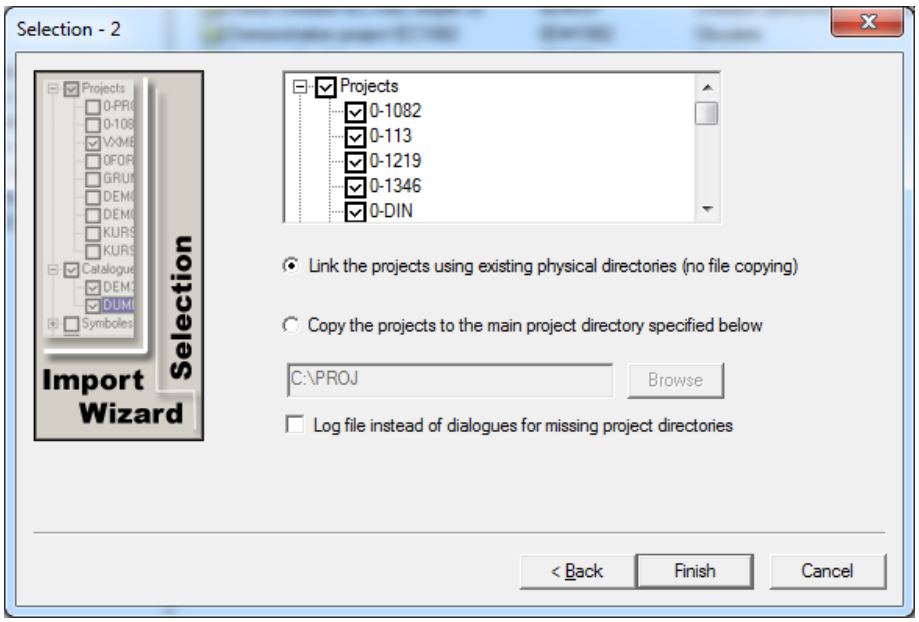

Figure 167: Selection of projects to import.

Under the **Projects** group, you will find each individual project and you have the possibility of specifying individually for each project whether it should be imported or not.

The projects are presented with their short-names. When you move the mouse-pointer over each project, the long-name will pop up as an extra selection aid.

Below the selection window you will find two radio buttons. Either you link your projects or you copy them.

You have to decide by yourself which of these two alternatives is the best in the current situation.

A few general guidelines are these:

- When updating an existing installation on the same computer or server that was used before you should normally select the first alternative, to **Link the projects**.

- When moving cadett ELSA to a new server by making a new installation there and importing from the old server, you should normally select to **Copy the projects**, in order to copy all project data from the old server to the new.

Please refer to the description below for more detailed information needed to make an informed choice!

11.8.9.1 Link the projects using existing physical directories (no file copying)

This is the typical choice for an ordinary update, meaning when the installation remains on the same computer (local installation or server). The projects will be left in their original location. No file copying is made. The projects will be linked to existing directories and files.

11.8.9.2 Copy the projects to the main project directory specified below

If you select **Copy the project to the main directory specified below**, copies of the projects will be created in the installation of cadett ELSA that you are importing to. These copies will physically be placed in a directory that you specify in the field below. Normally this can be the same directory as used for cadett ELSA's project samples (usually \PROJ).

Please note that if the cadett ELSA installation that you are importing from is in use, you will end up with two identical projects, one in each installation. This can be either good or bad, depending on the situation.

Please also note the SOURCE directories of the projects that you import, will be named after the project short-name, regardless of the original name of the SOURCE directory itself.

11.8.9.3 Log file instead of dialogues for missing project directories

This check-box is valid for the **Copy** alternative only. When used for the **Link** alternative, it has no effect at all.

When projects are imported using the **Copy** alternative, you may run into a not very uncommon situation, where the directories of one or many projects are simply missing. For example, projects may have been incorrectly deleted by manually deleting the associated directories instead of deleting the project in the Project Module of cadett ELSA, which of course is the correct way of doing it.

Either a dialogue is presented for each such case, or the import simply skips such projects and continues with the rest of the projects. Information about the skipped projects are in that case written to a log file named **SkippedProjects.log** located in the **Logs** subdirectory of the workstation directory (typically C:\ELSAWSx\Logs or similar).

In the dialogue alternative, a dialogue is displayed for each project where the directories are missing. Figure 168 below shows that dialogue.

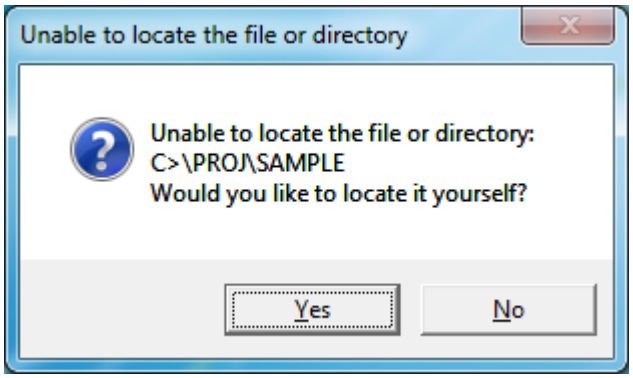

Figure 168: The dialogue that is displayed for each project with missing directory.

In the dialogue a question is presented. You select whether you want to locate the directory yourself or not.

- If you click the **Yes** button, a browser will be displayed with which you can locate the project directory manually. This is useful if the project is located elsewhere than where the import expected to find it. In that way, the project in question can still be imported. Please note however, that it may be very time-consuming to handle these dialogues if the number of projects is large. It is therefore in most cases recommended to instead use the log file alternative.

- If you click the **No** button, the project in question will be skipped and thereby not imported. It will therefore disappear from the tree structure and never appear again, unless you take additional actions of some kind.

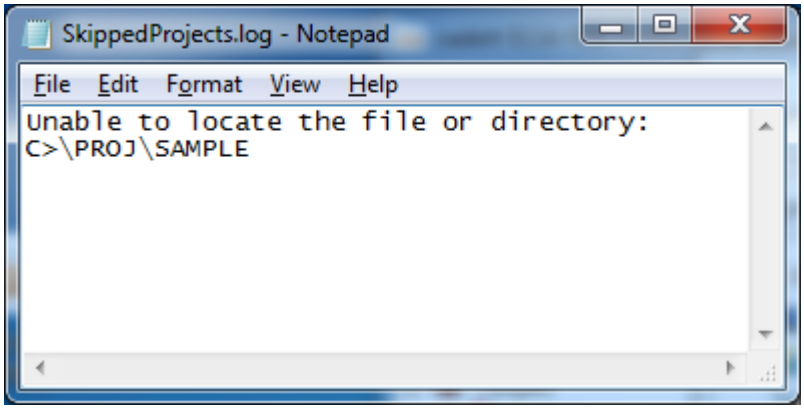

Figure 169: The log file for the same situation as shown in the previous picture, but where dialogues are not used.

11.8.10 Workstation

The Workstation group is divided in two sub-groups, as shown in Figure 170, page 180, below.

Both sub-groups refer to workstation directory related objects. The workstation directory in question is the prototype directory used when creating new workstations. (Typically this prototype directory is named X:\ELSA\WS or similar).

For local installations, new workstations are typically never created. The one created when the software is installed is the one that will be used for all eternity, or until you buy a new computer and reinstall your software there. (It is typically named C:\ELSAWS0).

In network installations, creating new workstations is however a common event. Therefore, the prototype workstation directory content is of great importance.

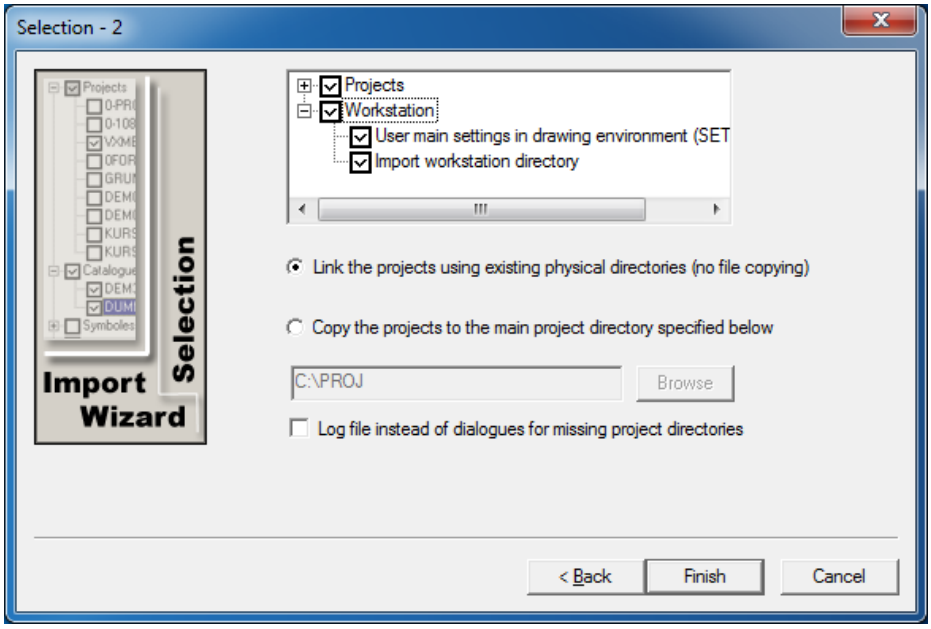

Figure 170: The Workstation group contains two sub-groups.

11.8.10.1 User main settings in drawing environment (SETUP.SCR

User main settings in drawing environment plainly concerns the SETUP.SCR script file which is loaded and executed each time you open a drawing sheet. This file is individual for each workstation and is therefore located in the workstation directory. The file referred here is the prototype for new workstations. If any change has been made to that file in the installation from which the import is being made, you can import those changes using this function. In fact, this is sometimes the case. The import of the SETUP.SCR file is hard, i.e. the corresponding file in the receiving installation is brutally overwritten, without mercy!

11.8.10.2 Import workstation directory

Selecting **Import workstation directory** means that the workstation directory is cleared from files that could cause problems, such as lisp files, ARX files and menu files and that certain information is imported. In more detail the following will occur:

- A “soft” file copy is performed from the old WS directory, meaning that no over-writing is made.
- Any write-protection flags on the files in the WS directory are removed.
- A soft import record-by-record of the database MGVER.DBF, i.e. the database containing the directory paths to the system files, is performed. The directory paths are translated to the new main directory where applicable.
- The files MGCADE.MNU, MGTAB3.MNU and PRJVIEW.DBF are deleted.

- A flag will be set for regeneration of the menu system, meaning that the next time the Drawing Environment is opened in AutoCAD, the menu system will be regenerated.

- The files MGCADE.MNX, MGCADE.MNC, MGCADE.MNS, MGCADE.MXK and ACAD.PGP are deleted.

- All DCL files, LSP files, ARX files, NDX files, CDX files, MDX files and NTX files are deleted.

- The subdirectory XNETCTRL including subdirectories is deleted. This is the remains of a today obsolete function.

- The subdirectory VXMENY including subdirectories is deleted. This is the remains of a today obsolete function.

The operations described here are created primarily with imports from local installations of old versions in mind, where the workstation directory from which the import is made was the one that in fact was in use. In current versions, the affected workstation directory is the prototype used when creating new workstations.

The operations in questions should typically always be performed, to be sure.

12 Enabling PDF Generation

cadett ELSA is equipped with a number of useful features for PDF generation. Single multi-sheet PDF files covering entire projects can be generated. Bookmarks can be included and configured according to user preferences. Hyperlinks for cross-references can be created, which makes it possible to navigate through a large PDF file by clicking the cross-references. It is also possible to make the PDF's searchable, meaning that you can search for texts, like item designations, which naturally can be a very effective way of navigating in large PDF files.

A few additional actions are required to enable the PDF Generation features that are briefly described above. These actions are:

1. Download and install GhostScript.
2. Create a PS_CADETT virtual printer in AutoCAD.
3. Create a PDF_CADETT virtual printer in AutoCAD.

Below you will find a detailed description of these actions.

Technical note
In older versions of cadett ELSA, a software called FreePDF was used for PDF Generation. The use of FreePDF was discontinued in cadett ELSA R33.0.1.1. FreePDF may still be useful for other purposes, but is no longer needed for cadett ELSA.

12.1 GhostScript installation

You start by downloading a complete GhostScript package from cadett's homepage.

The address to cadett's homepage is http://www.cadett.com.

To be able to access the download area of the homepage, you need to login. To login you need a username and a password. If you do not have those, you can use the **Password request** feature of the homepage to get them. If you fail to do this, please contact cadett directly to get the appropriate assistance needed.

When you have logged in, please enter the **Downloads** section. There you will find **Tools and utilities** and thereunder the proper version of GhostScript as a ZIP file.

