

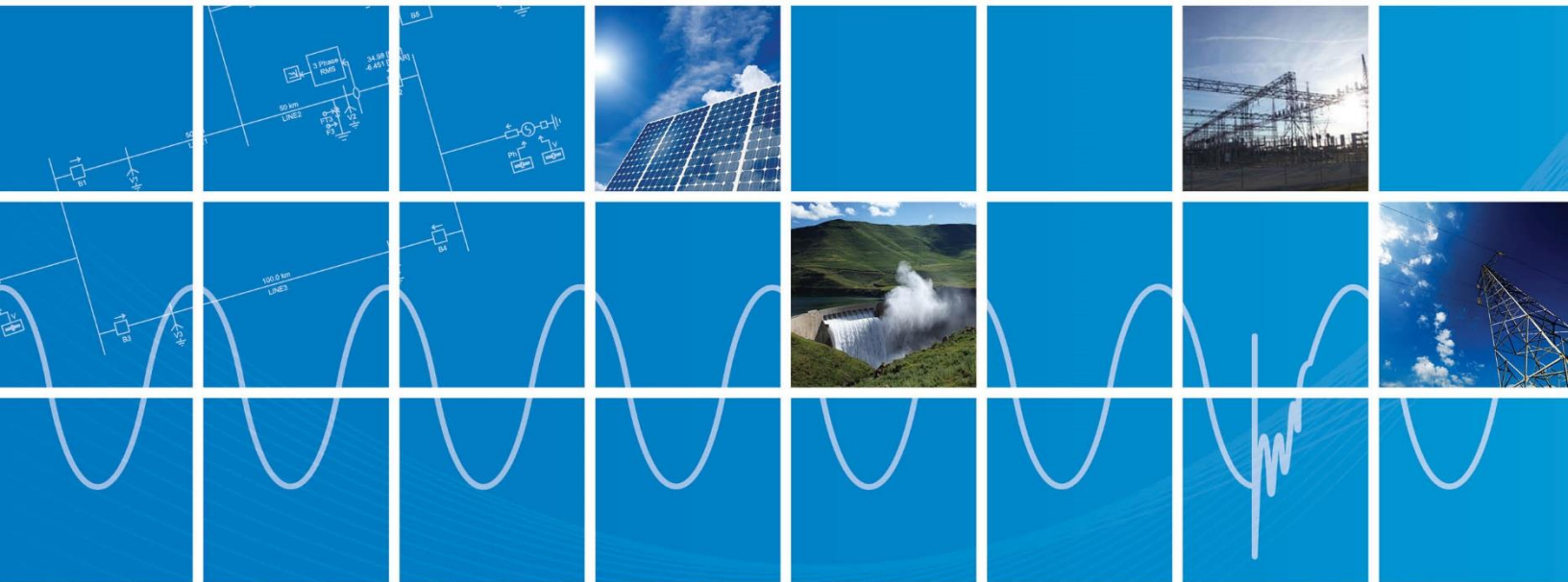


Offline Plotting & Analysis

Enerplot Setup Manual (Detailed)

Written for Enerplot v1.0.0 to v1.1.0

April 25, 2023
Revision 4



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1. General

1.1 Introduction

This manual provides instructions for installing Enerplot and activating a license.

Also included are the steps for registering a MyCentre user account, which is required for obtaining access to the software and licensing.

For any login, installation, join code, or licensing issues, a section on obtaining assistance is included.

1.2 Enerplot

Enerplot is an automatable software tool for displaying and analysing simulated and measured data, in an offline environment.

Supported files:

- PSCAD files:
 - EMTDC output (*.inf, *infx, *.out)
 - PSCAD Harmonic Frequency Scanner Output File
- COMTRADE files (*.cfg) – 1991, 1999 both ASCII and Binary
- PSS/E (*.out, *.asc)
- RSCAD (*.out)
- Comma Separated Values (*.csv) – Formatted and Unformatted
- Text files (*.txt) – Formatted and Unformatted

All file types, once loaded into Enerplot, can be converted to Comma Separated Value or COMTRADE formats.

Enerplot contains a Python 3 interpreter for the purpose of internal scripting. This interpreter is conveniently embedded in the software itself, but has a fixed unalterable set of site packages. Expanded scripting capabilities are available using an external Python interpreter. With an external interpreter, additional third-party modules may be installed. In addition, debugging tools may be used.

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1.3 Licensing

Certificate licensing, also known as Advanced Licensing or Internet Licensing, is used for running Enerplot. Login credentials in an Internet-based user portal called MyCentre are used to authorize licensing, and a temporary certificate to run Enerplot is checked out from the MHI server onto the client machine.

Once a certificate is activated, it may be used to run multiple instances of Enerplot on that machine, the number of instances being limited only by the machine's memory size.

When a certificate is checked out, it may either be retained on that computer when Enerplot is exited, or returned to MyCentre so that another user may check it out. If the certificate is retained, it will initially be valid for a four-week period; this period will then be refreshed to a new four-week period whenever Enerplot is re-launched with Internet access. The benefit to retaining a certificate on a machine is that Enerplot may be run for up to four weeks without requiring Internet access, making it portable.

