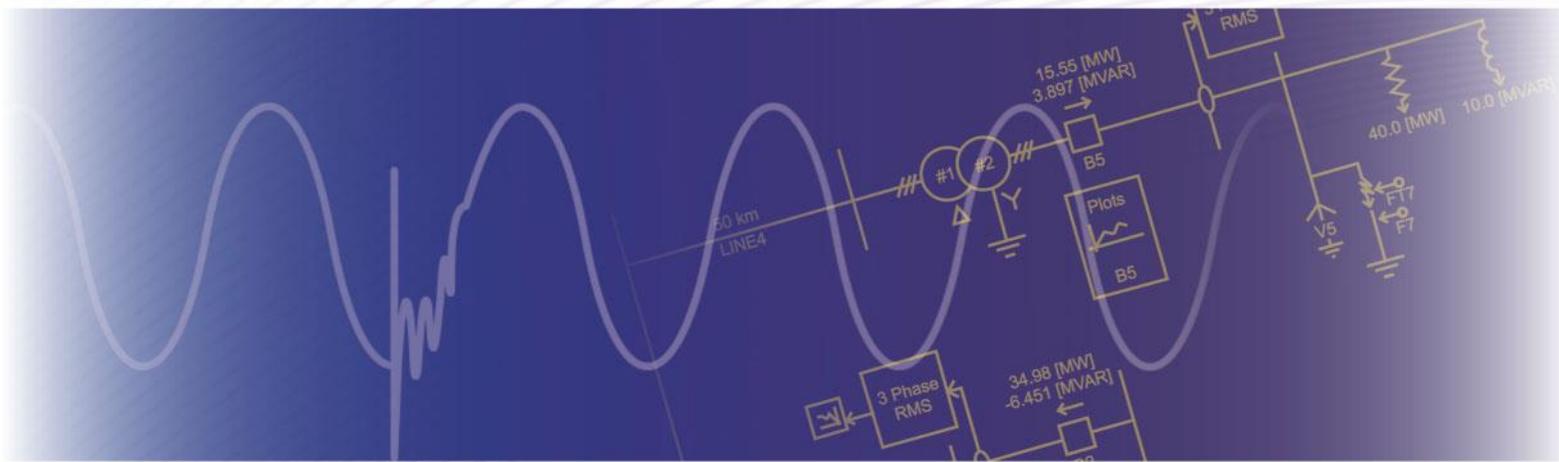


PSCAD™

Updating PSCAD (v4.5)

November 22, 2013

Revision: 3



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APPENDIX A LICENSING ACROSS NETWORKS

1. Introduction

1.1 Overview

This document provides instructions for updating PSCAD™ software (and licence if applicable). It is written for all PSCAD X4 v4.5 releases, which include PSCAD v4.5.0 to v4.5.3, and PSCAD License Manager v1.31 to v1.34.

This document is applicable for all licences, as follows:

- Professional and Educational Multi-User licences (MULs)
- Professional and Educational Single-User licences (SULs)

Note

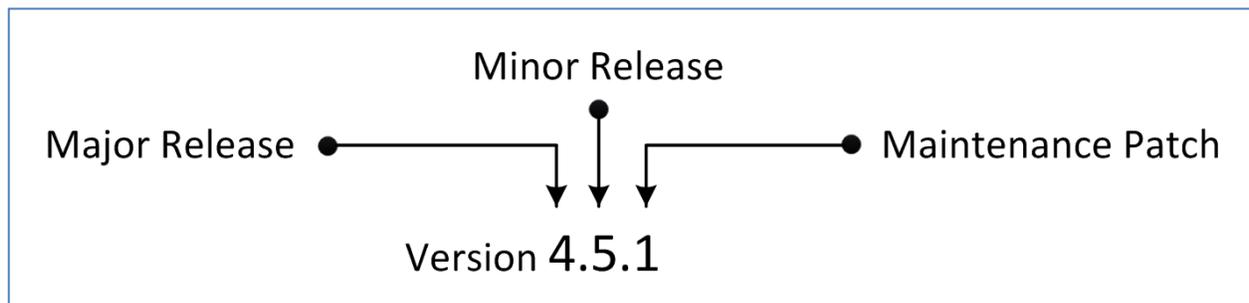
If this is an initial installation, refer to the instructions "Installing PSCAD X4", available at <https://hvdc.ca/knowledge-library/reference-material>

1.2 Release Numbering System

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

- A major release contains a significant number of new features and functionalities, such that it warrants a brand new product. These types of releases have historically occurred once every several years (for example, version 3, version 4, etc.).
- A minor release typically provides a handful of new and enhanced features, but not enough to justify a new product. Minor releases are released on an annual basis (for example, version 4.3, version 4.4, version 4.5, etc.).
- A maintenance patch is purely a bug fix release. Patches can be released multiple times per year (for example, version 4.5.1, version 4.5.2, etc.).

