PSCAD

PSCAD™

Setting up a Lockless Trial for PSCAD
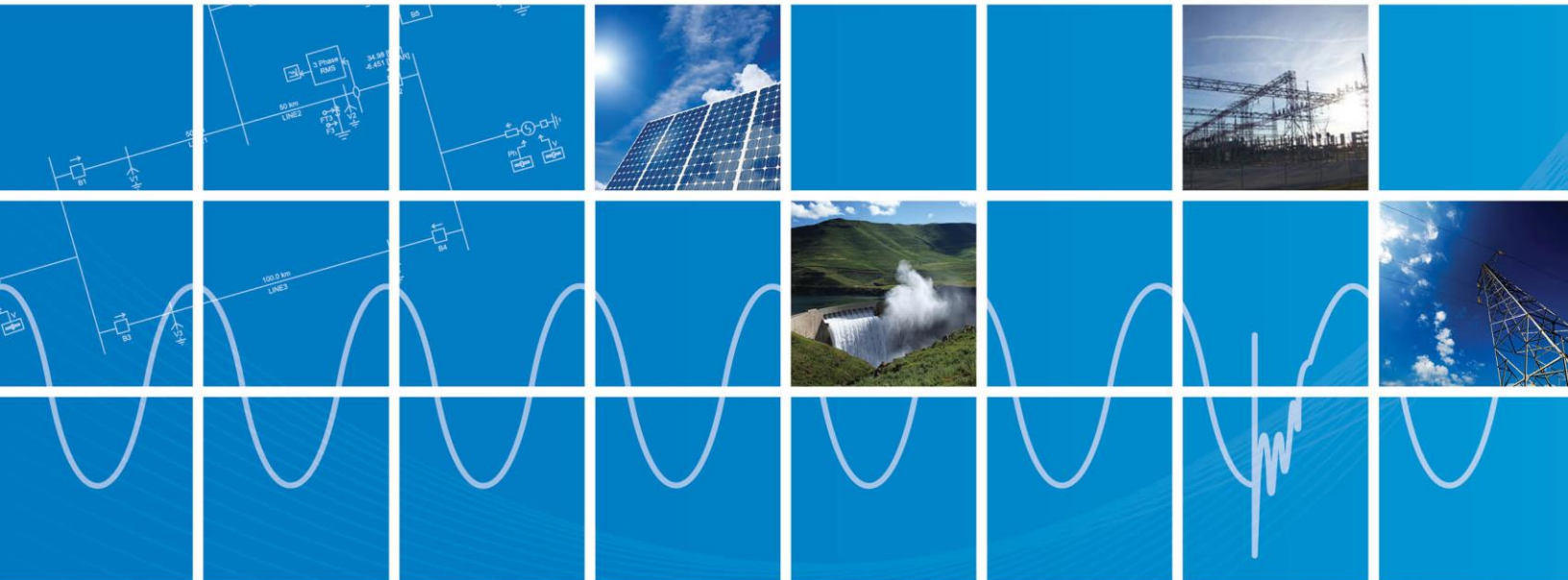
Written for:

PSCAD X4: Version 4.5 (v4.5.0 to v4.5.3)

Legacy Lockless Licensing

May 22, 2018

Revision: 8

Manitoba
HYDRO INTERNATIONAL

Contents

1. General

1.1   Introduction

This manual provides instructions for setting up a time-limited trial for evaluating the fully-featured edition of PSCAD.

The licensing used for this trial is "lockless licensing", and is applicable to PSCAD X4 v4.5.0 to v4.5.3 (and earlier versions that are not covered in this manual).

Lockless trial licensing was discontinued as of PSCAD v4.5.4, and replaced with the internet-based configuration, "certificate licensing". For information on certificate trial licensing, both for trial and permanent licenses, refer to materials posted to this [webpage](#).

1.2   Software

Included in this installation are PSCAD version 4.5 and a GFortran Compiler.

PSCAD (Power Systems Computer Aided Design) is a powerful and flexible graphical user interface to the world-renowned, EMTDC electromagnetic transient simulation engine. PSCAD enables the user to schematically construct a circuit, run a simulation, analyse the results, and manage the data in a completely integrated, graphical environment. Online plotting functions, controls, and meters are also included, enabling the user to alter system parameters during a simulation run, and thereby view the effects while the simulation is in progress.

PSCAD comes complete with a library of pre-programmed and tested simulation models, ranging from simple passive elements and control functions, to more complex models, such as electric machines, full-on FACTS devices, transmission lines, and cables. If a required model does not exist, PSCAD provides avenues for building custom models.