If the certificate is returned, it is available to be activated to the same or different authorized user.

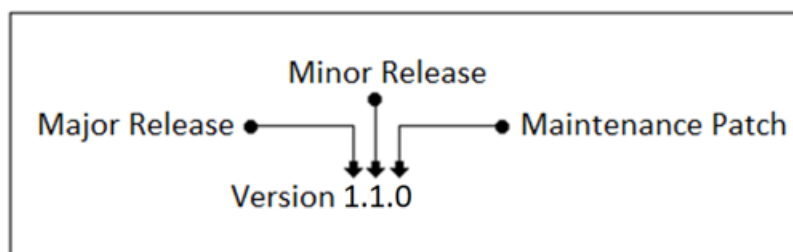
The license for the certificate is held within MyCentre in a special grouping called a "workgroup". A workgroup contains products, such as certificate licensing and software downloads, and can be linked with the MyCentre user accounts of authorized users.

When licensing will be shared among many users within one workgroup, access to a workgroup may be controlled by a designated person (or people) within the organization. The designated person is referred to as the "WorkGroup Administrator" (or "Local Administrator" or "Administrator"). In addition to adding and removing member access to the workgroup, the workgroup administrator may also designate other members as additional administrators.

For instructions on using MyCentre, please refer to this [article](#).

1.4 Release Numbering System

Releases are identified by a numbering system, which is used to designate the release type. There are three types of releases as shown:



- A "Major Release", for example Version 1.1.0, contains a significant number of new features and functionalities, such that it warrants a brand new product. These types of releases normal occur every several years.

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- A “Minor Release”, for example, 1.1.0, typically provides a handful of new and enhanced features, but not enough to justify a new product. Minor releases may be released yearly.
- A “Maintenance Patch”, for example, 1.1.1 is purely a bug fix release. Maintenance patches may be released more than once per year.

1.5 Changes to the Software

All changes made since to the software are posted to this [webpage](#).

1.6 Quick Start Instructions

This manual contains detailed instructions for setting up a member’s software. For quick setup instructions, refer instead to the document Quick Start document posted to this [article](#).

1.7 How to Use this Manual

Section 2 contains instructions for setting up your software, which include registering a MyCentre user account, joining a workgroup to access the products, and installing and licensing the software.

Section 3 contains some troubleshooting resources.

Appendix A provides a link to the resources for becoming familiar with Enerplot.

2. Software and Licensing Setup

This section provides all required steps for setting up software and certificate licensing, and should be performed in the order presented.

2.1 Requirements

The requirements for installing, licensing, and using Enerplot are listed in this [article](#).

2.2 Obtain Access to Enerplot

Enerplot is available as either permanently licensed or for a time-limited trial.

The software may be purchased through our sales desk (enerplotsales@mhi.ca). Or, if your organization already owns Enerplot licensing, please request access from your WorkGroup Administrator. You will be provided a join code, that will be used to join your MyCentre user account to the workgroup containing the software and licensing. Proceed to Section 2.6 to use the join code.

Note

To find out who the workgroup administrator is, send a request to our sales desk (enerplotsales@mhi.ca), ensuring to include your name and organization.

For a trial, please contact our sales desk (enerplotsales@mhi.ca). Ensure to include your name and the name of your organization.

2.3 Register a MyCentre User Account

A MyCentre user account is required to authorize certificate licensing. [Register](#) a user account if you do not already have one.

Note

Refer to the [MyCentre User Manuals](#) for details on using the MyCentre user portal.

2.4 Log in to MyCentre

Log in to MyCentre as follows:

Requirement

A MyCentre user account (Section 2.3)

- a. Open a web browser, and go to the following link:

<https://mycentre.hvdc.ca/login>

- b. When prompted, enter your MyCentre login credentials, then select “Log in”.

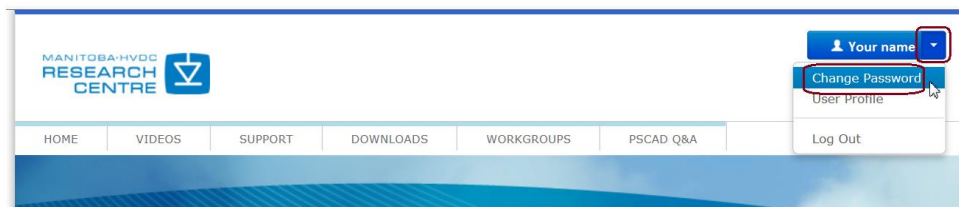
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Notes

1. If this is your first time logging in, use the provided temporary password.
2. Refer to Section 3.2 for login tips and troubleshooting.
- c. It is recommended that upon registering in MyCentre, you change the temporary password per Section 2.5.
- d. If you have been provided a join code to join a workgroup, proceed to Section 2.6 to join a workgroup. Otherwise, proceed to Section 2.7 to install the software.

2.5 Change your MyCentre Password

If a MyCentre user account was newly registered (per Section 2.3), it is recommended that you change the assigned temporary password:



Refer to the [MyCentre User Manuals](#) for details.

2.6 Join a WorkGroup using a Join Code

If you were provided a join code, to link your user account to the licensed workgroup, apply the join code as per this [article](#).