*Figure 171: **Login** to cadett's homepage and then enter the **Downloads** area.*

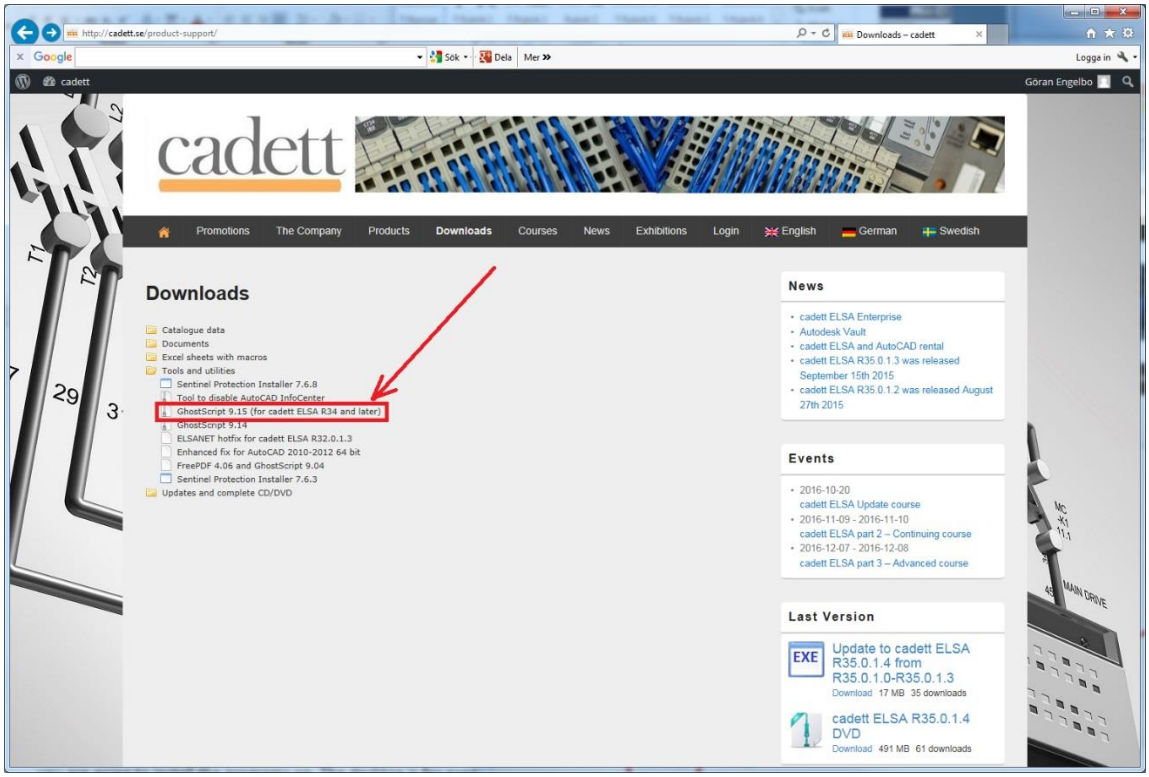

*Figure 172: Under **Tools and utilities**, please find and select the appropriate version of GhostScript (may vary over time).*

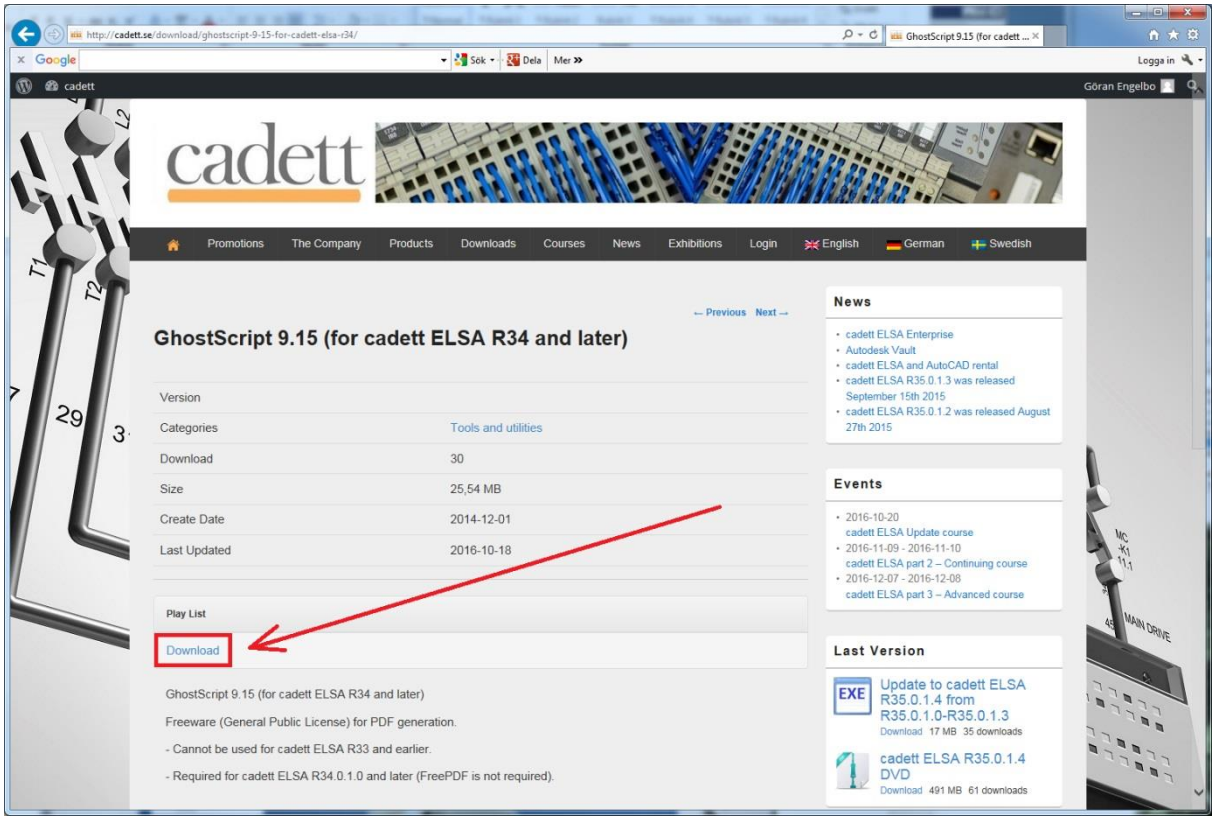

Figure 173: Download the GhostScript ZIP file.

When this is written, the current version of the ZIP file contains 3 files:

- **README.TXT** with a short description of the contained files
- **GS915W32.EXE** (the 32 bit version of GhostScript)
- **GS915W64.EXE** (the 64 bit version of GhostScript)

The 32 bit version of GhostScript cannot be used with contemporary versions of cadett ELSA.

Please extract the 64 bit EXE file from the ZIP file to an appropriate location on the workstation that you are going to install the programs on. The desktop is for example a practical choice.

Please note that the exact content may vary over time when the programs are updated.

Start to install the proper version of **GhostScript** by double-clicking the corresponding EXE file. Follow the instructions given on the screen. Preferably, use the default location for the program.

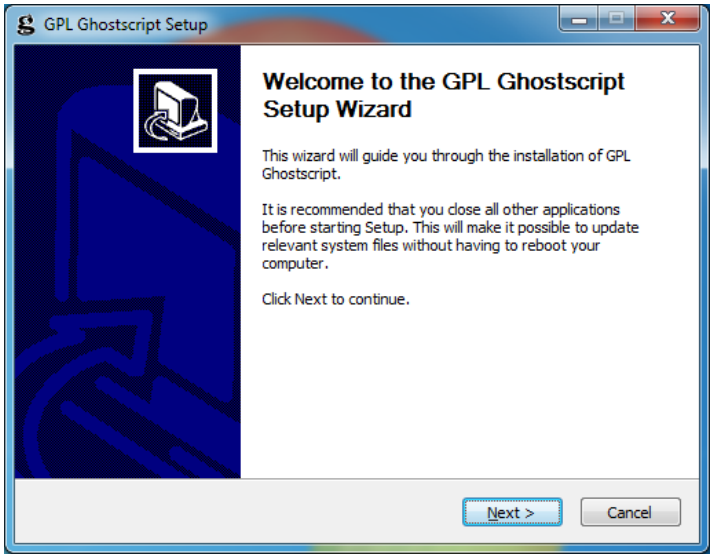

Figure 174: The installation of Ghostscript has started. Click Next.

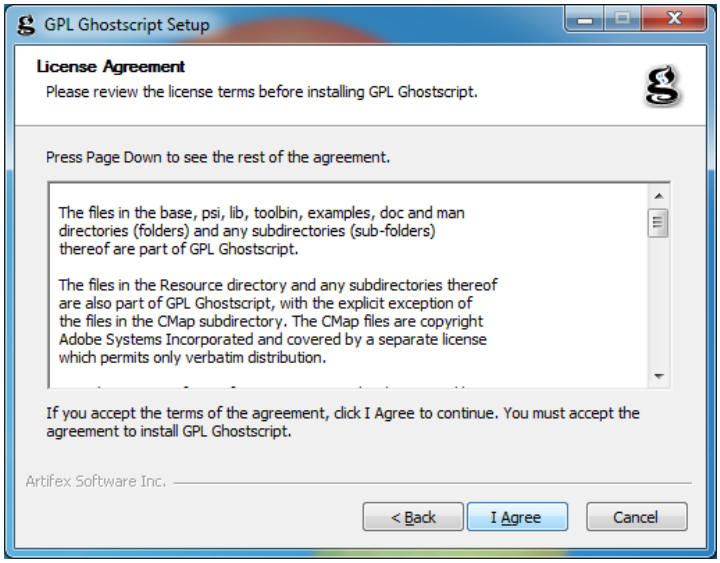

Figure 175: Please accept the license agreement.

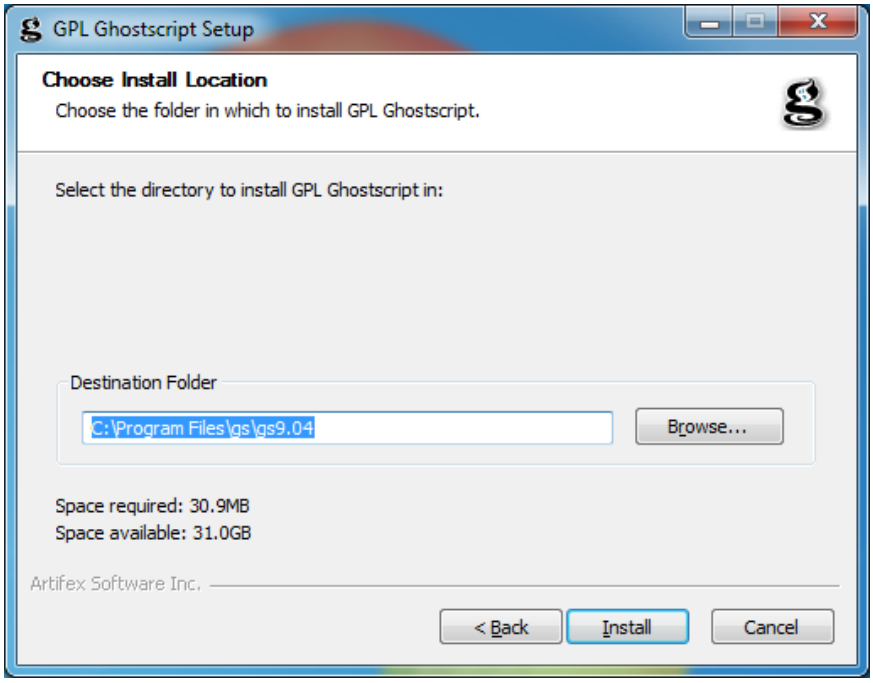

Figure 176: The default directory is recommended.

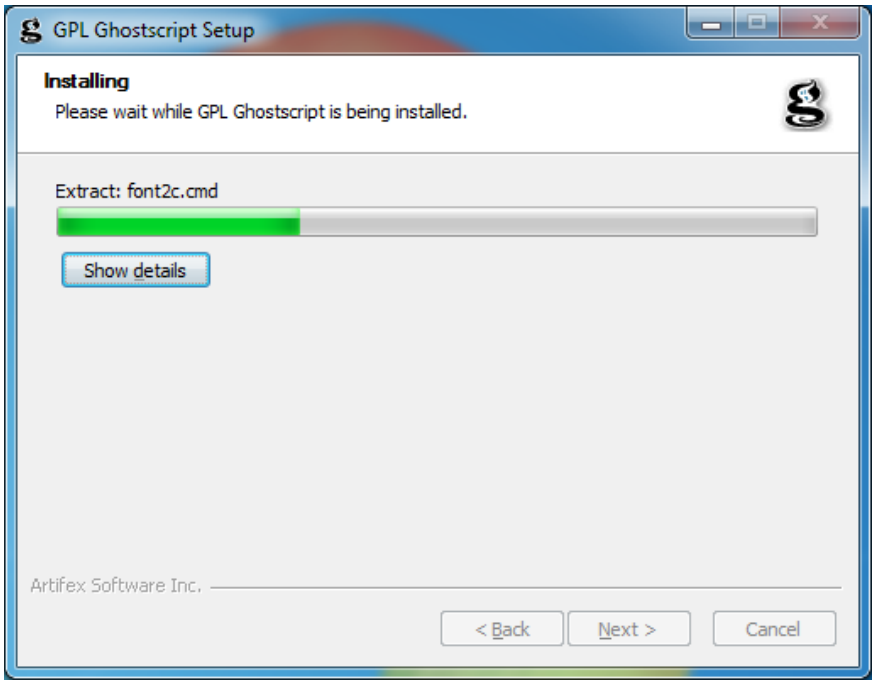

Figure 177: The installation is running.