A FORTRAN compiler is required for building a PSCAD project in order to view the simulation results. As such, two GFortran compilers are included in the installation package. GFortran v4.2.1 is compatible with PSCAD v4.5 and v4.6, and GFortran 4.6.2 is compatible with PSCAD v4.6. These compilers comply with the American National Standards Institute, ANSI 95.

If you own a Professional or Educational PSCAD license, it is recommended that you use the Intel® Fortran Composer XE 2015 compiler. When compared with GFortran, Intel® Visual Fortran Composer is faster, has superior debugging capabilities, and is more frequently updated. As such, Intel is recommended over GFortran when running larger PSCAD cases, as typically found in commercial and educational environments. Intel Fortran is also compatible with MATLAB, whereas GFortran is not. For purchasing details, please contact our sales desk (sales@pscad.com).

1.3 Licensing

A free temporary trial license is available to allow users to try our fully-featured version of PSCAD.

This manual covers lockless trial licensing, and is supported with PSCAD v4.5.0 to v4.5.3 (as well as previous versions, not covered by this manual). Licensing is performed without the use of a USB lock; instead, a license file is installed on a PSCAD computer, and remains locked to that computer. Lockless licensing is typically used for a temporary evaluation (a trial) of our fully-featured software.

1.4 How to Use this Manual

Section 2 contains instructions for setting up the lockless trial license.

If you encounter any issues while installing or licensing the software, you may contact our support desk in accordance with Section 3.

Appendix A contains a listing of resources for new users, to help to become familiar with PSCAD.

2. Setting up a Lockless Trial

2.1   General

This section provides instructions for obtaining a temporary lockless trial license in order to try our fully-featured version of PSCAD. The lockless trial license is applicable for v4.5.0 to v4.5.3 (and to older versions of PSCAD that are not covered in this manual).

These instructions cover the steps for requesting and installing the software and license, and should be completed in the order presented.

2.2   Request the Lockless Trial License

a.   Send an e-mail to sales@pscad.com to request the software and trial license. Your e-mail should include your name, organization, and address.

b.   Upon approval, our sales desk will provide the software installation files.

c.   Proceed to Section 2.3 to install the software.

2.3   Install the Software

Once you have been provided the software installation files (Section 2.2), the software may be installed.

The PSCAD installation package includes the following software:

- PSCAD (required)

- Microsoft Visual C++ (required)

- Microsoft .NET Framework (required)

- GFortran compiler (optional)

    Notes

    1.   A compiler is required for compiling PSCAD cases. Install GFortran alongside PSCAD only if a commercial compiler such as Intel® Fortran Composer is not available).

    2.   If GFortran is installed, ensure to log out and log in on your computer following this installation, prior to running a PSCAD case with GFortran.

Requirements

1. Microsoft® Windows 7 is officially supported, however, the following operating systems have also been shown to work:

> For v4.5: Windows® XP, Vista SP1, Win8, Win8.1, and Win10

> For v4.6: Windows® Vista SP1, Win8, Win8.1, and Win10

2. Windows administrative privileges if operating on Windows Vista or later

3. Internet connection

Notes

1. On a computer running the 32-bit Windows operating system, only the 32-bit version of PSCAD will be installed. The 32-bit version may be launched using the automatically generated link in the Windows Start menu.

2. On a computer running the 64-bit Windows operating system, both the 32-bit and 64-bit versions of PSCAD will be installed. The 64-bit version may be launched using the automatically generated link in the Windows Start menu.

3. If you encounter any installation issues, refer to Section 3.1.

Install the software using the InstallShield Wizard as follows:

a. Download the installation files to a folder on a local drive (e.g. desktop).

b. Launch the installation (from the installation files, right-click on "setup.exe", and select "Run as administrator").

c. When the "User Account Control" dialog box displays, select "Yes" to proceed with the installation. The InstallShield Wizard will launch.