For any join code issues, contact our support desk as per Section 3.5, ensuring to include the join code in your e-mail.

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2.7 Install the Software

2.7.1 Considerations

The following are some considerations for your installation:

1. **Type of Installation:** The software may be installed in two manners:
 - Normally, using the Installer utility (Section 2.7.2).
 - Silently, through the Windows Command Prompt (Section 2.7.3).
2. **Options:** During the installation, the following products may also be installed (see Section 1.2 for details on these products):
 - **Python:** Install this if you intend to perform external scripting and if Python 3.5 or better is not already installed.
 - **Enerplot Automation Library:** Install this if you intend to perform external scripting and if Python 3.5 or better is installed.

2.7.2 Installer Utility

Install the software using the Installer utility as follows:

Notes

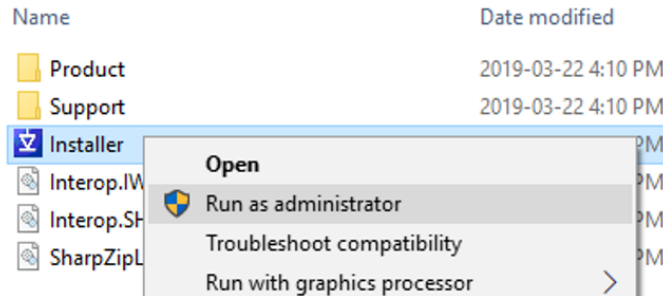
1. System requirements are listed in Section 2.1, Step 2.
2. If you encounter any installation issues, refer to Section 3.1.
 - a. Review the installation considerations as per Section 2.7.1.
 - b. Obtain access to the software as per Section 2.2.
 - c. Extract (unzip) the top-level zipped file, and save the unzipped folder to your local drive (e.g. desktop).

Warning

Do not unzip any of the zipped sub-files.

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- d. Right-click on the unzipped “Installer.exe” file, and select “Run as administrator”.

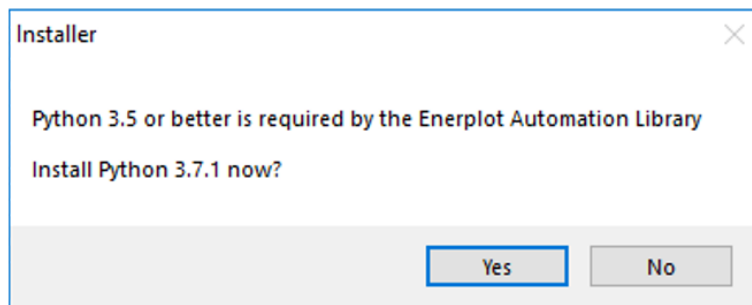


- e. When prompted by the User Account Control dialog box, select the option to run this installation with Windows administrator privileges by selecting “Yes”.
- f. The Installer will launch.

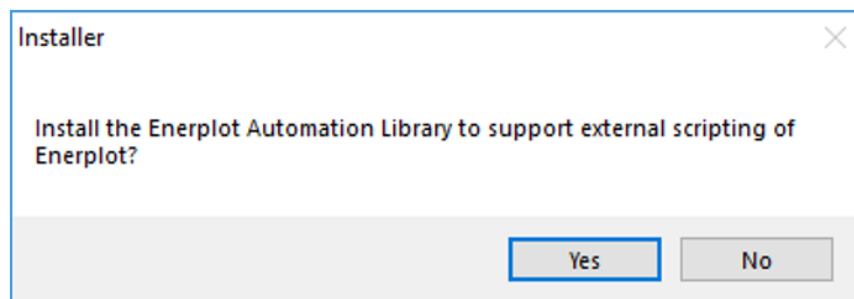
Note

If the Installer has detected that Enerplot is already installed, a message similar to that shown in Step (i) will display. The installation will be complete; simply close the Installer.

- g. When prompted whether to install Python, refer to Section 2.7.1 for further information:

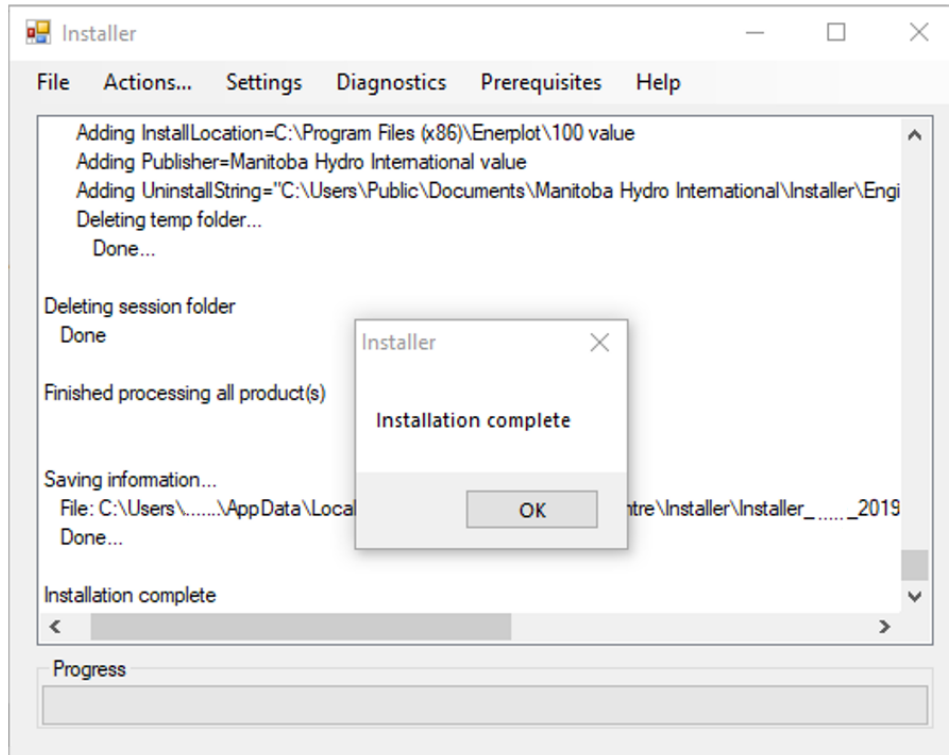


- h. When prompted whether to install the Enerplot Automation Library, refer to Section 2.7.1 for further information.



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- i. The software will be installed. When the installation is complete, a message similar to the following will display:



- j. Select "OK" and close the Installer.

Proceed to Section 2.8 to launch your software.

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2.7.3 Silent Installation – Windows Command Prompt

[2.7.3.1 Background](#)

The Installer utility supports a silent install configuration in which an automated Software Management System can deploy it to multiple machines without human intervention.

The IT staff managing the SMS-based deployment have several command line switches that they can use to specify the behaviour of the installation.

[2.7.3.2 Basic Workflow](#)

1. Ensure that system requirements are met (Section 2.1, Step 2).
2. Review the installation considerations as per Section 2.7.1.
3. Obtain access to the software (Section 2.2).
4. Download the Installer zipped file to the target machine.
5. Extract (unzip) the top-level zipped file, and save the unzipped folder to your local drive (e.g. desktop).

Warning

Do not unzip any of the zipped sub-files.

6. Run the Installer.exe application with the appropriate command line switches (see Section 2.7.3.4 and Section 2.7.3.8).
7. Check the exit code of the application (see Section 2.7.3.5) and perform any further actions.

[2.7.3.3 Background on Pre- and Post- actions](#)

A product installation manifest may specify:

- A pre-installation action that must be performed before the product installation can begin. A typical example is stopping a specified service. Not all products require a pre-installation action.
- A post-installation action that must be performed after the product has been installed. A typical example is starting a specified service. Not all products require a post-installation action.
- A post-module installation action that must be performed after the module has been installed. A typical example is running a batch file, or running a third party installer. Not all modules specify a post-install action.

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2.7.3.4 Command Line Switches

Switch	Interpretation
/Silent=false	Normal operation
/Silent=true	Silent operation. All dialogs are silenced.
/Folder=	<p>If not specified (the default), the Installer utility will look for a ZIP file in the \Products folder relative to the Installer.exe file.</p> <p>If specified, this is the folder that contains the product ZIP file that is to be installed by the utility.</p>
/ChildInstaller=true	Install the product without logging into MyCentre and without adding it to the MyUpdater products list.
/Elevated=true	Run the Installer utility with elevated privileges, required to install files to Program Files, create machine shortcuts, modify the system environment, and run third party installers.
/Execute=	If this switch is not specified at all, then all specified module post-install actions are executed.
/Execute=NONE /Execute=none	No specified module post-install actions are executed at all.
/Execute=module1	<p>Only module1's post-install actions are executed (if it has any).</p> <p>All other modules' post-install actions are ignored.</p>
/Execute=module1,module2	<p>Only module1's and module2's post-install actions are executed (if they have any).</p> <p>All other modules' post-install actions are ignored.</p> <p>Multiple modules should be comma-separated.</p>
/Exit=true	<p>When done, the user can review the installation messages.</p> <p>The user must explicitly close the application.</p>
/Exit=false	When done, the application closes immediately, and returns the exit code to the system.

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2.7.3.5 Common Return Codes

Return code	Interpretation
0	Success.
32500	A pre-installation sanity check failed.
32501	A required login to a valid MyCentre account failed.
32502	The product's pre-install action failed to execute correct.
32503	The product's post-install action failed to execute.
32504	A module's post-install action failed to execute.
32505	Installation folder not specified or is invalid.
32506	General installation failure. Usually due to not launching the Installer.exe with elevated privileges.

Other return codes are also possible...

A product installation manifest may specify:

- A pre-installation action which must be performed before the product installation can begin. A typical example is stopping a specified service. Not all products require a pre-installation action.
- A post-installation action which must be performed after the product has been installed. A typical example is starting a specified service. Not all products require a post-installation action.
- A post-module installation action which must be performed after the module has been installed. A typical example is running a batch file, or running a 3rd party installer. Not all modules specify a post-install action.