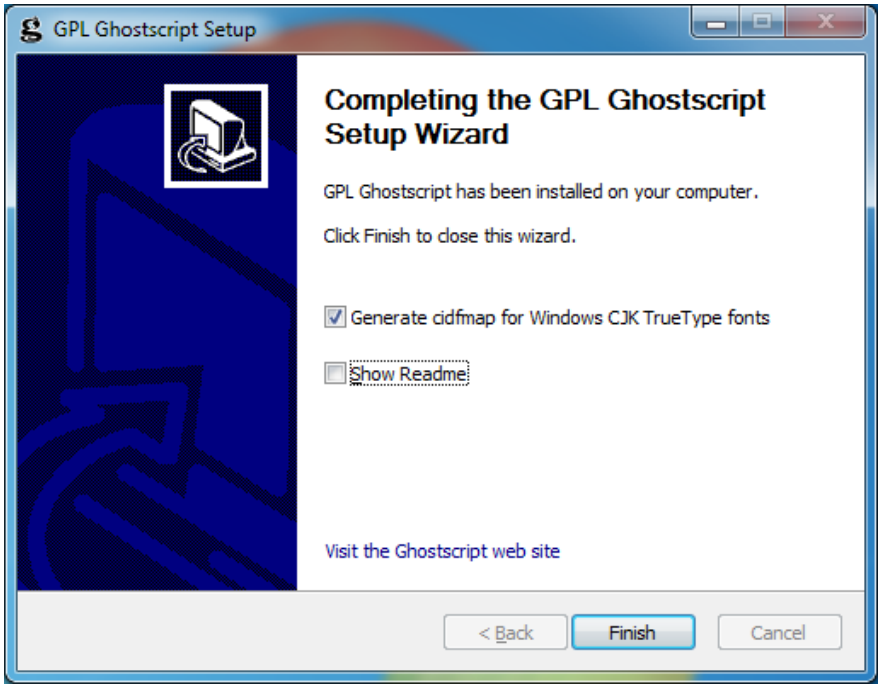

Figure 178: Uncheck "Show Readme" and click Finish.

GhostScript is installed and ready to use.

Please continue to configure the needed virtual printers in AutoCAD.

12.2 Create a PDF_CADETT virtual printer

A virtual printer named PDF_CADETT.PC3 must be present in AutoCAD in order to use PDF generation script sequences supporting the searchable text feature.

Please note that other script sequences for PDF generation that are also included in the delivery of cadett ELSA are using another virtual printer, the PS_CADETT.PC3. How that is installed is described in section 12.3, page 198.

The virtual printer for searchable PDF's – the PDF_CADETT.PC3 – is manually created the following way:

1. Open a drawing sheet using the Drawing Manager.

2. In the **File** tab of the ribbon menu, please select the **Printer Settings…** command at the top left.

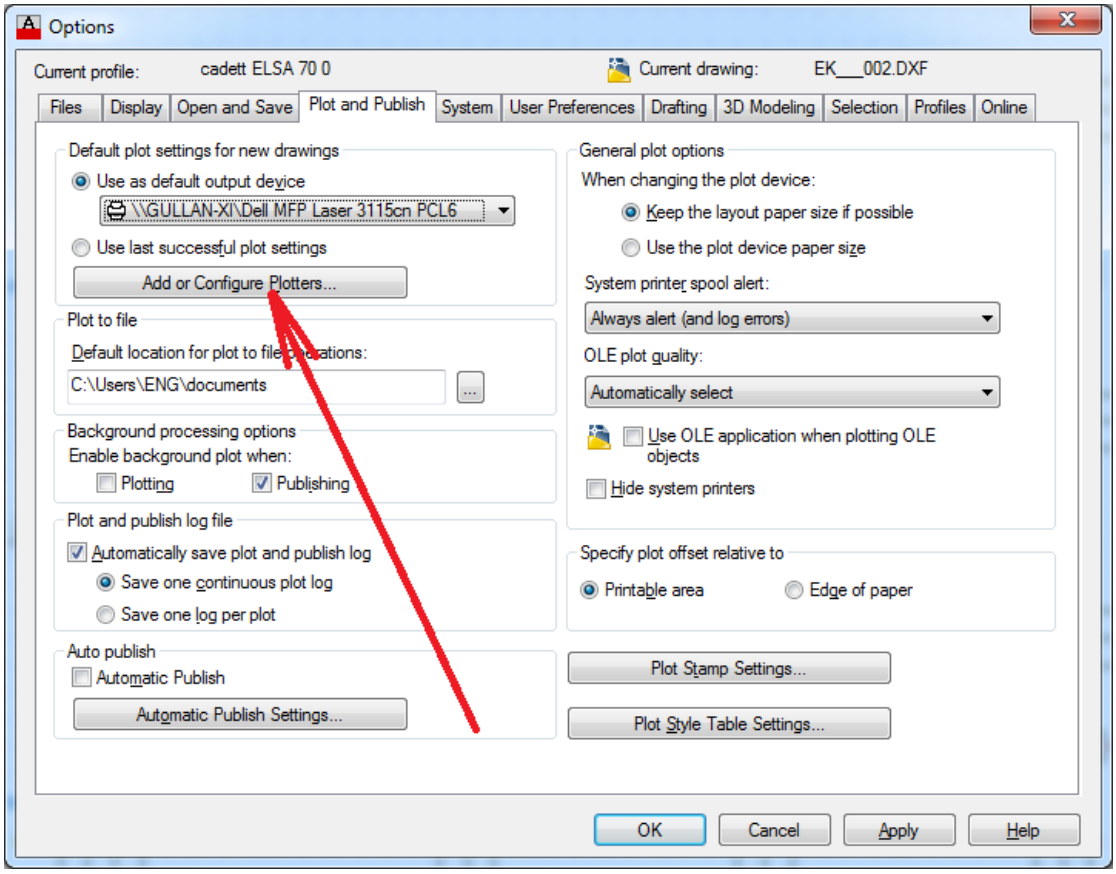

Figure 179: The "Options" dialogue box where the Add or Configure Plotters... button is pressed.

3. Click the **Add or Configure Plotters…** button.

4. Double-click the **Add-A-Plotter Wizard** shortcut.

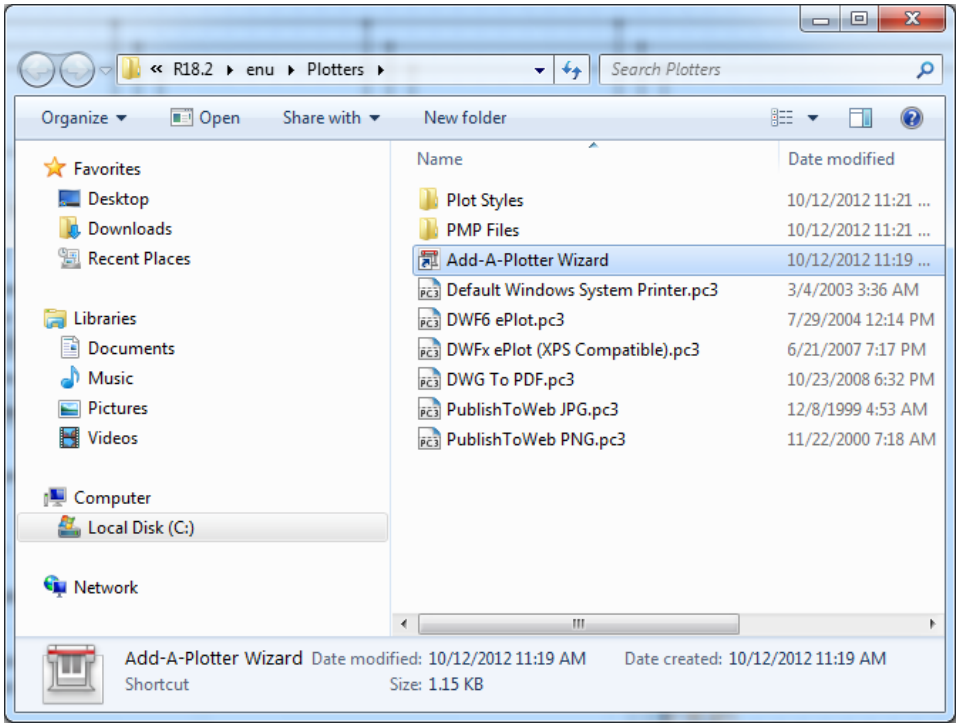

*Figure 180: The **Add-A-Plotter Wizard** is started with a double click.*

5. Click **Next >** in the **Introduction Page**.

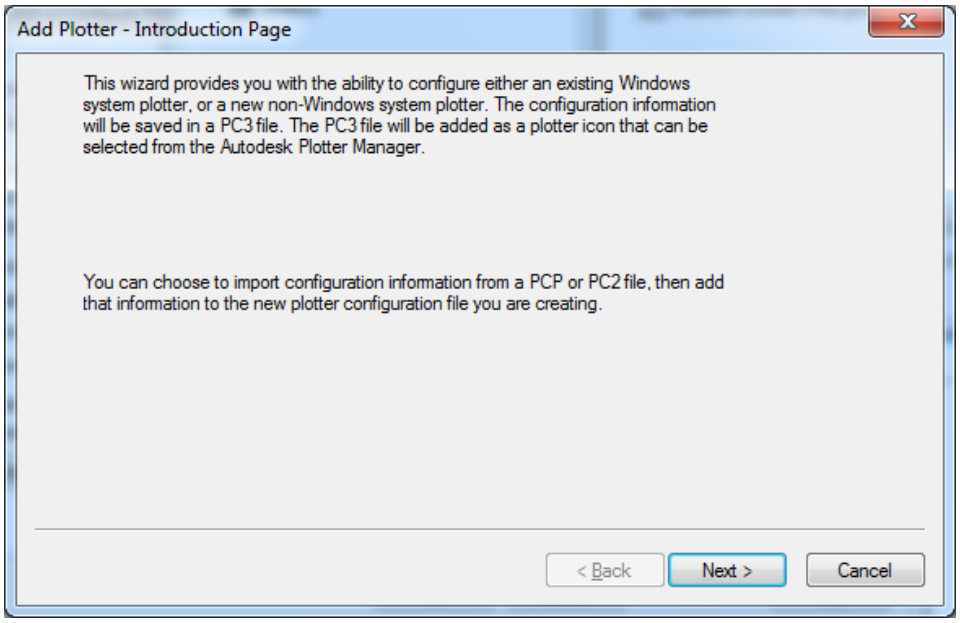

*Figure 181: The **Next >** button is pressed.*

6. Specify **My Computer** and then click **Next >**.

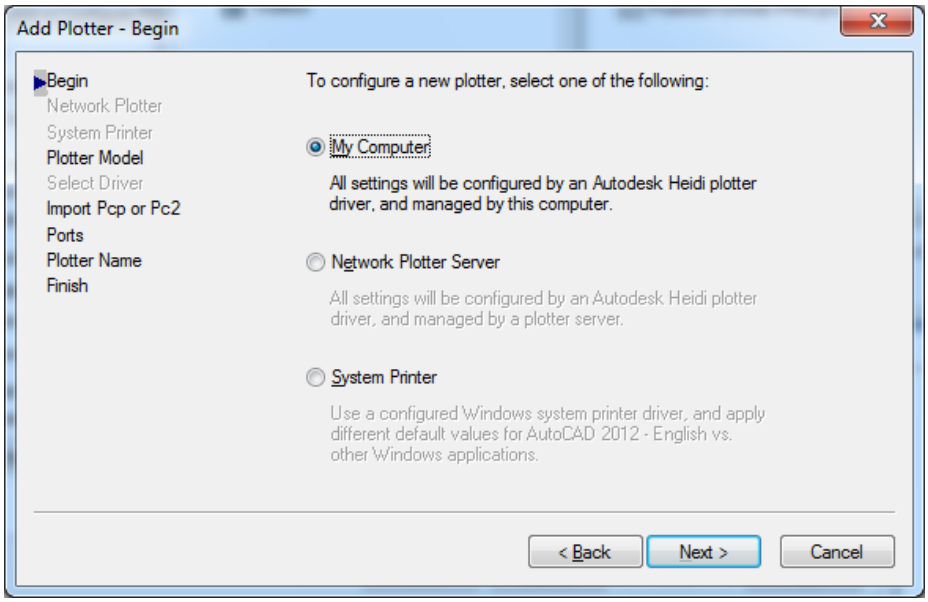

*Figure 182: **My Computer** is selected.*

7. Under **Manufacturers**, please select **Autdesk ePlot (PDF)**. Under **Models**, please specify **DWG to PDF**. Then click **Next >**.