d. If prompted, select "Install" to install the required prerequisite software (Microsoft Visual C++ and Microsoft .NET Framework). This may take a few minutes.
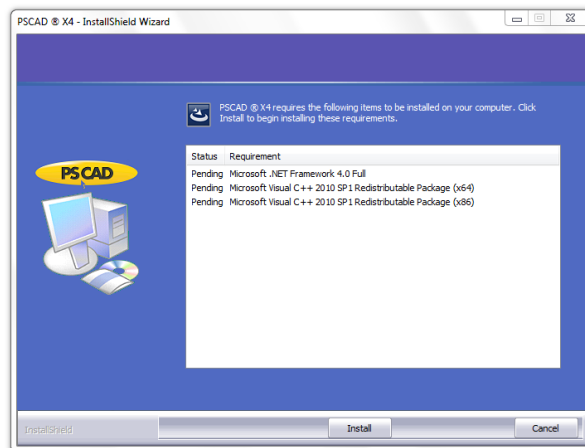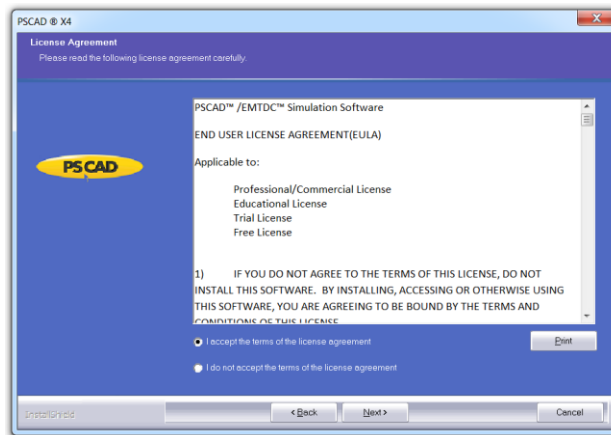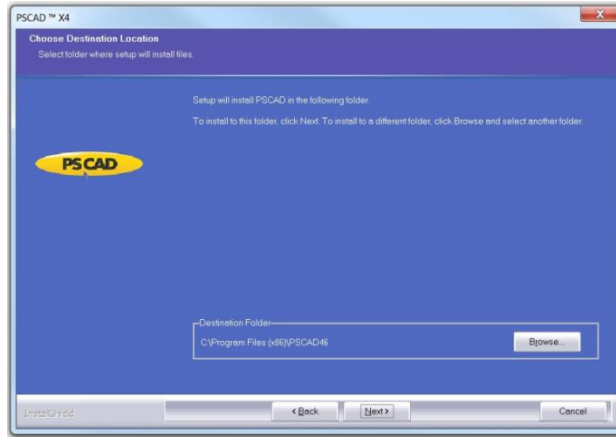
e. Select "Next" to continue.
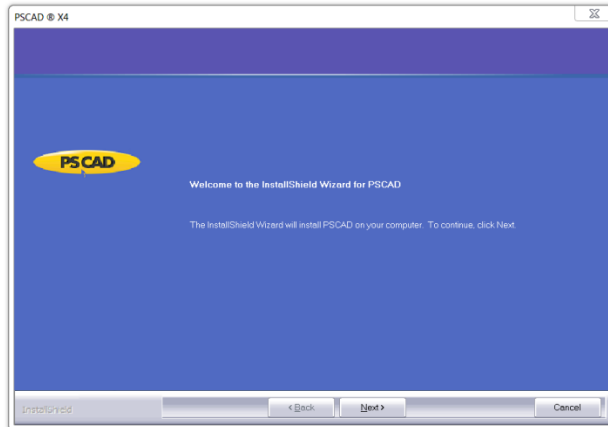
f. Select "I accept the terms of the license agreement" if you agree with the terms, then select "Next".

g.   Review the default destination folder for the program files. To install to a different folder, set the file path with the "Browse" button. Select "Next".

The default directories are as follows:

- **PSCAD v4.5:** C:\Program Files (x86)\PSCAD45
- **PSCAD v4.6:** C:\Program Files (x86)\PSCAD46

h.   Place a checkmark beside all programs to be installed, then select "Next". Normally, "PSCAD" is selected, along with the GFortran Compiler if you do not have a commercial compiler.
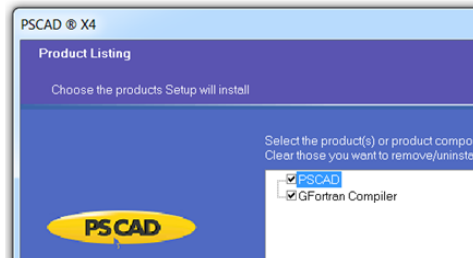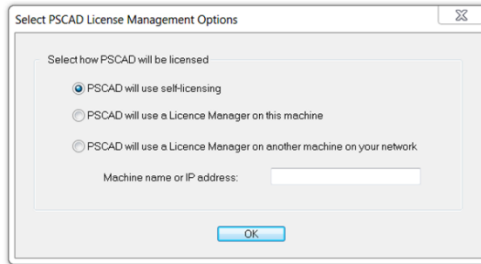

Notes
1.   To select a product for installation, left-click on the checkbox to place a checkmark.