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[2.7.3.6 Addressing Errors](#)

If you do encounter an error mode when using Silent installer mode, you can do the following to see what is generating that reported error:

- a. Copy the Installer ZIP to the target machine.
- b. Extract the Installer ZIP once.
- c. Run the Installer.exe application with the appropriate command line switches, but leave out /Exit=true.
- d. Scroll through the messages to see the offending error messages.
- e. Resolve any errors, then try again.

[2.7.3.7 Enerplot Installation Notes](#)

Note that Enerplot has two modules that have post-install actions (see Section 2.7.1 for details):

Module name code	Post-install action	Notes
Installs_Python	Run the Python 3.7.1 installer in silent mode	Python 3.5 or better is required to support the external Python scripting of Enerplot. Note that this third party installer can take 60 to 120 seconds to run and complete.
Installers	Installs the Enerplot Automation Library	

[2.7.3.8 Typical Enerplot Silent Install Commands](#)

- To just install Enerplot, and to not install Python 3.7.1:

```
Installer.exe /Silent=true /Elevated=true /Login=false /Execute=NONE /Exit=true
```

- If Python 3.5 or better is already installed, and you want to support external Python scripting of Enerplot (install Enerplot and Enerplot Automation Library):

```
Installer.exe /Silent=true /Elevated=true /Login=false /Execute=Installers /Exit=true
```

- If you want to install Enerplot, Python, and the Enerplot Automation Library:

```
Installer.exe /Silent=true /Elevated=true /Login=false /Exit=true
```

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2.7.3.9 Notes About Elevation

If you use the /Elevated=true switch then you must also do one of the following:

- Run the batch file or the SMS invoker with elevated privileges, or
- Mark the extracted and saved Installer.exe as “Run this program as an Administrator” so that the executable is always launched with elevated privileges.

2.8 Launching Enerplot

Once Enerplot has been installed (Section 2.7), it may be launched from the new desktop shortcut:



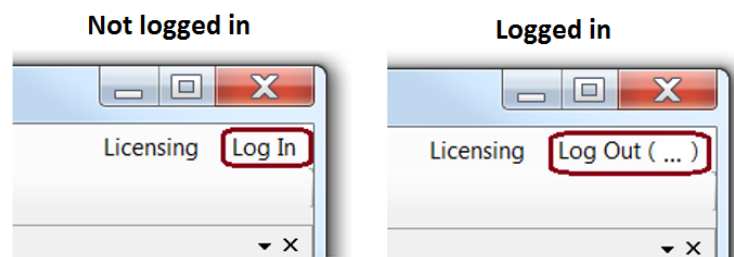
Proceed to Section 2.9 to activate a certificate.

2.9 Activating a Certificate

Activate a certificate as follows:

Notes

1. Refer to Section 2.1, Step 3 for requirements.
2. If there are any issues when activating a certificate, refer to Section 3.3.
 - a. If not already running, launch Enerplot as per Section 2.8.
 - b. If not already logged in on Enerplot, select “Log In”, and enter your MyCentre login credentials:

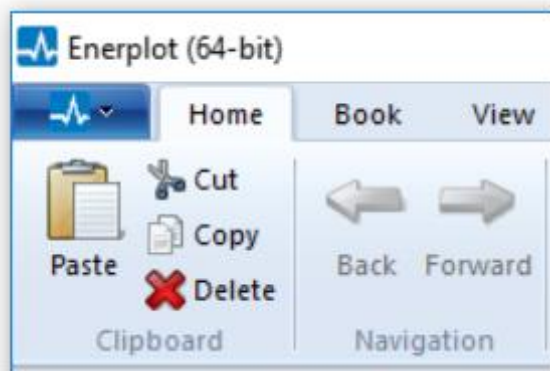


Note

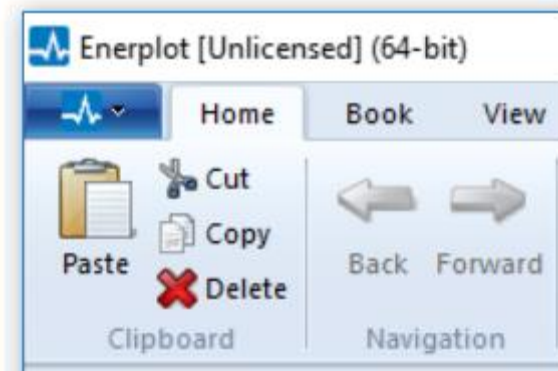
Refer to Section 3.2 for login tips and troubleshooting.

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- c. If Enerplot is unlicensed (see below), activate licensing:

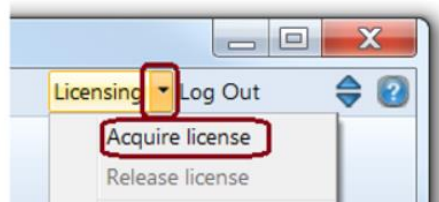


Enerplot is Licensed



Enerplot is Unlicensed

- Select Licensing | Acquire license.



- d. A temporary certificate will be activated, and the software will be available to use. See Section 1.3 for details on certificate licensing.

Note

Once a certificate is activated, it may be used to run multiple instances of Enerplot on that machine, the number of which is limited only by the machine's memory size.