The numbering system is illustrated in the following image. The first number on the left represents the major release. The version 4 product was first released in 2003. The second number represents the minor release; version 4.5 was released in the spring of 2012. The third number represents the maintenance patch; for example, version 4.5.1 was released in December, 2012.



This document provides instructions for updating minor releases and maintenance patches.

1.3 Determining your Update

The following table may help to determine which instructions are applicable to your setup. This is based on your type of licence (Professional or Educational, and Multi-User or Single-User), and which software version you are updating from.

Type of Update \ Type of Licence	Professional Licence		Educational Licence	
	Multi-User Licence (MUL)	Single-User Licence (SUL)	Multi-User Licence (MUL)	Single-User Licence (SUL)
Updating from v4.2.1	Section 2	Section 4	Section 3	Section 5
Updating from v4.3.0 or later	Section 3	Section 5	Section 3	Section 5

2. Updating the Software and Licence (MUL)

This section provides instructions for updating the PSCAD licence and software for the following type of licence:

- Professional Multi-User licence for v4.2

These instructions include all required software updates and configurations for the Server and Client computers, and should be completed in the order presented. Specifically, the Licence Manager and PSCAD licence on the Server will be updated and configured. On the Client computers (and on the Server, if applicable), PSCAD will be updated and configured to obtain a licence from the Licence Manager.

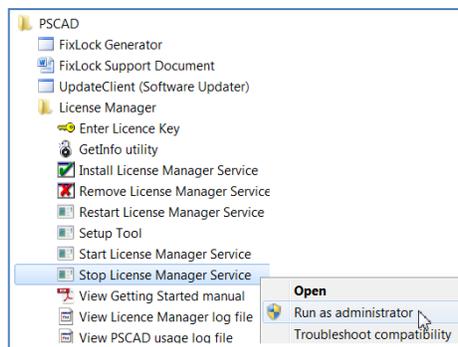
2.1 Updating the Software on the Server

This section provides instructions for updating the Licence Manager (and PSCAD, if applicable) on the Server. Proceed as follows:

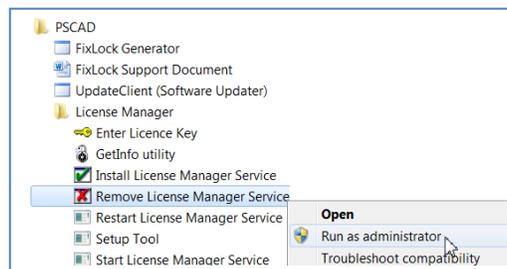
Notes

1. This section is applicable to a Professional Multi-User licence for v4.2.
2. If you encounter any issues, refer to [Section 6.1](#).
3. For a PSCAD installation on the Server, the 32-bit version of PSCAD will be installed on a 32-bit machine, and both the 32-bit and 64-bit versions will be installed on a 64-bit machine. The suitable version may then be launched, as determined in [Step 2.4\(b\)](#).
4. If you require assistance with configuring the Licence Manager for Expanded Licensing, please contact our support desk ([Section 6.5](#)). Ensure to include in your support e-mail your licence number and the networks on which the Server and Client computers reside (see [Appendix A](#) for more information).
 - a. To initiate an update to your licence and software, inform our sales desk at sales@pscad.com. Indicate the update is from v4.2, and include your licence number, which is typically listed on your USB lock.

- b. Upon approval, our sales desk will provide the following:
- A link to the installation files.
 - A zipped folder containing several files. These files are related to updating the licence. Save the contents of this folder to a folder on your machine.
- c. If operating on Windows Vista or Windows 7, ensure that you have local administrator privileges prior to beginning the installation.
- d. Stop and remove the current Licence Manager service as follows:
- From the Windows “Start” menu, right-click “Stop Licence Manager Service”, then select “Run as administrator”.