2.   To display a description of a product in the "Description" field, click on the product name.
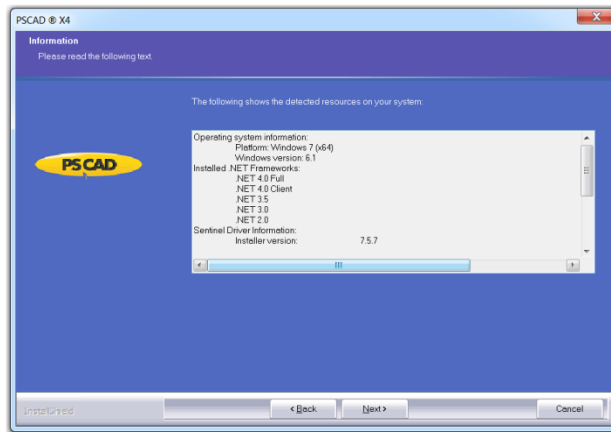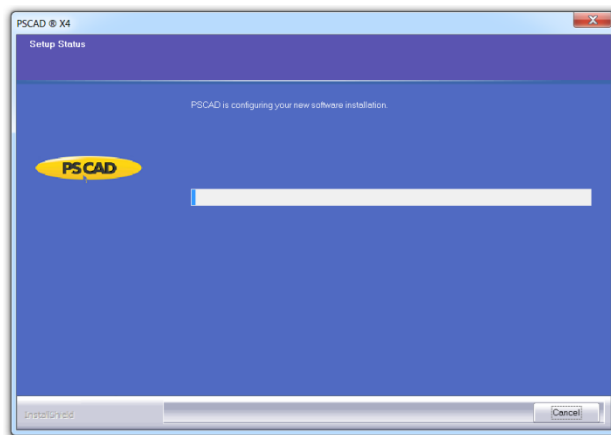
i.   Select "PSCAD will use self-licensing", then select "OK" to continue.

j.   The "Information" screen will display your system resources. Select "Next".

k.   The "Setup Status" screen will display, and PSCAD will be installed.

l.   If you also chose to install GFortran, this will be installed next. Ensure to log out and log in to your computer following this installation, prior to running a PSCAD case with GFortran. This is required to apply the changes to your computer.

m. If prompted, unplug any Sentinel USB locks, then select "OK". The InstallShield Wizard will install or repair your Sentinel Drivers.
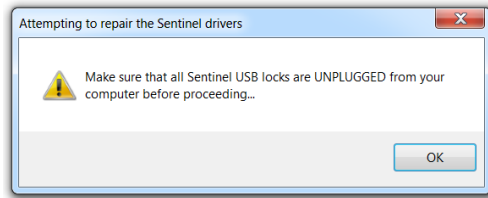
n. This concludes the installations. Select "Finish".
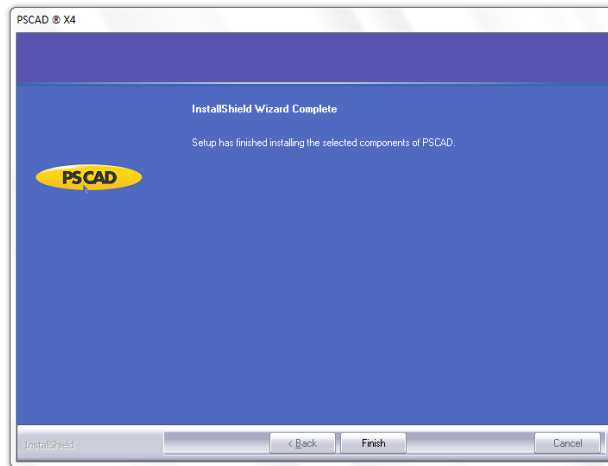
o. Proceed to Section 2.4 to generate the trial request.

2.4   Generate the PSCAD Trial License Request

Once PSCAD has been installed (Section 2.3), a trial license request may be generated as follows:

Note
If you encounter any licensing issues, refer to Section 3.2.

a.   Launch PSCAD according to your Windows operating system, and your PSCAD version and edition:

- If operating on Windows XP, Windows 7, or Windows 8 proceed as shown:

PSCAD Version	Educational Edition	Professional Edition

v4.5.0	Windows 32-bit or 64-bit
	
	From the Windows Start menu, select All Programs, then go:
	
	📁 PSCAD
	  📁 PSCAD X4
	    PSCAD (32-bit)[1]
	    PSCAD (32-bit, non-elevated)[2]
	
	Note
	The 64-bit version of PSCAD is not available for the Educational Edition at v4.5.0. It is however available as of v4.5.1 and later.
		Windows 32-bit
		
		From the Windows Start menu, select All Programs, then go:
		