- e. Configure licensing behaviour upon exit as per Section 2.11.

WARNING

If you are sharing licensing with other users, it is strongly recommended that you configure Enerplot for appropriate exiting behaviour as per Section 2.12.

- f. For new Enerplot users, refer to Appendix A for accessing the help files.

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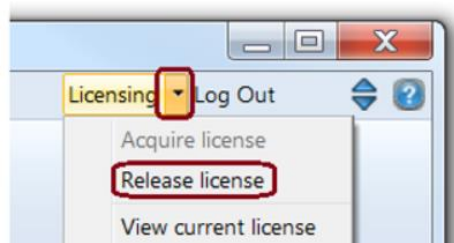
2.10 Returning the Certificate

A certificate may be returned either manually or automatically to MyCentre so that it is available to be activated on another machine.

2.10.1 Manually Return the Certificate

Return the certificate manually as follows:

- a. Select Licensing | Release license:



- b. The certificate will be returned to MyCentre.

2.10.2 Automatically Return the Certificate

Set the certificate to be returned automatically whenever Enerplot is closed as per Section 2.12.

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2.11 Configuring Enerplot to Retain or Return a Certificate

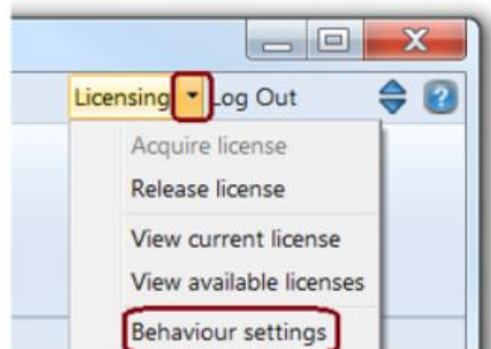
This section provides instructions for configuring Enerplot to either retain or return a certificate automatically, whenever the application is exited. This will ensure that the certificate will be available to yourself or another user as applicable.

There are three considerations for the next software launch:

- If the next launch will be on this same machine, and you will not be working offline, the certificate may either be retained or returned.
- Or, if the next launch will be on this same machine, but you will be working offline, the certificate should be retained.
- Or, if the next launch will be on a different machine (e.g. other user), the certificate should be returned so that it will be available for activation on the other machine.

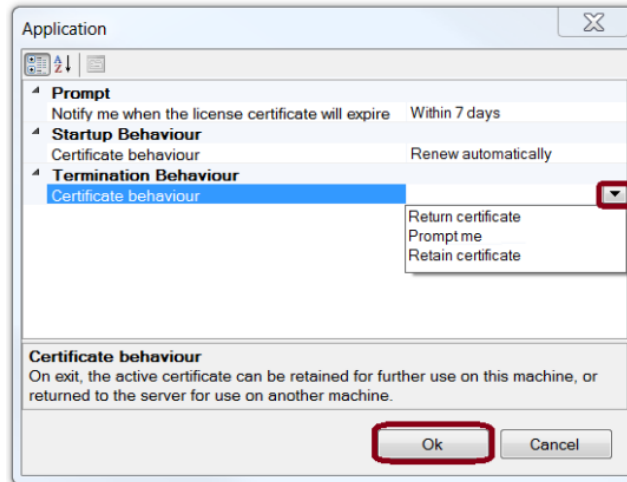
Configure the certificate behaviour upon exit as follows:

- a. Select Licensing | Behaviour settings.

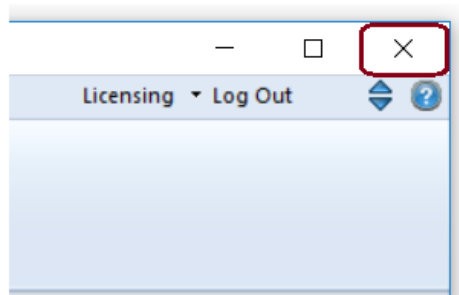


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- b. From the “Behaviour Settings” drop-down menu, select the appropriate exiting behaviour, then select “Ok”:



- c. Enerplot will now perform the selected certificate behaviour whenever the application is exited:



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2.12 Sharing a Certificate with Multiple Users

This section provides an important configuration when multiple users will be accessing a certificate.

A certificate may be activated (checked out) on one computer to run one or more instances of Enerplot. When Enerplot is closed, the certificate should be configured to be returned to the license server, to make it available for activation on another user's machine.

If the certificate is not returned to the license server, it will remain checked out on this user's machine, and will not be available to any other users until it is returned.

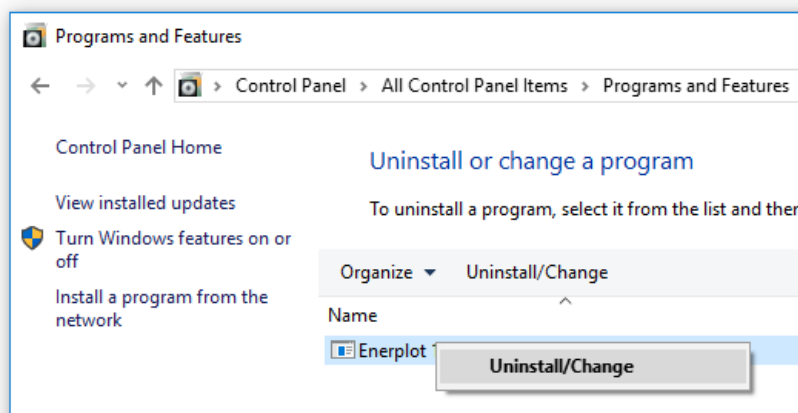
To avoid locking a certificate on a particular machine, Enerplot should be configured to always return the certificate to the license server whenever the application is closed as per Section 2.11 with the following note:

- At Step (b), select "Return certificate".