- From the Windows “Start” menu, right-click “Remove Licence Manager Service”, then select “Run as administrator”.



Note

At PSCAD v4.5.1 release: If updating the License Manager from v1.31 to v1.32, uninstall v1.31 prior to installing v1.32. This will ensure that all prerequisites are installed.

- e. Download the installation files from the link provided and run "setup.exe".

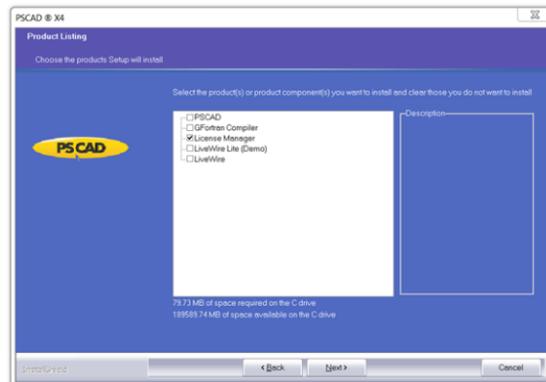
Note

Ensure that your installation files are saved to a local drive rather than to a network drive.

- f. The "User Account Control" dialog box may display to inquire whether you want to allow "setup.exe" to make changes to your computer. This message is a standard warning to protect your computer when an executable file is detected. Select "Yes" to begin the installation.

- g. The InstallShield Wizard will launch. During the installation, the various installation screens will prompt you to provide some information. When the following screens are displayed, perform as follows:

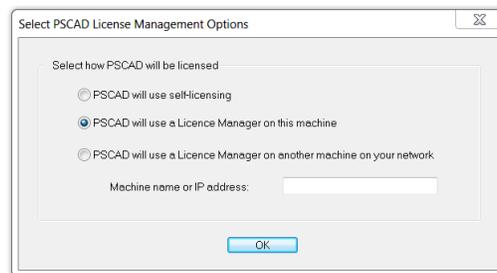
- From the "Product Listing" screen, select all required programs, then select "Next". Normally, only the "Licence Manager" is selected. For Servers also running PSCAD, however, also select "PSCAD" and "GFortran Compiler" (and "LiveWire Lite (Demo)" to use the free limited version, or "LiveWire" to be licensed using either a trial or permanent license).



WARNING

Ensure that all software to be updated or retained is selected. All previously installed software that is deselected will be uninstalled.

- Select "PSCAD will use a Licence Manager on this machine", then select "OK".



- h. If selected for installation, PSCAD will be installed, followed by the Licence Manager.
- i. Proceed to [Section 2.2](#) to configure the Licence Manager.

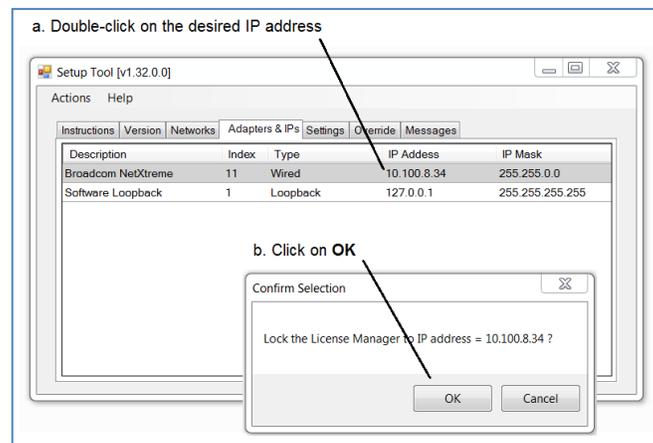
Notes

1. The licence for Expanded Licensing is included as part of your "License.txt" file. This file will be installed in [Section 2.3](#).
 2. See [Appendix A](#) for more information on Expanded Licensing.
- c. In the "Adapters & IPs" tab, select the network on which the Server and Client computers will communicate. There are two methods for configuring the networking:

Note

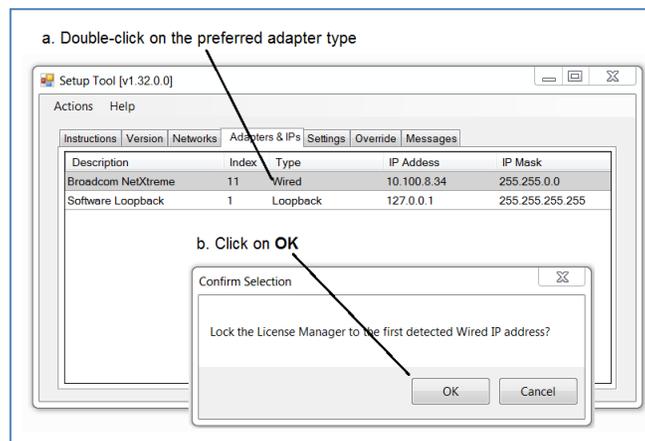
This step is applicable for all Multi-User licences, regardless whether you have Expanded Licensing or not. If you do not have Expanded Licensing, this tab permanently sets the network communication between the Server and Client computers. If you do have Expanded Licensing, this tab sets the default network communication between the Server and Client computers if the Expanded Licensing expires.

- The preferred method to set the network is to lock communication to a specific network, which lists the specific IP address. Proceed as shown.

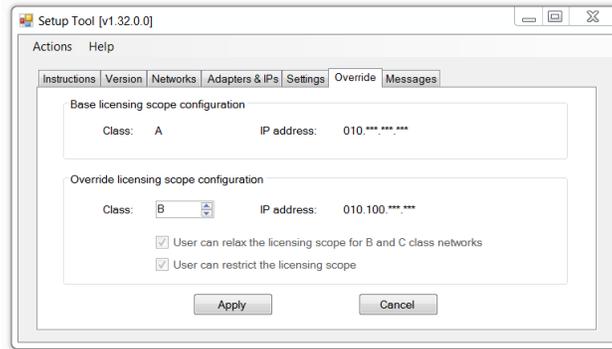


Notes

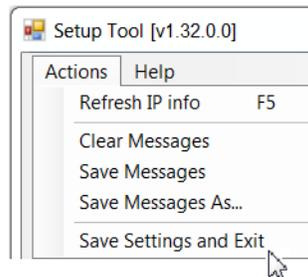
1. The IP address 127.0.0.1 is typically never selected since this is the IP address of the current computer, and networking to other computers would not be possible.
2. Alternatively, select IP address 127.0.0.1 if the following two conditions are both met:
 - Your PSCAD licence has multiple PSCAD seats, and
 - You will not share these seats with other computers over the network.
- The second method of configuring the networking is to lock to an adapter type, such as wired or wireless, as shown. The Licence Manager will lock to the first detected adapter of the type selected. This is not the preferred method of setting the networking, as the IP address can vary depending on which adapter type is detected first. Proceed as shown.



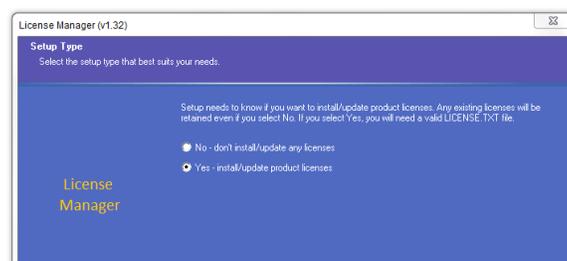
- d. If required, the networking permission that was set in the “Adapters & IPs” tab may be relaxed or restricted by configuring the “Override” tab. Use the up and down arrows to restrict or loosen permission. For more detailed information on networking permissions, see [Appendix A](#).



- e. Save settings and close the utility by selecting “Save Settings and Exit” in the “Actions” menu.



- f. When prompted to install a licence, select “Yes – install/update product licenses”. This will display the “License Update Utility”. Proceed to [Section 2.3](#) to update the licence.



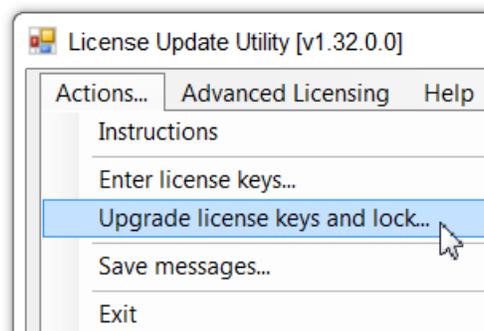
2.3 Updating the Licence on the Server

This section is a continuation from [Section 2.2](#). The “License Update Utility” will be used to update a Professional licence, as follows:

Note

If you encounter any issues, contact our support desk ([Section 6.3](#)).