		📁 PSCAD
		  📁 PSCAD X4
		    PSCAD (32-bit)[1]
		    PSCAD (32-bit, non-elevated)[2]
		
		Windows 64-bit
		
		From the Windows Start menu, select All Programs, then go:
		
		📁 PSCAD
		  📁 PSCAD X4
		    PSCAD (64-bit)[1]
		    PSCAD (64-bit, non-elevated)[2]

v4.5.1 and later	Windows 32-bit or 64-bit
	
	From the Windows Start menu, select All Programs, then go:
	
	📁 PSCAD
	  📁 PSCAD X4
	    PSCAD v4x (non-elevated)[2]
	    PSCAD v4x[1]
	
	Note
	The links will launch the PSCAD version corresponding to the computer's operating system (i.e. 32-bit or 64-bit), for both the Professional and Educational Editions.	

1. Select this option if you have Windows administrative privileges on your computer.
2. Select this link if you do not have Windows administrative privileges on your computer, and/or you are operating on Windows XP.

Note
PSCAD v4.6 may not be run on Windows XP.

- Or, if operating on Windows 10, there is one shortcut in the Windows Start menu. This shortcut will try to launch the application with Windows administrative privileges. If you do not have these privileges, simply set the shortcut to run without these privileges (right-click on the shortcut, go Properties | Advanced, de-select the checkbox "Run as administrator", and select "Ok" and "Ok").

b. Display the "System Settings" dialog box (from the PSCAD Start button, select "System Settings").
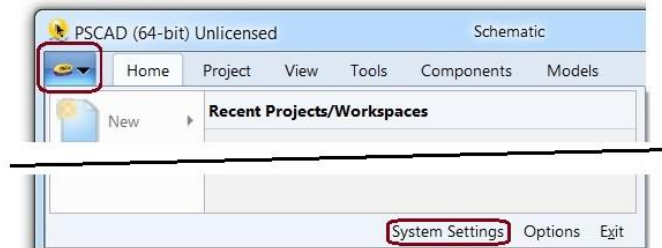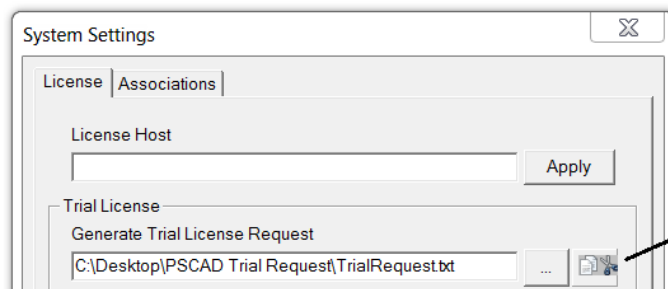

c. Generate a trial license request as shown:
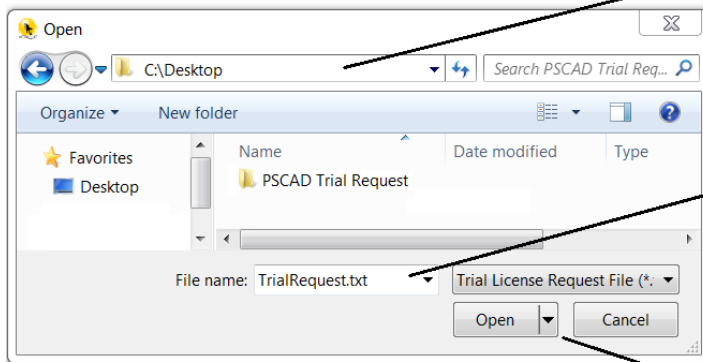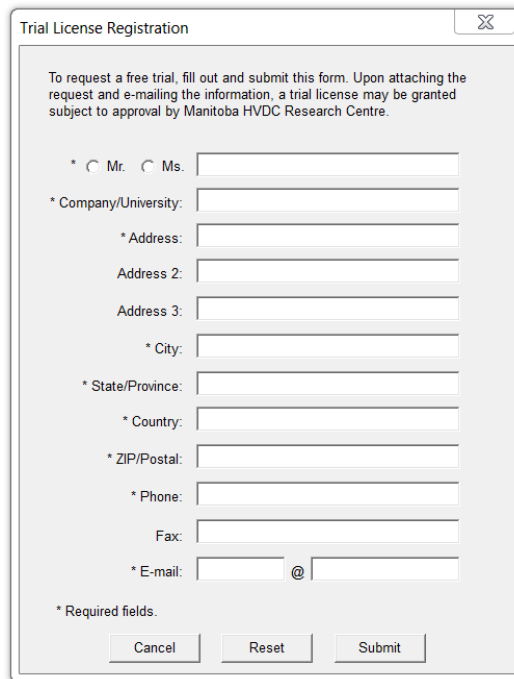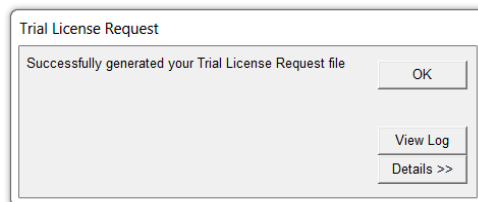
d. When prompted, complete the registration form, ensuring to fill in all required fields (as denoted by an asterisk (*)). Select "Submit".