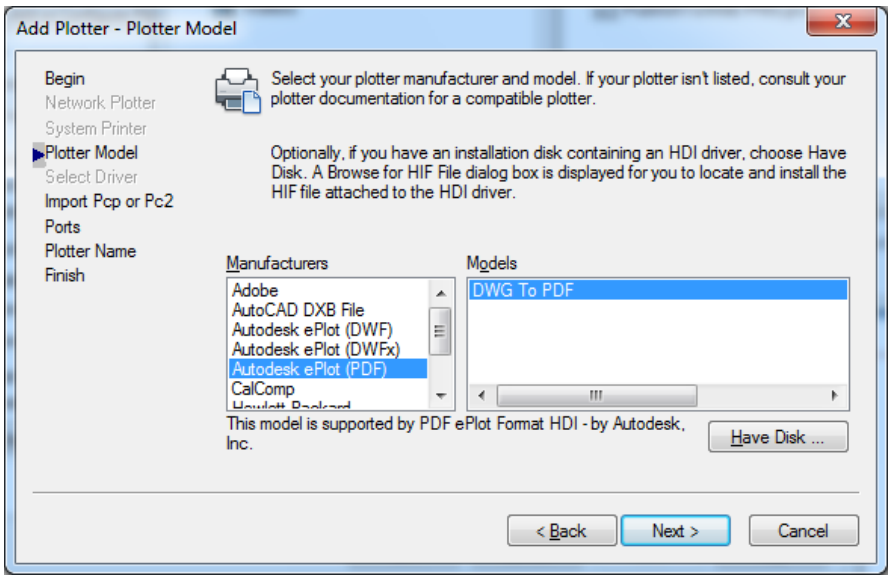

*Figure 183: **Autodesk ePlot (PDF)** and **DWG To PDF** are selected.*

8. Click **Next >**.

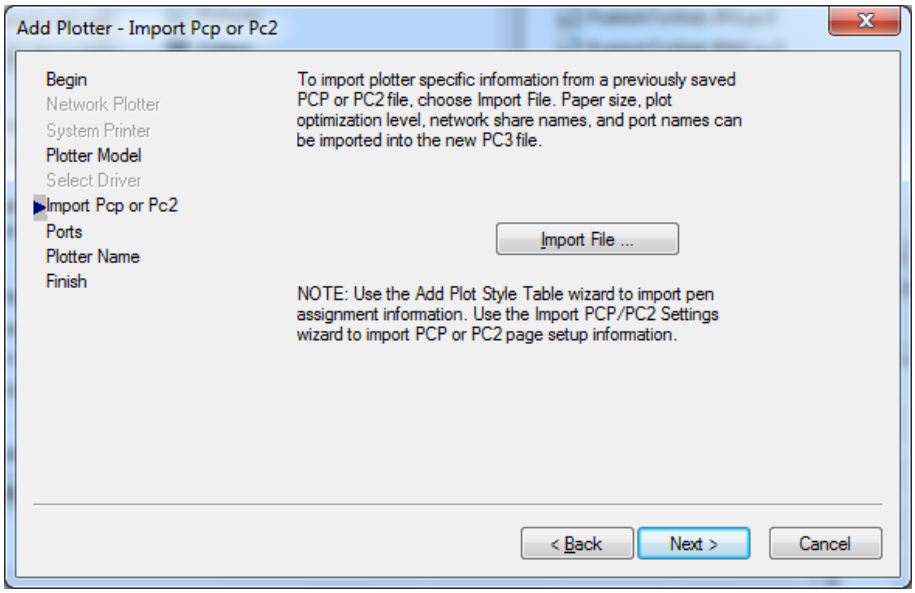

*Figure 184: The **Next >** button is pressed.*

9. Select **Plot to File**, then click **Next >**.

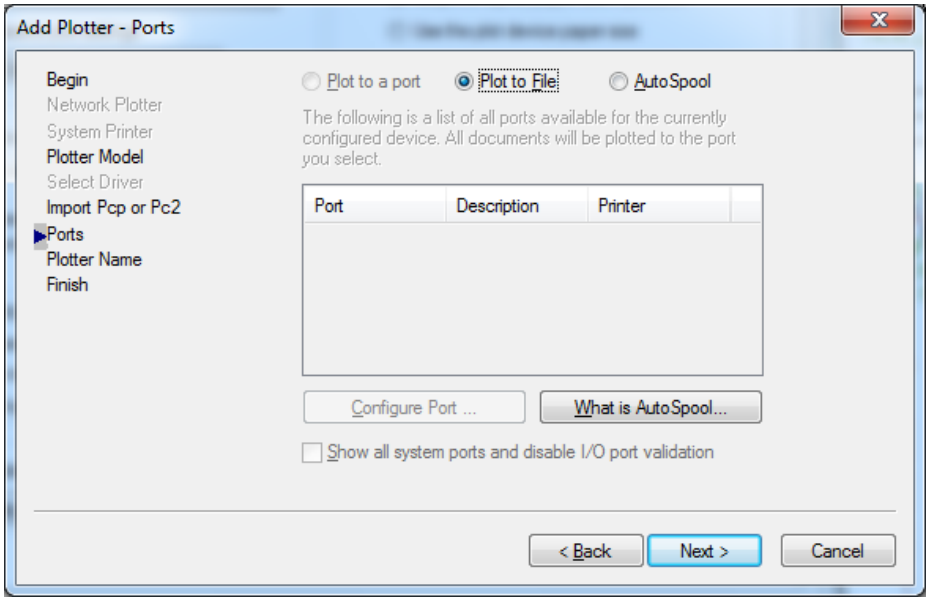

*Figure 185: **Plot to File** is selected.*

10. Specify the **Plotter Name** as **PDF_CADETT**. Then click **Next >**.

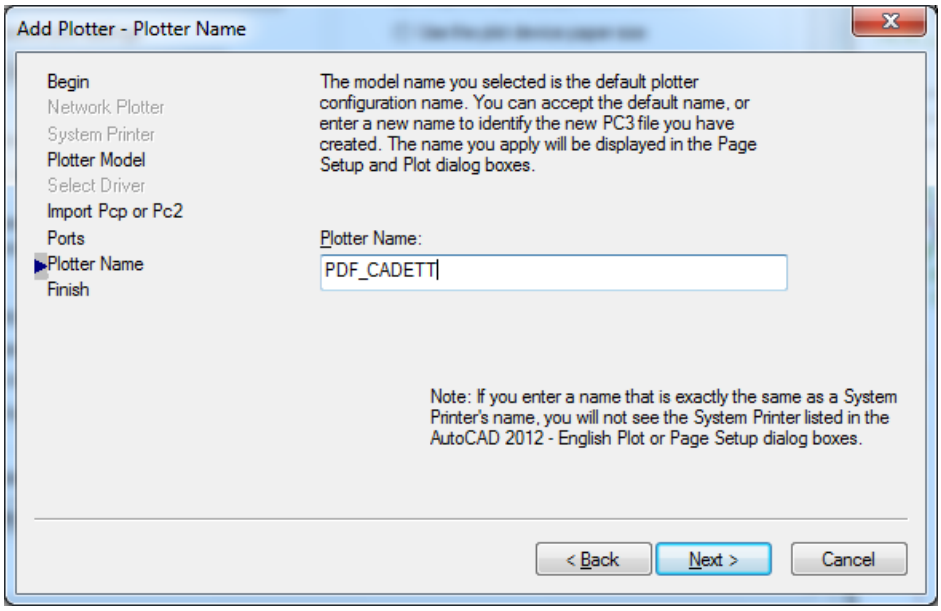

*Figure 186: The name of the virtual PDF printer must be exactly **PDF_CADETT**.*

11. Click the **Edit Plotter Configuration…** button.

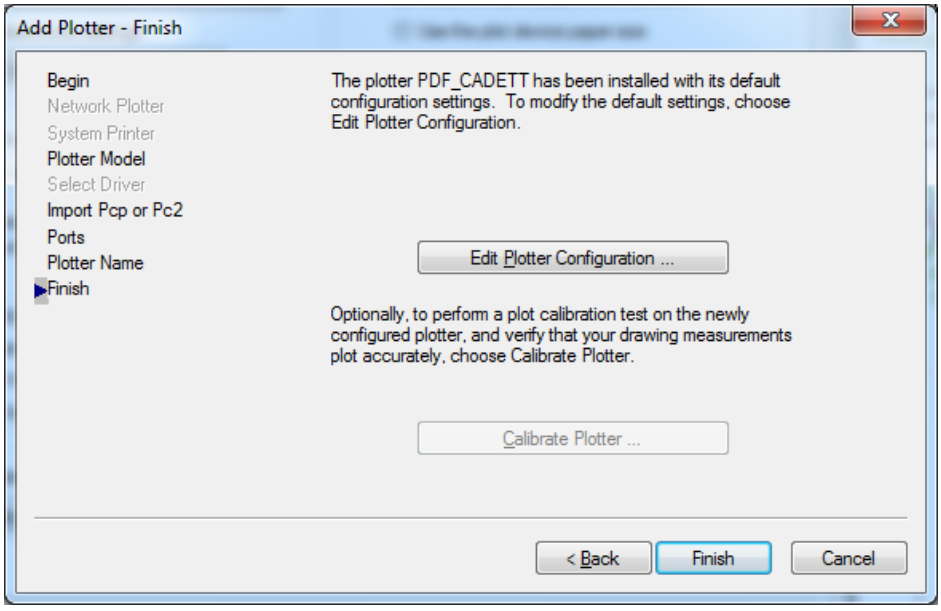

*Figure 187: The **Edit Plotter Configuration...** button is pressed.*

12. In the upper part of the dialogue, please select **Custom Properties**. Then click the **Custom Properties…** button that appear in the lower part of the dialogue.

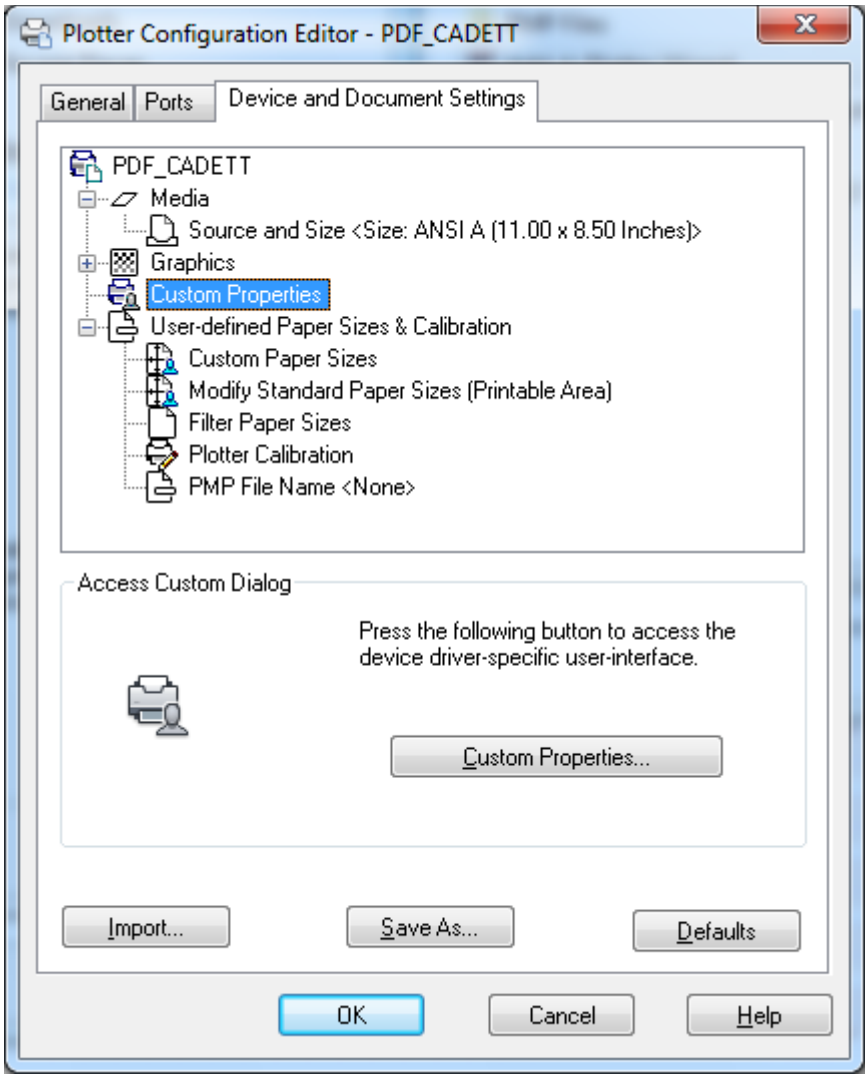

*Figure 188: Select **Custom Properties** and then click the **Custom Properties...** button.*

13. The look of the next dialogue differ depending on the version of AutoCAD that you are using. Below you will find pictures of both the old and the new dialogue. The old one was used in AutoCAD 2015 and older. The new one is used in AutoCAD 2016 and newer.