- a. Ensure that the USB lock is plugged in on the computer.
- b. If not already displayed, display the “License Update Utility” from the Windows “Start” menu by browsing to “Enter License Key”.
- c. From the “Actions” menu, select “Upgrade license keys and lock”.



- d. When prompted to install the “Upgrade.txt” file, browse to this file, as saved in [Step 2.1\(b\)](#), then select “Open”.
- e. When prompted to install the “License.txt” file, browse to this file, as saved in [Step 2.1\(b\)](#), then select “Open”.
- f. The licence database and the USB lock will be updated. The licence number will also be changed to a new licence number.

- g. Once the update has been completed, the "License Update Utility" will display information about the installed licence. From this information, ensure to take note of the new licence number. Also, it is recommended to attach a tag that lists the new number to the USB lock to easily identify your licence number when contacting the sales or support desk.
- h. Close the "License Update Utility".
- i. The InstallShield Wizard will finalize the Licence Manager installation, and the Licence Manager will be ready to issue the licences from the Server to the Client computers.
- j. If selected for installation, the InstallShield Wizard will install GFortran and LiveWire on the Server.
- k. Log out or restart the Server after all software has been installed.
- l. Proceed as follows:
 - If PSCAD was installed on the Server, go to [Section 2.4](#) to activate a licence.
 - If PSCAD was not installed on the Server, go to [Section 2.5](#) to update the software on the Client computers.

2.4 Activating a Licence to Run PSCAD

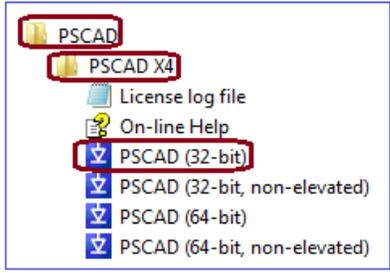
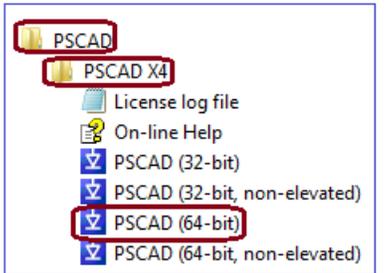
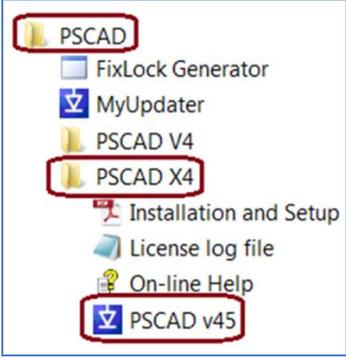
Activate a licence to run PSCAD on the Client computers (and on the Server if applicable) as follows:

Notes

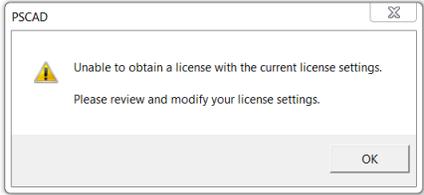
1. Servers do not typically run PSCAD.
 2. If you encounter any issues, contact our support desk ([Section 6.4](#)).
- a. On the Server, ensure the USB lock is plugged in and the licence is updated ([Section 2.3](#)).
 - b. Launch PSCAD as follows:

Note

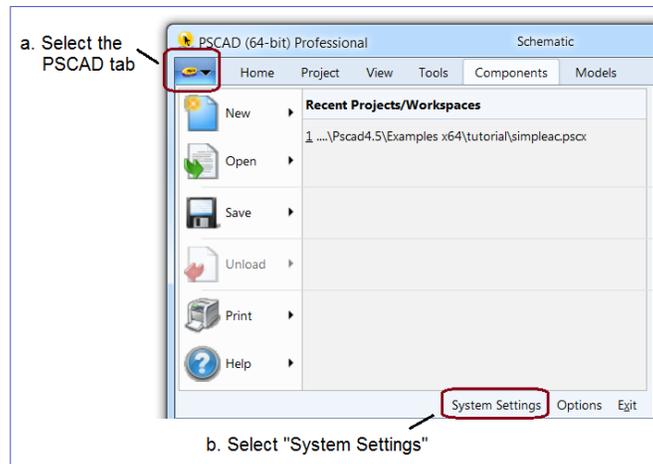
The method for launching PSCAD varies depending on the PSCAD version and Windows operating system (32-bit or 64-bit).