e. When the registration form is submitted, the trial license request file will be saved to the specified directory. You may view the file path by selecting "Details". Select "OK".
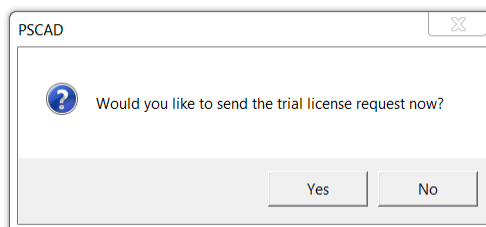
Note

As part of the trial license request procedure, we require specific information about the computer that will run the software. This information is supplied as a text file, and contains important machine metrics such as computer name and other operating system information. This data is required to create a trial license request file and is held in the strictest confidentiality.

f. You will be prompted to e-mail the trial license request. Select "Yes".

g.   You will be notified to manually attach the trial license request file to the generated e-mail. Select "OK".

h.   When the generated e-mail displays, attach the TrialRequest.txt file, then select "Send".
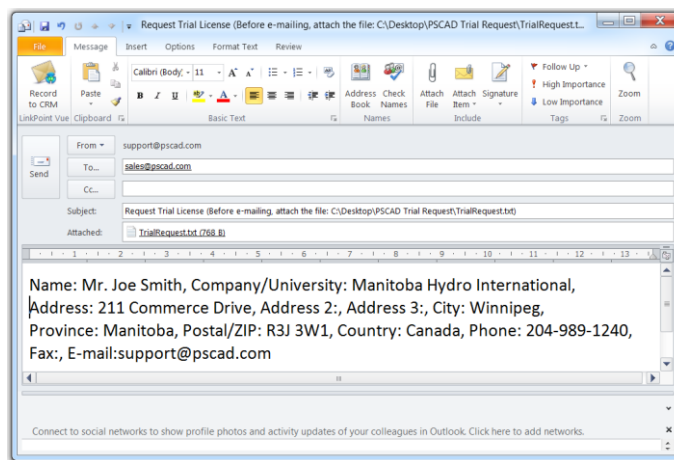
Notes
1.   To manually generate an e-mail, include your contact information, attach the TrialRequest.txt file, and send the e-mail to sales@pscad.com.

2.   Do not upgrade your operating system, change your system clock, or change any hardware configuration (i.e. hard drives, motherboard, etc.) while awaiting your trial license or after installing it.

i.   Once you receive the trial license from our sales desk, proceed to Section 2.5 to install it.

Note
The trial license is valid for 30 days, commencing the day the license is sent to you.

2.5 Install and Activate the PSCAD Trial License

Upon approval of your trial license request (generated in Section 2.4), you will receive the trial license in the form of a "Trial.txt" file from our sales desk. Install and activate the trial license as follows:

Notes
1. The trial license may only be installed on the same computer from which it was requested.

2. The trial license will not install if your computer system configuration was changed following the trial license request; nor may the computer be modified during the trial period.

3. Only one instance of PSCAD may be open when installing the trial license.

4. If there are any licensing issues, please contact our support desk (Sections 3.2 and 3.3).

a. Save the Trial.txt file to your desktop.

b. Launch PSCAD as per Section 2.4 Step (a).

c. If not already displayed, display the System Settings dialog box (from the PSCAD Start button, select "System Settings").
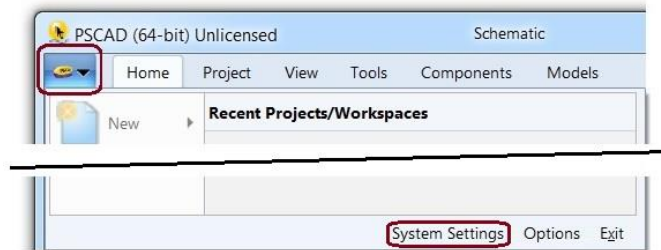
d. Configure the license as shown:

1. Enter the following text:
   localhost 2053

2. Select "Apply"

3. Browse to the "Trial.txt" file

4. Select "Install"

5. Select license

6. Select "Activate"

System Settings

License | Associations

License Host
localhost 2053   [Apply]

Trial License
Generate Trial License Request
[   ] [...] [icon]

Install Trial License
C:\Desktop\PSCAD Trial Request\Trial.txt [...] [key]

Multi-User or Single User License
Install License(s)
[   ] [...] [key]

Available License(s)
[▼] [Activate]

Active License
Legacy License, Professional Edition, Never [Details...]