    In AutoCAD 2016 or newer, please uncheck **Show results in viewer**, **Create bookmarks** and **Include layer information**.

In AutoCAD 2015 or older, please uncheck **Open in PDF viewer when done**.

Then click **Ok**.

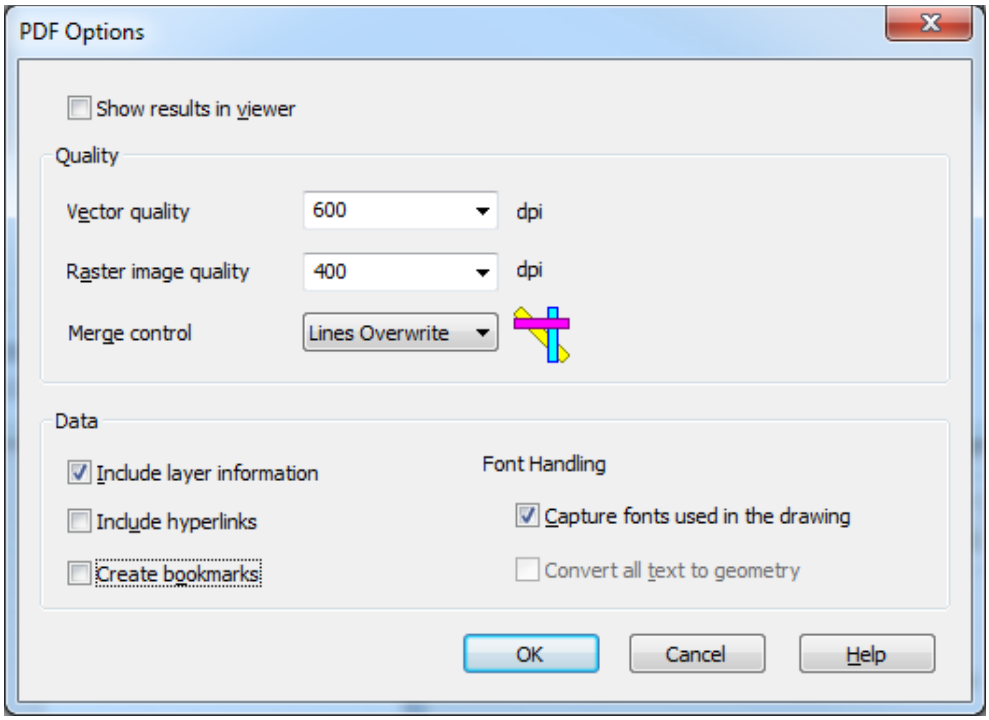

*Figure 189: The dialogue used in AutoCAD 2016 and newer. Uncheck both **Show results in viewer** and **Create bookmarks**. Unchecking **Include layer information** is also recommended.*

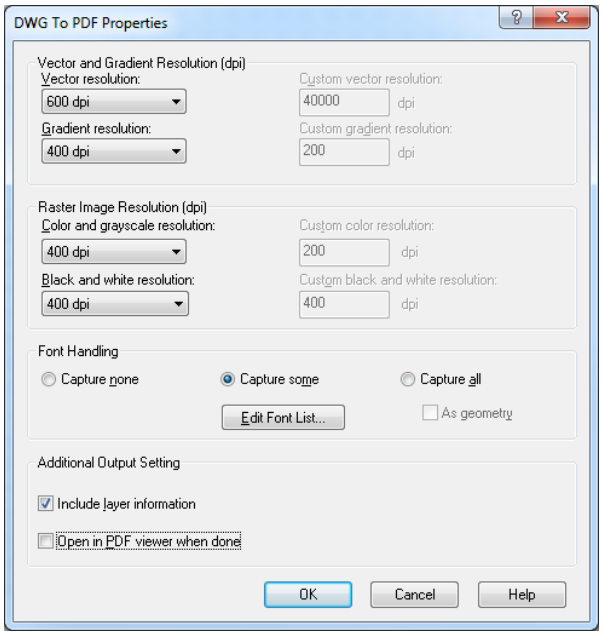

Figure 190: The old dialogue used in AutoCAD 2015 and older.

14. In the upper part of the appearing dialogue, please select **Modify Standard Paper Sizes (Printable Area)**.

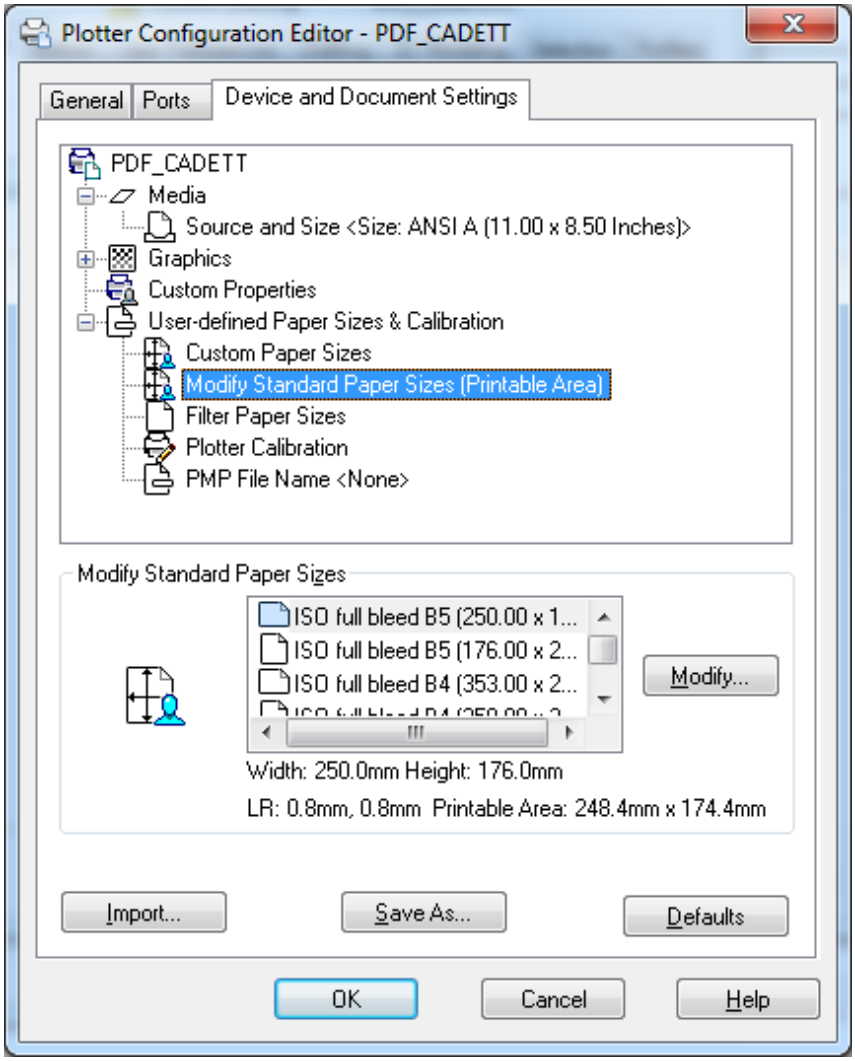

*Figure 191: Select **Modify Standard Paper Sizes (Printable Area)**.*

15. In the lower part of the dialogue, please select **ISO A4 (297.00 X 210.00 MM)**. Then click the **Modify…** button.

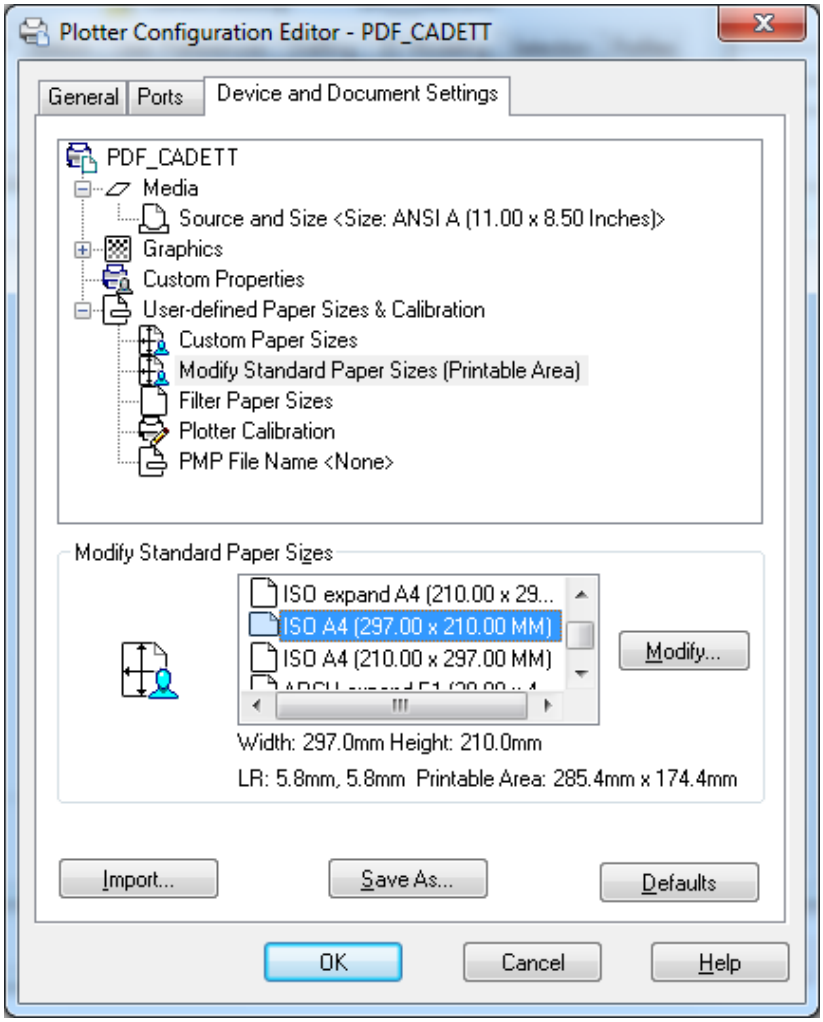

*Figure 192: Select **ISO A4 (297.00 x 210.00 MM)** and click the **Modify** button.*

16. Adjust the margins with suitable values, for example **3** mm as shown below. Then click **Next >**.

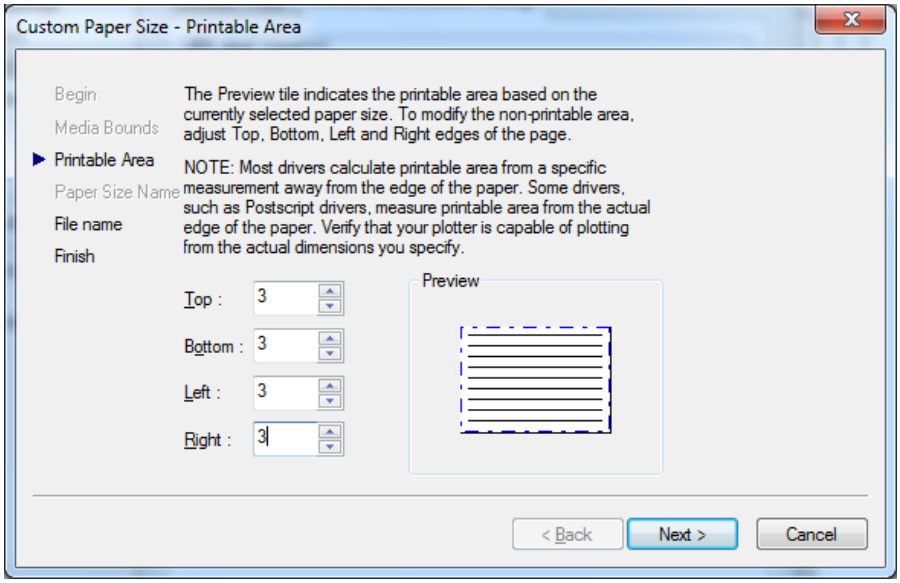

Figure 193: The margins have been adjusted to reasonable values.

17. The margin information will be stored in a so-called PMP file. Please accept the default file name of that (identical with the PC3 file). Then click **Next >**.