2.13 Removing Enerplot

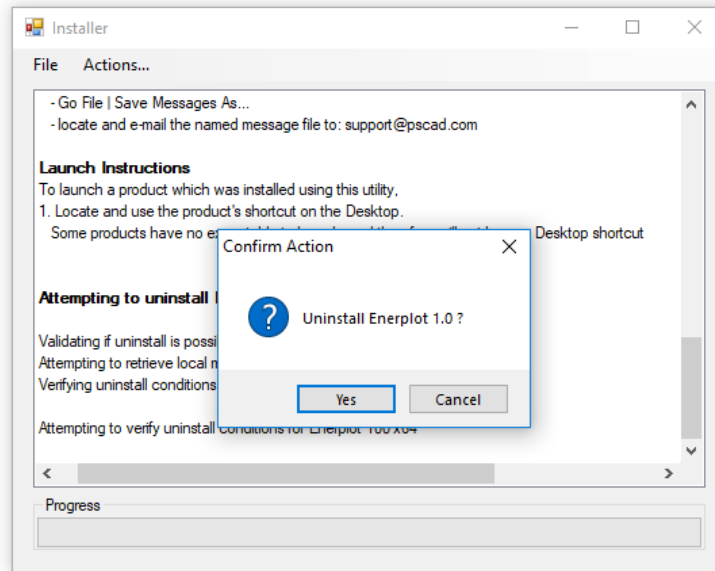
Enerplot may be removed using the Installer utility as follows:

- Ensure all instances of Enerplot are closed.
- In Windows Control Panel | Programs and Features, right-click on the Enerplot application, and select the option to uninstall the software:

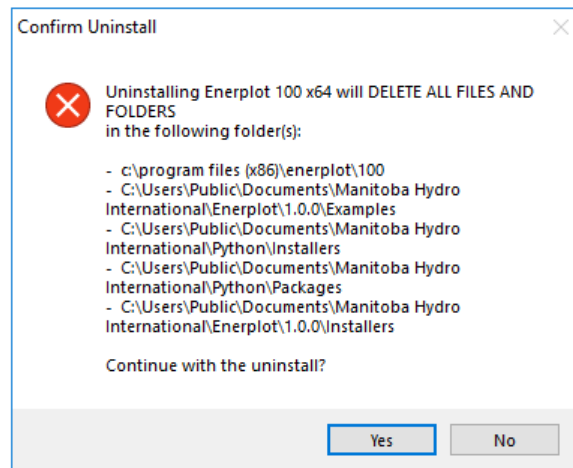


- The Installer utility will launch.
- Select "Yes":

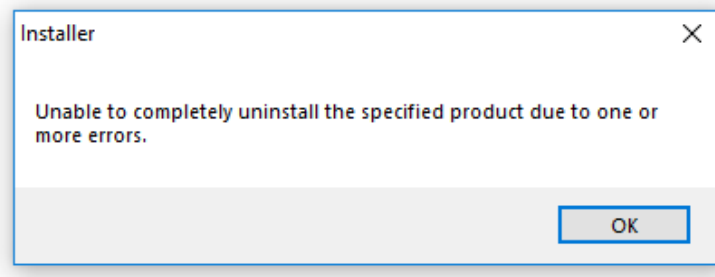
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e. Select "Yes":



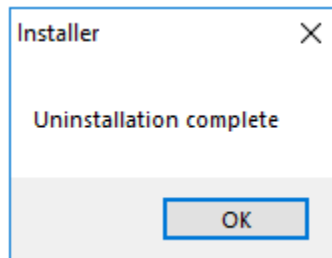
f. If the following error displays, this is because an instance of Enerplot is still open:



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If so:

- Select “OK” and close the Installer.
 - Close all instances of Enerplot.
 - Restart from Step (b) above.
- g. Select “OK” and close the Installer utility.



2.14 Viewing your MyCentre WorkGroup Products

Refer to the [MyCentre User Manuals](#) for details on using the MyCentre user portal.

2.15 Viewing and Updating your Profile

Refer to the [MyCentre User Manuals](#) for details on the MyCentre user portal.

3. Resolving Issues

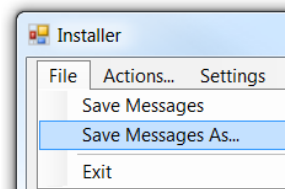
Refer to the following sections if you encounter any issues:

- See Section 3.1 for software installation issues
- See Section 3.2 for MyCentre login issues
- See Section 3.3 for licensing issues
- See Section 3.4 to determine your Enerplot license number
- See Section 3.5 to contact our support desk

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3.1 Software Installation Issues

If any error messages display while using the Installer, please send in a support request to our support desk for assistance (from the “File” menu, select “Save Messages As”, and send in the log file along with a detailed description of the issue to support@mhi.ca).