[OK]   [Cancel]   [Help]

e. The time-limited fully-featured version of PSCAD will be available using the trial license.

   Notes
   1. The trial license is valid for 30 days, commencing the day the license is sent.

   2. Only one instance of PSCAD may be run with the trial license.

f. For new PSCAD users, a listing of resources is available in Appendix A.

3. Resolve Issues

Refer to the following sections if you encounter any issues:

- See Section 3.1 for software installation issues

- See Section 3.2 for issues with installing and activating lockless licensing

- See Section 3.3 to contact our support desk

3.1   Software Installation Issues

If you encounter any software installation issues, you may troubleshoot them using the "Resolving Installation Issues" manual, which may be downloaded from this [webpage.](webpage)

If you are still unable to resolve the problem, please contact our support desk as per Section 3.3. Ensure to include as much information as possible to describe when the problem occurred and screenshots of any error messages, as well as a "Get Info" log file, which is generated as described in Step 3.2 (a), and a "Fortran Medic" log file, which is generated as follows:

a. Download the latest "FortranMedic" from our website, and unzip and save it to your computer.

   http://updater.pscad.com/utilities/FortranMedic.zip

b. Run the FortranMedic.exe file.

c. In the Fortran Medic utility, click on the Actions menu and select Start.

d. After the utility is done retrieving information, click on the Actions menu and select Save Messages. The Fortran Medic message window will display the location of the saved messages text file on your computer.

3.2   Licensing Issues

If you encounter any issues with generating, installing, or activating a PSCAD lockless trial license, please forward the following log files to our support desk as per Section 3.3 to determine the reason:

a.   ***GetInfo.txt file:*** This file is available as follows:

- Download the GetInfo utility from this link and save it to your computer.

- Select the "GetInfo32.exe" file to run the utility. When prompted whether to test shortcuts, select "No".

- The utility will display the results and save the generated log file. The location of the log file will be displayed.

b.   ***PscadLmgr.txt file:*** The location of this file is related to your Windows operating system, as follows:

On Windows XP:

C:\Documents and Settings\All Users\Application Data\Manitoba HVDC Research Centre\LicenseManager\PscadLmgr.txt

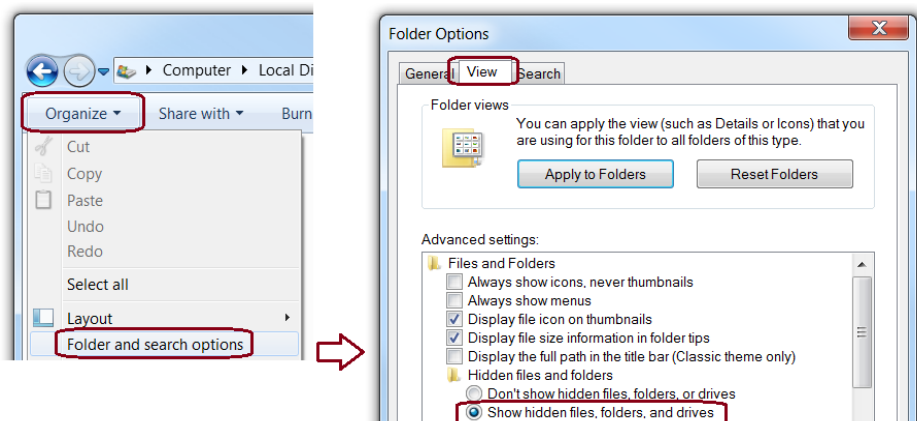On Windows Vista and later (send all as available):

C:\Users\All Users\Manitoba HVDC Research Centre\LicenseManager\PscadLmgr.txt

C:\ProgramData\Manitoba HVDC Research Centre\LicenseManager\PscadLmgr.txt

C:\Users\<Your User ID>\AppData\Local\Manitoba HVDC Research Centre\LicenseManager\PscadLmgr.txt

Note
If the AppData folder is hidden, set hidden folders to display as shown:

3.3   Contact the Support Desk

If you are unable to resolve an installation or licensing issue, please submit a support request to our support desk as indicated below.