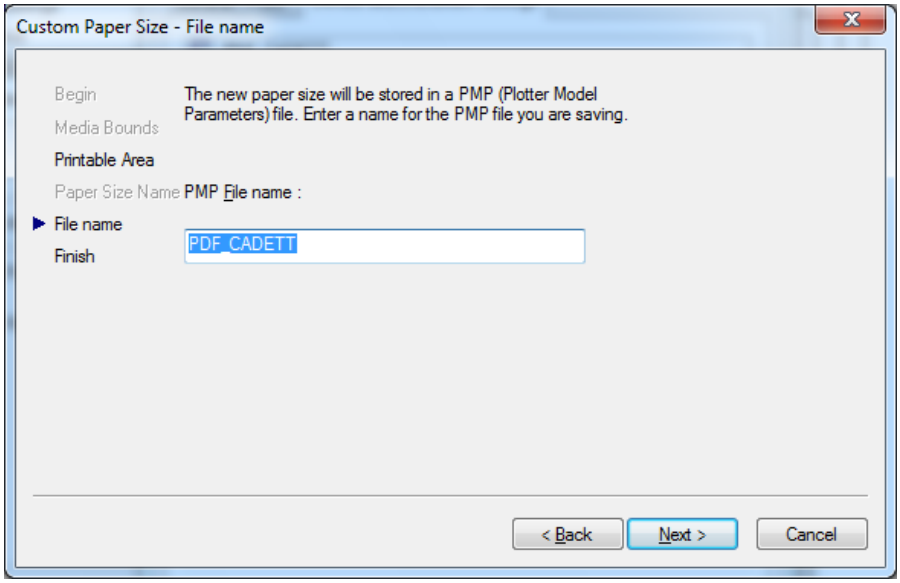

*Figure 194: **PDF_CADETT** is a perfect name here too.*

18. Please repeat the process described in items 14 – 17 above, this time for the standard paper size **ISO A4 (210.00 x 297.00 MM)**, which is used by the QuickPDF feature.

19. Click **Finish**, **Ok** and then **Finish** again. The virtual printer is then ready for use.

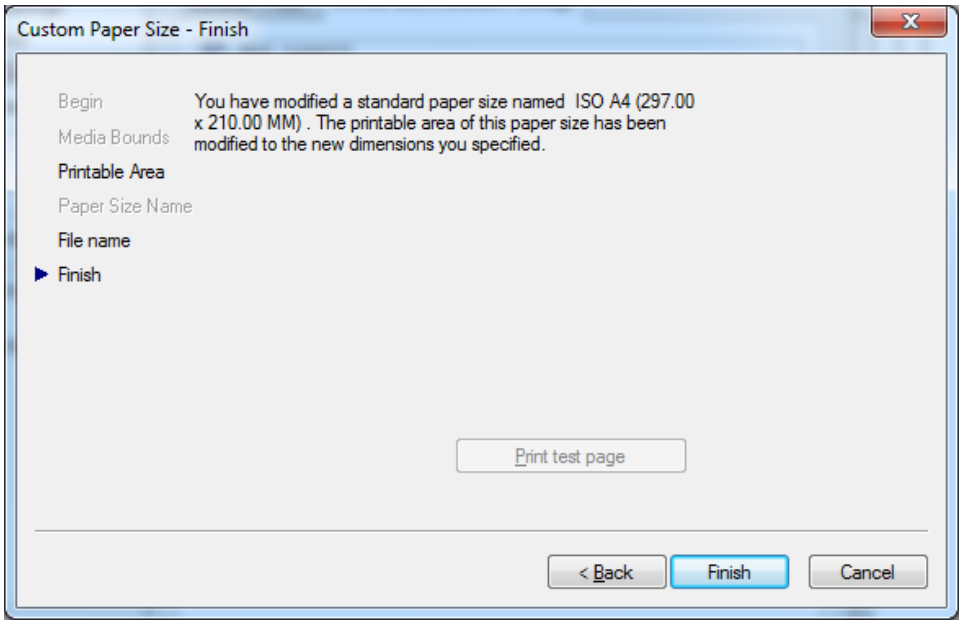

*Figure 195: The **Finish** button ends the procedure.*

12.3 Create a PS_CADETT virtual printer

For a number of older PDF generation script sequences, another virtual printer is used. This is currently true for all script sequences that generate non-searchable PDF files.

The name of that printer is **PS_CADETT**.

The creation of the **PS_CADETT** virtual printer is described in full detail here.

Please follow these steps:

1. Open a drawing sheet using the Drawing Manager.

2. In the **File** tab of the ribbon menu, please select the **Printer Settings…** command found top left in the menu.

3. Click the **Add or Configure Plotters…** button.

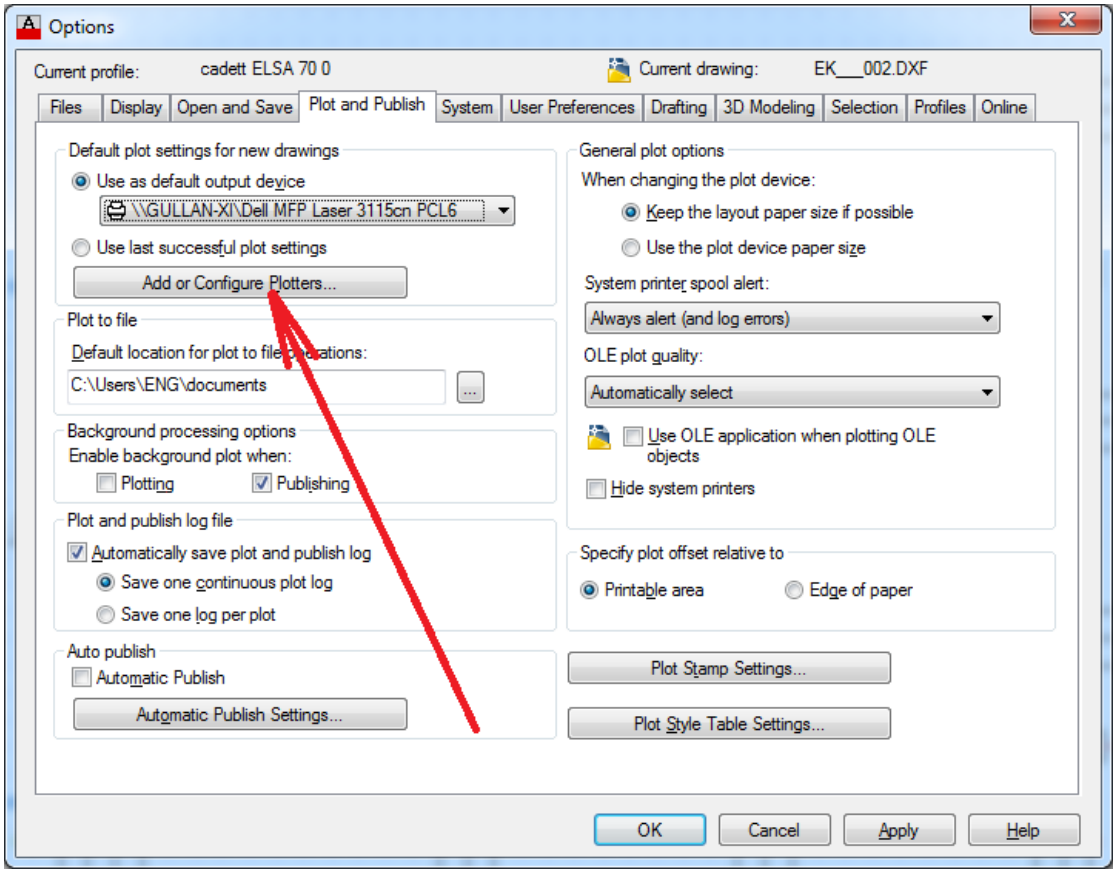

*Figure 196: The **Options** dialogue box where the **Add or Configure Plotters...** button is pressed.*

4. A list of available plotter definitions is displayed. In that list, you can also find a shortcut for the wizard used to create new plotter definitions.