3.2 MyCentre Login Issues

If there are any issues with logging in to your MyCentre user account, please refer to the suggestions listed from this [page](#).

3.3 Certificate Licensing Issues

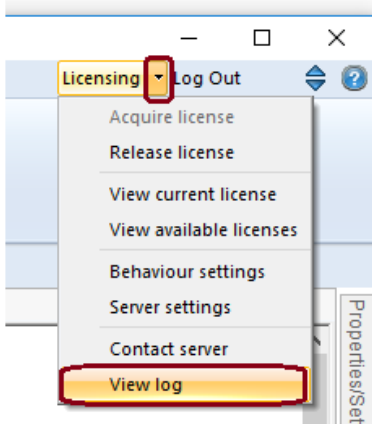
If there are any issues with activating a certificate (Section 2.8), please forward your Enerplot.txt file to our support desk to determine the reason.

This log file may be found in the following location:

C:\Users\Public\Documents\Manitoba Hydro International\Licensing\Logs

Note

This log file may also be displayed easily from within the Enerplot application by selecting Licensing | View log.



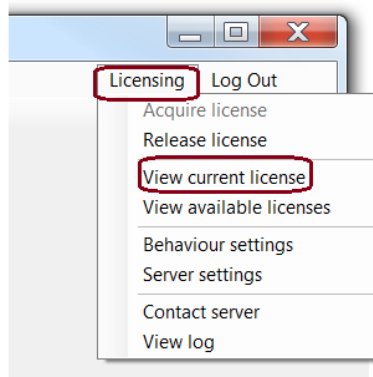
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3.4 Determining your Enerplot License Number

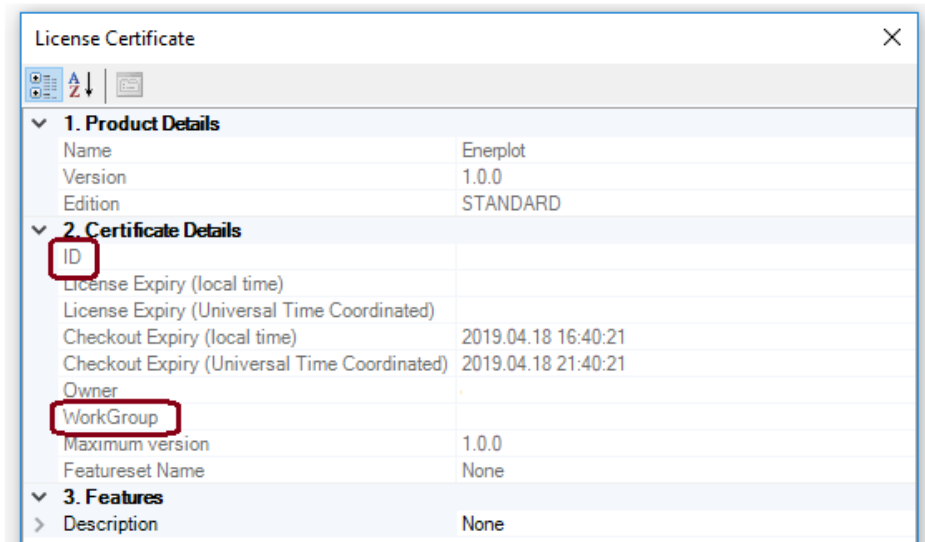
When requesting support from our support desk, your license certificate number is required. Please ensure to provide your email address that is linked to the licensing.

Or, if you have a license checked out on your machine, you can simply send in the license number as follows:

- a. Launch Enerplot (Section 2.8), and activate a certificate (Section 2.9).
- b. Select Licensing | View current license:



- c. The certificate number (ID) and WorkGroup name will be displayed:



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3.5 Contact the Support Desk

If you are unable to resolve an installation, login, join code, or licensing issue, please submit a support request to our support desk.

Send an e-mail to support@mhi.ca, ensuring to include all relevant information to expedite assistance, including:

- The name of your organization
- If known, your license number, which may be determined as per Section 3.4
- A detailed description of the issue
- For a licensing issue, include your licensing log file as per Section 3.3
- Screenshots of any error messages



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Appendix A: Resources for New Users

Refer to this [article](#) for a listing of resources for using Enerplot.

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DOCUMENT TRACKING

Rev.	Description	Date
0	Initial	01/Apr/2019
1	Update to Section 3.2.1	22/Nov/2019
2	Update to Section 2.1	07/Dec/2020
3	Updated manual to the new template; Renamed the document; Renamed Section 2.7.2; Sections 1.4 and 1.5 renumbered to 1.6 and 1.7; Added new Sections 1.4 and 1.5; Update to Sections 1.3,1.7, 2.3, 2.5, 2.6, 2.14, 2.15, 3.2 3.4, Appendix A;	19/Dec/2022
4	Update to v1.1.0; Minor Fixes and update to title	25/Apr/2023