3.3.1   Relevant Information for a Support Request

Ensure to include all relevant information in your support request to expedite assistance, including:

- Your PSCAD license type (e.g. lockless licensing)

- A detailed description of the issue

- Your GetInfo and PscadLmgr log files as per Section 3.2

- Screenshots of any error messages

3.3.2   How to Submit a Support Request

Contact the support desk in one of the following two manners, ensuring to include the relevant information outlined in Section 3.3.1:

1. Send an e-mail to support@pscad.com.

2. Or, submit the support request through the PSCAD application as described in the references on this webpage.

Appendix A: Resources for New Users

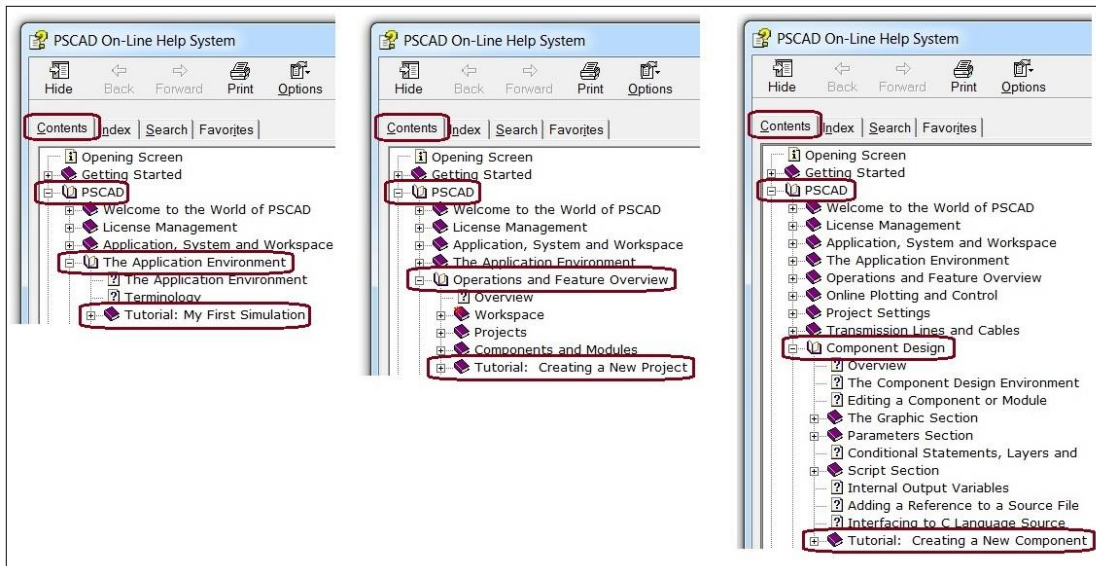The following resources may assist new users to become familiar with PSCAD:

- The Knowledge Base contains videos, user guides, examples, tutorials, webinars, and manuals.

- Examples and tutorial projects to view and run are available through the "PSCAD" start button:
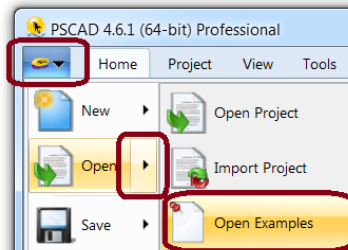
- The Help system provides information on PSCAD tools and features:
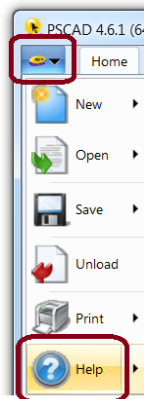
- Three tutorials for designing PSCAD cases are available in the Help system:

DOCUMENT TRACKING

Rev.	Description	Date
0	Initial	14/Jan/2013
1	Revision	16/Jan/2013
2	Generalized to cover v4.5.0 to v4.5.2; Added new section for LiveWire trial license; Revised support desk contact information; General corrections and improvements	14/Jun/2013
3	Minor updates for v4.5.3 release and Intel 13 support, minor corrections, updated title page	22/Nov/2013
4	Deleted LiveWire installation/licensing/troubleshooting instructions (moved to "Installing PSCAD" manual); Added v4.5.4 release (Certificate Licensing)	28/Nov/2014
5	Updated to v4.6.0; re-organized	20/April/2015
6	Updated to v4.5.5, Updated to MyCentre changes; Improvements	30/Nov/2015
7	Removed materials on LiveWire software Removed materials on Certificate Trial Licensing	12/Sep/2016
8	Update to new Brand Guidelines	22/May/2018