5. Double-click the **Add-A-Plotter Wizard** shortcut.

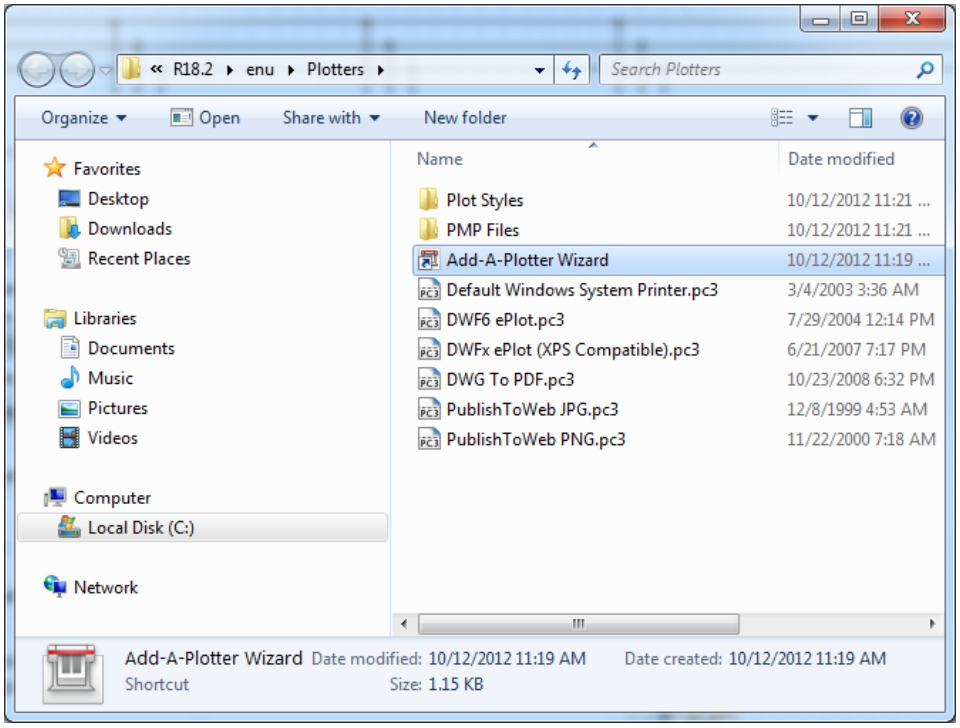

*Figure 197: The **Add-A-Plotter Wizard** is started with a double click.*

6. Click **Next >** in the **Introduction Page**.

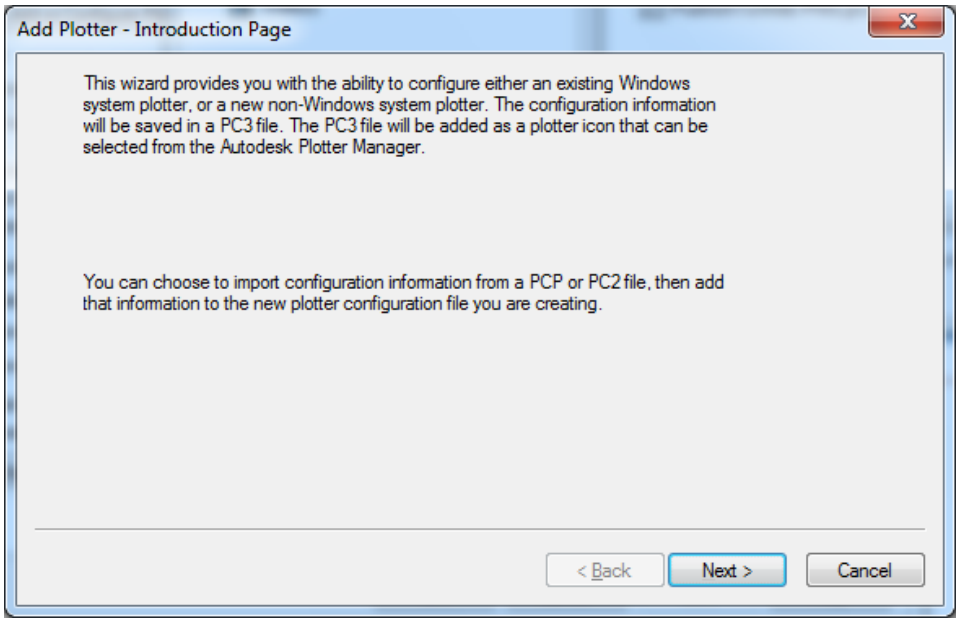

*Figure 198: The **Next >** button is pressed.*

7. Specify **My Computer** and then click **Next >**.

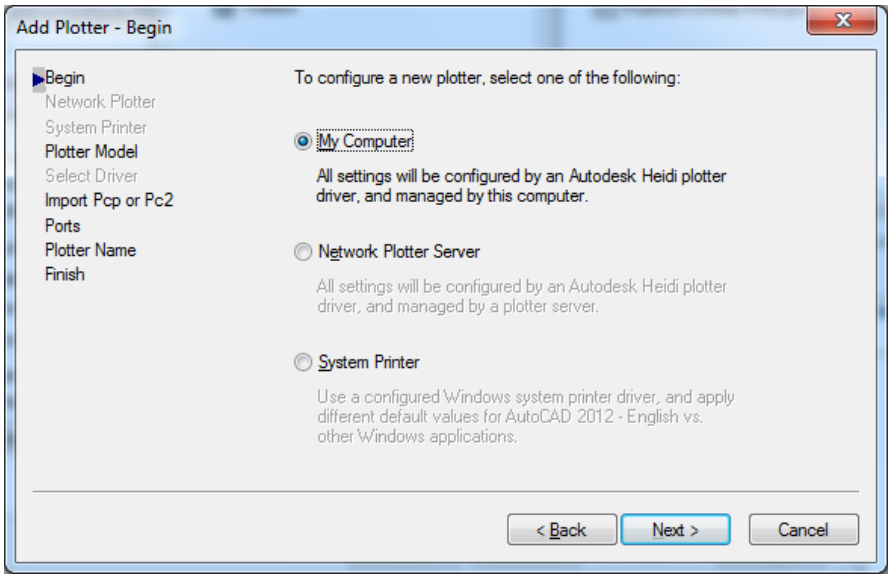

*Figure 199: **My Computer** is selected.*

8. Select **Adobe** and **PostScript Level 1 Plus**. Then click **Next >**.

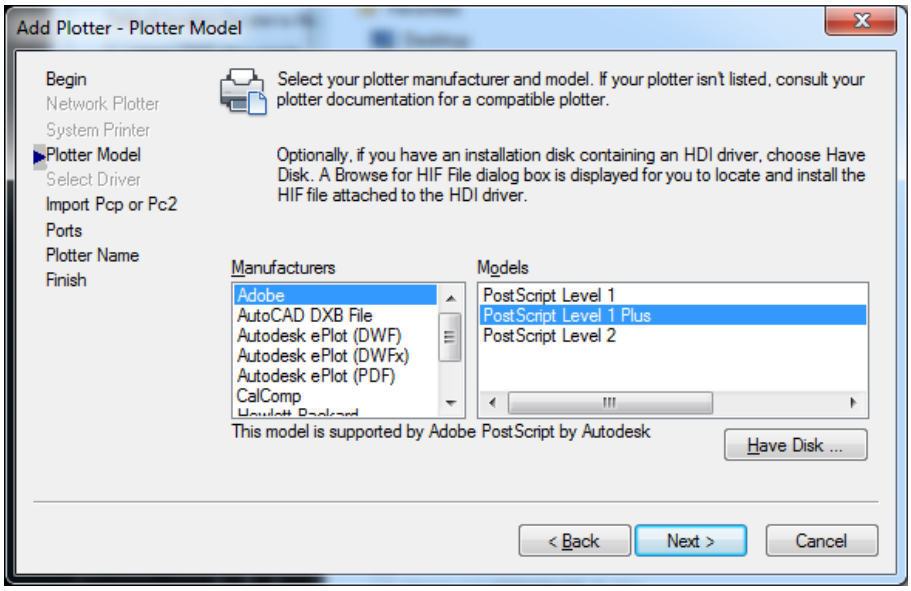

*Figure 200: Select **Adobe** and **PostScript Level 1 Plus**.*

9. Do not import anything. Simply click **Next >**.

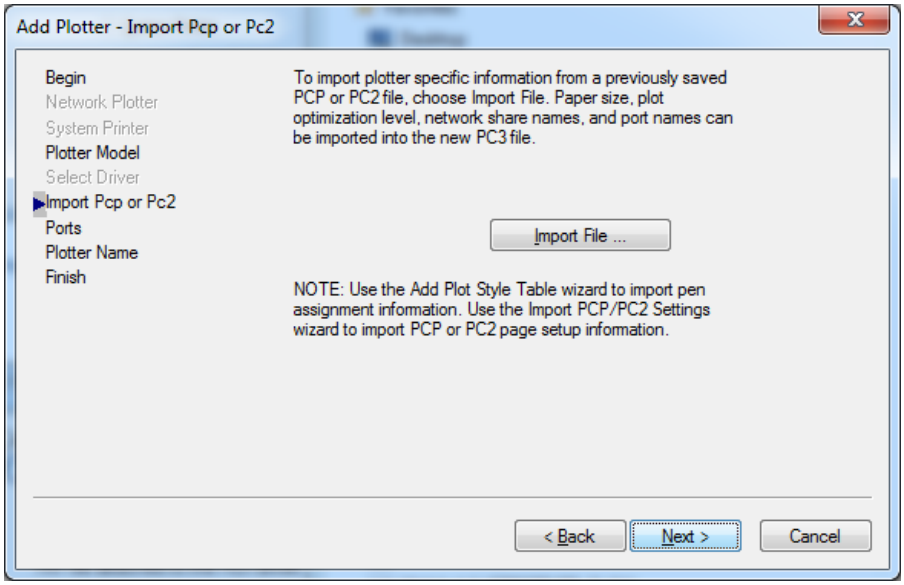

*Figure 201: Simply click **Next >**.*

10. Select **Plot to File** and then click **Next >**.

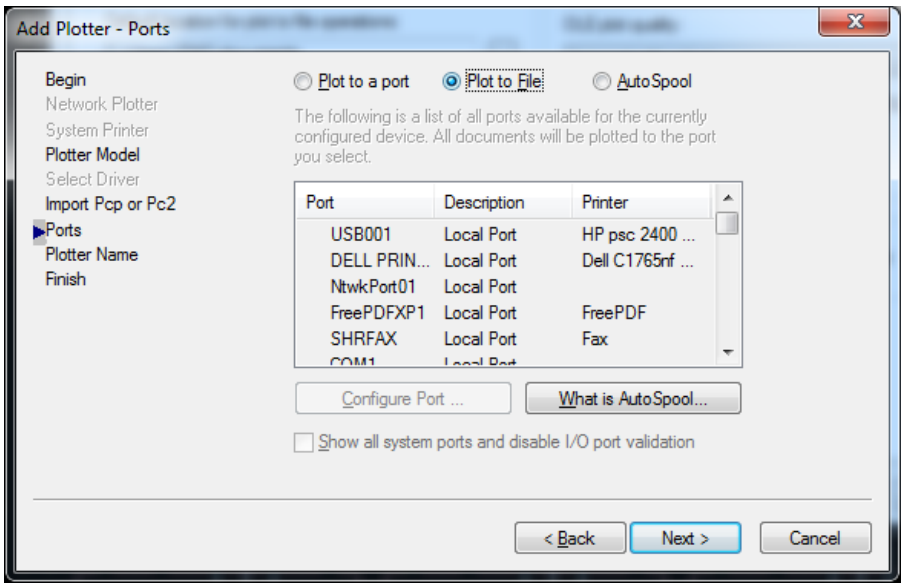

*Figure 202: Select **Plot to File**.*

11. Specify the name of the virtual printer. It must be exactly **PS_CADETT**.

    No variations are allowed if you want to use the standard script sequences that are included in the delivery of the software.

    Then click **Next >**.

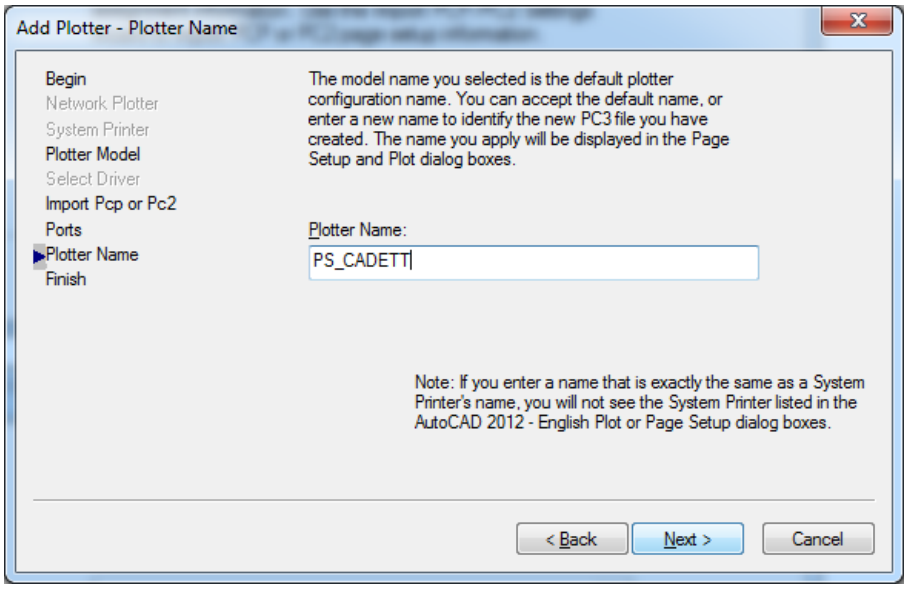

*Figure 203: The plotter name should be **PS_CADETT**.*

12. Click the **Edit Plotter Configuration…** button.

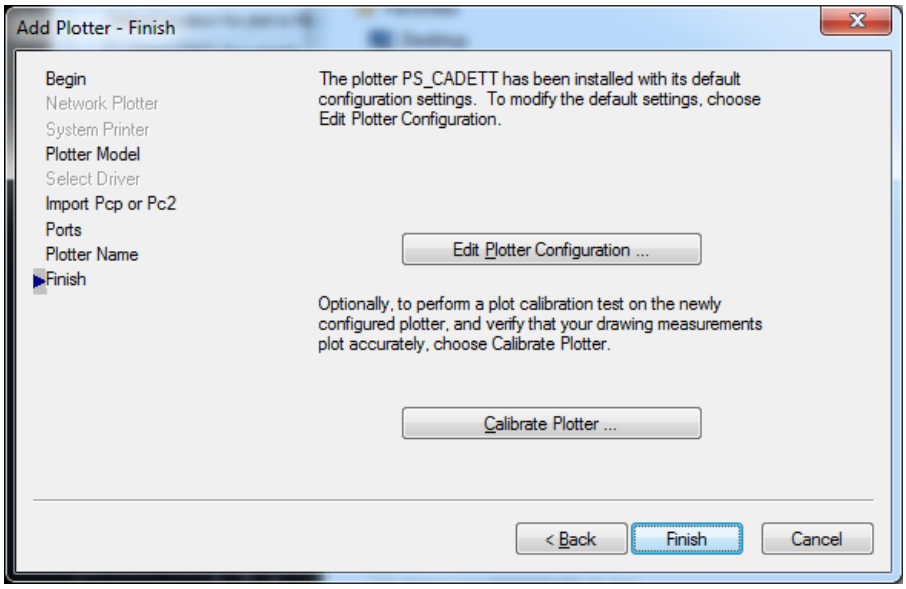

*Figure 204: Click **Edit Plotter Configuration…**.*

13. In the upper part of the next dialogue, please select **Custom Properties**. Then click the **Custom Properties…** button that appears.

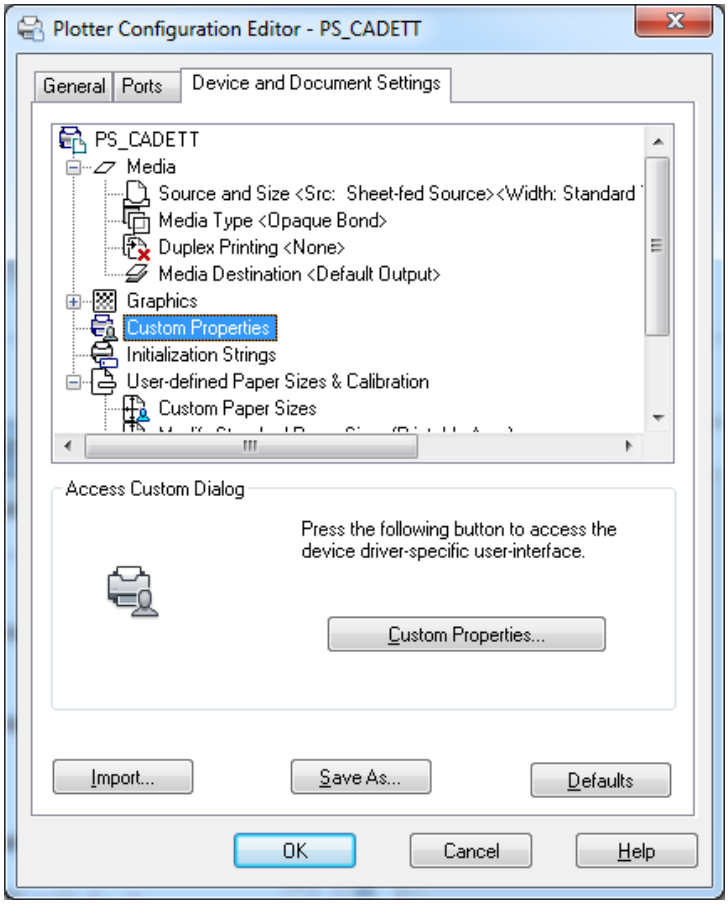

*Figure 205: Select **Custom Properties**.*

14. Select **PS PostScript** and then uncheck everything else. Nothing should be activated apart from **PS PostScript**. Then click **OK**.

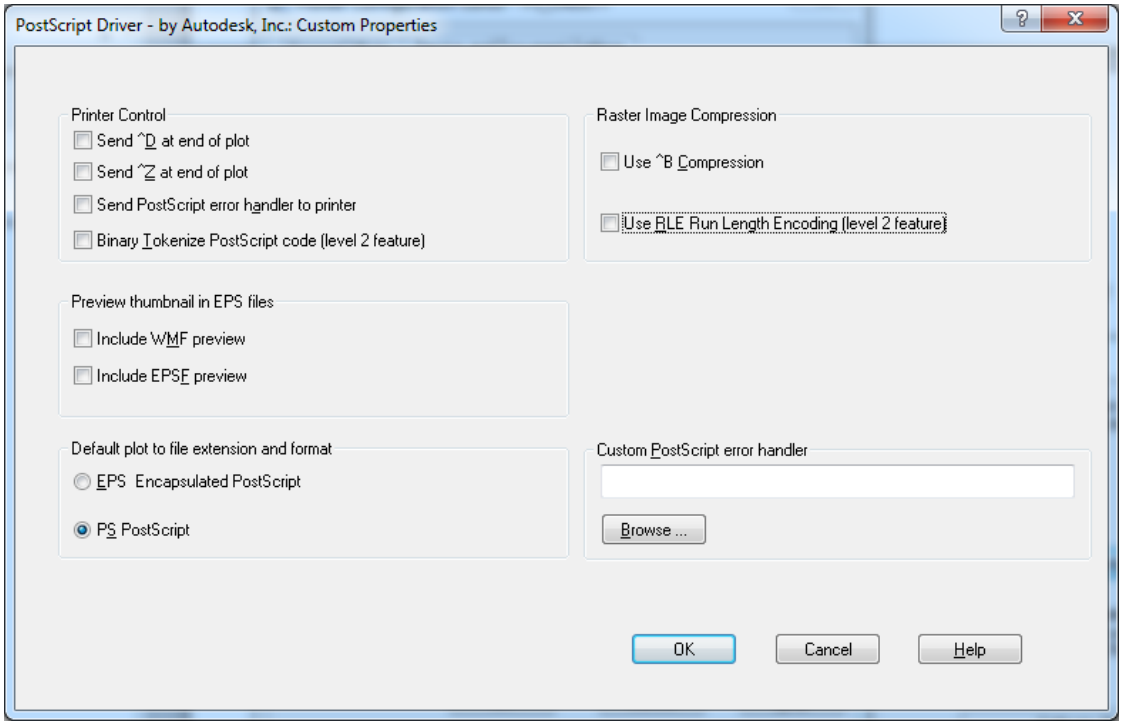

*Figure 206: Uncheck everything except **PS PostScript**.*

15. In the upper part of the dialogue, please select **Modify Standard Paper Sizes (Printable Area)**.

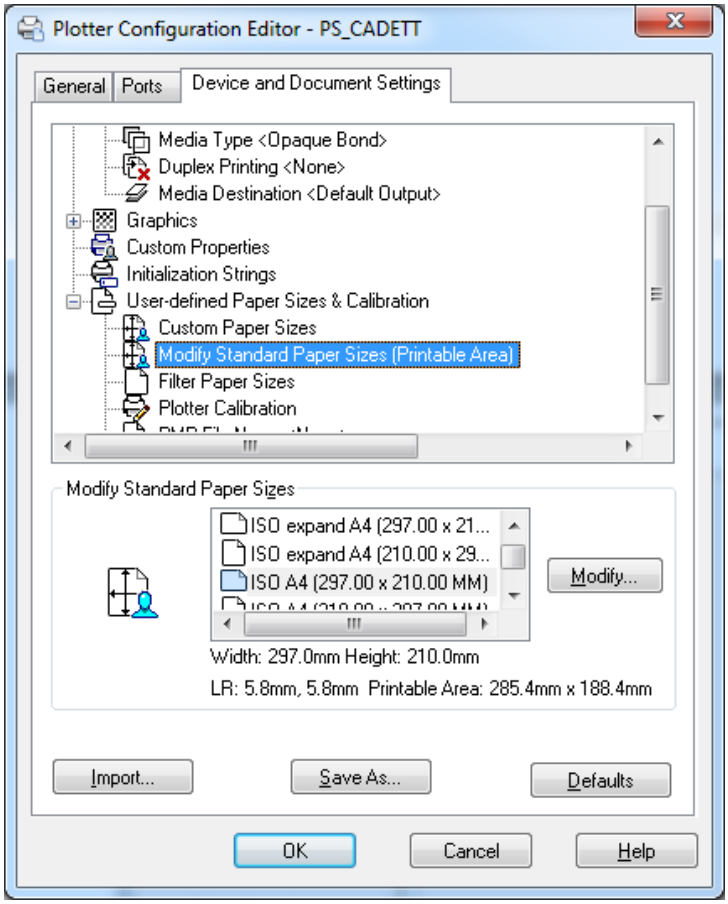

Figure 207: ***Modify Standard Paper Sizes (Printable Area)*** *is selected.*

16. Then, in the lower part of the dialogue, please select **ISO A4 (297.00 x 210.00 MM)**. When that is done, click the **Modify…** button to the right.

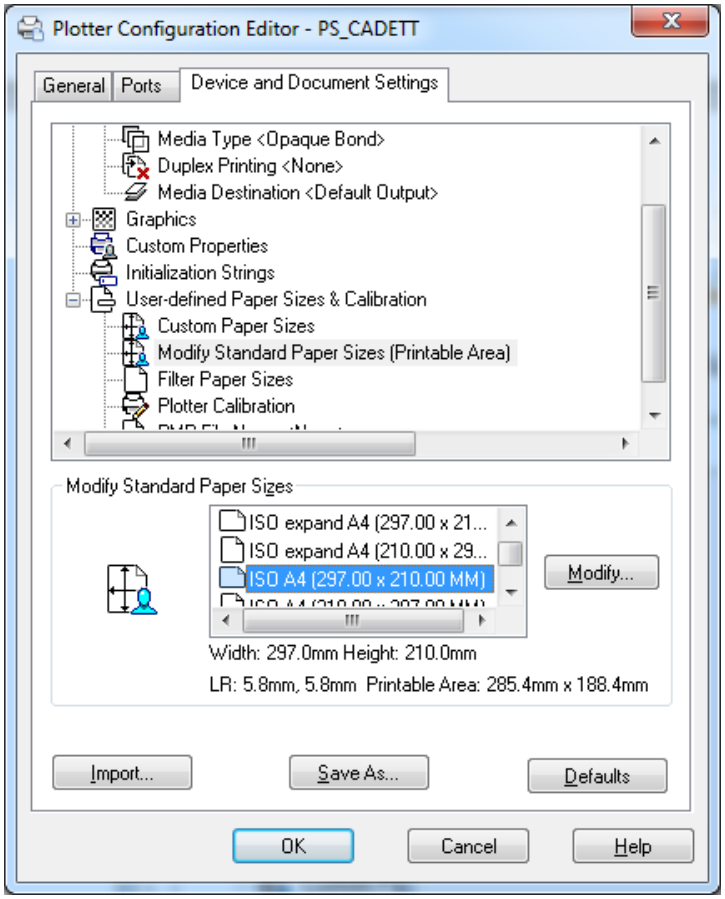

Figure 208: ***ISO A4 (297.00 x 210.00 MM)*** *is selected and modified.*

17. Adjust the margins. **3** millimeters in all directions is a reasonable choice.

    Then click **Next >**.

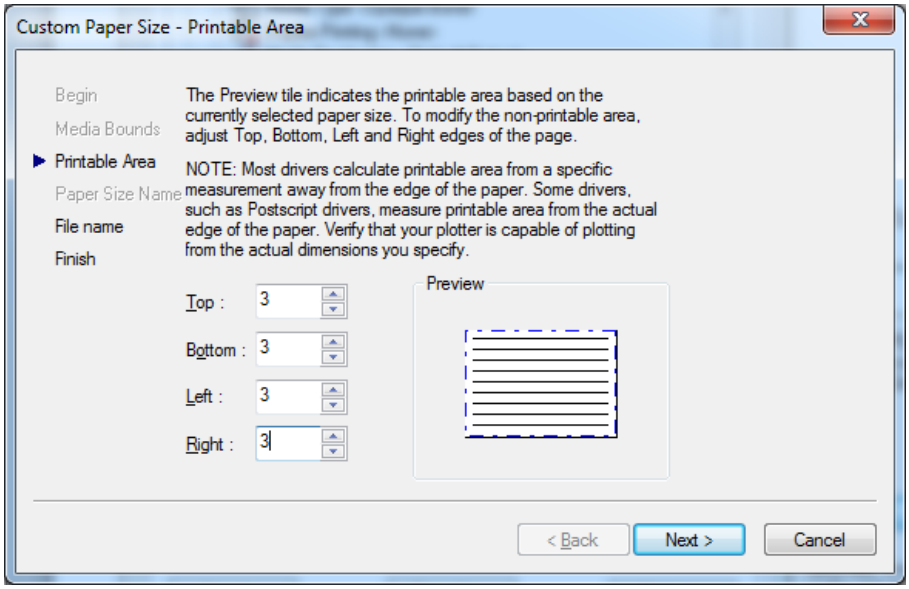

Figure 209: 3 millimeters is a recommended value for the margins.

18. The PMP file to store this information in should preferably be given the same name as the virtual plotter, in other words **PS_CADETT**. After typing that, click **Next >**.

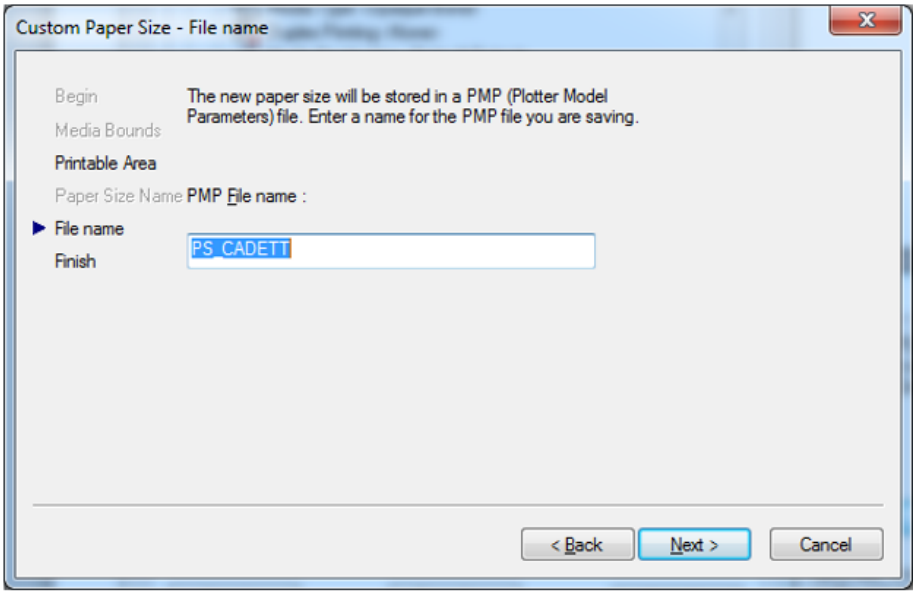

*Figure 210: The name if the PMP file should be PS_**CADETT**.*

19. Select **Sheet-fed Source** and click **Finish**.

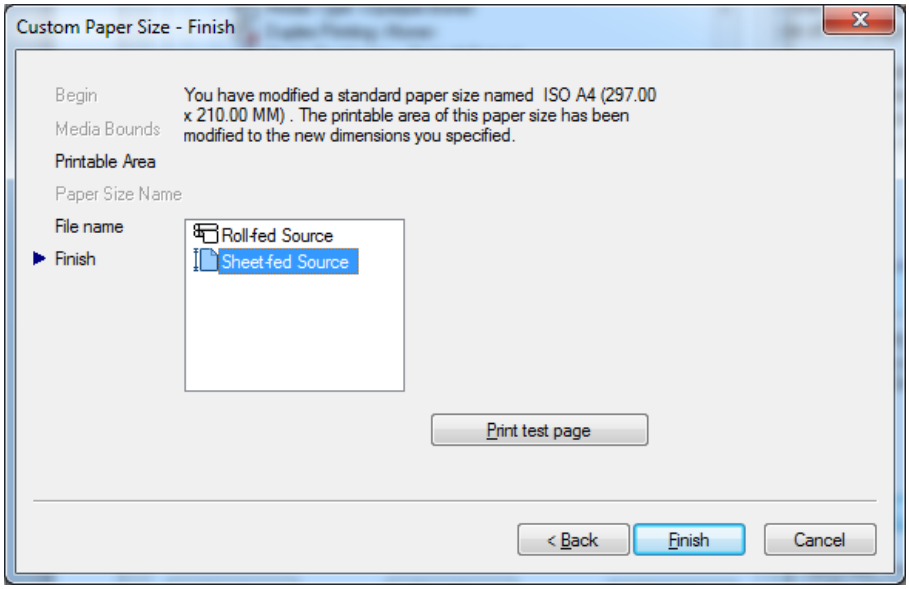

Figure 211: ***Sheet-fed Source*** *is selected.*

20. The virtual plotter is ready. You only have to confirm a few dialogue boxes to exit the procedure and then you are done.

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