Operating System PSCAD Version	Windows 32-bit	Windows 64-bit
PSCAD v4.5.0	Browse to "PSCAD (32-bit)" in the Windows "Start" menu: 	Browse to "PSCAD (64-bit)" in the Windows "Start" menu: 
PSCAD v4.5.1 and later	Browse to "PSCAD v45" in the Windows "Start" menu:  <p>Note The version corresponding to the machine's operating system (32-bit or 64-bit) will automatically be selected to run.</p>	

c. A licence will not be available at this time. Select "OK".

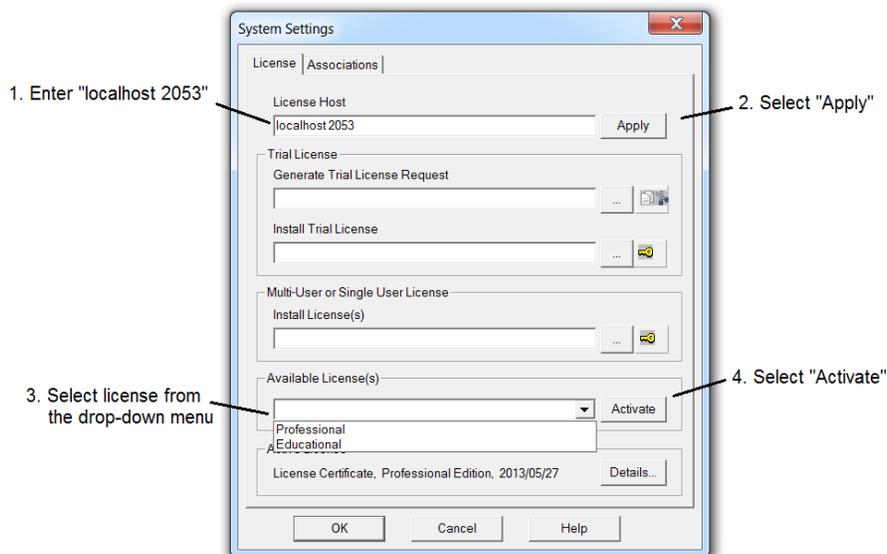


- d. The "System Settings" dialog box will display automatically. To display it manually, browse to "System Settings".

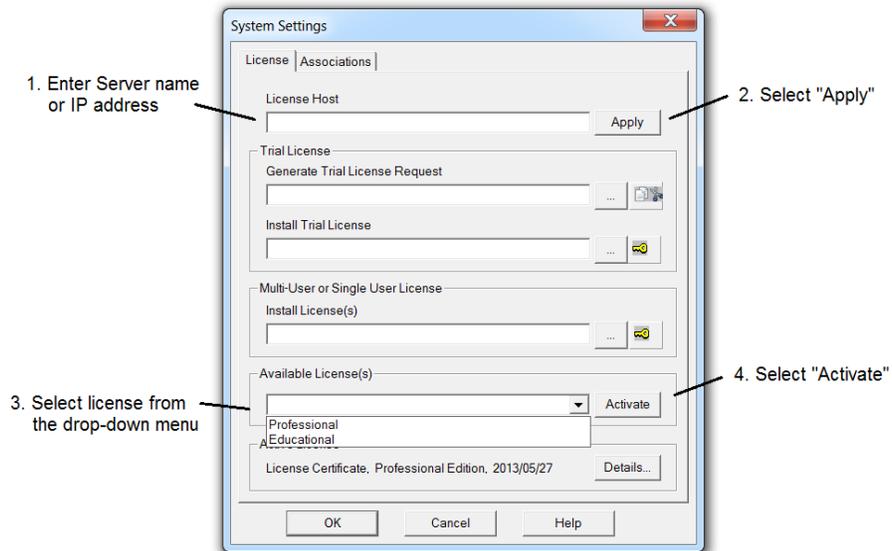


- e. Configure the licence on the Server or Client computer as follows:

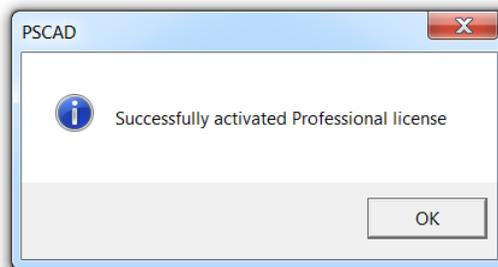
- **On the Server:** Configure the licensing as shown:



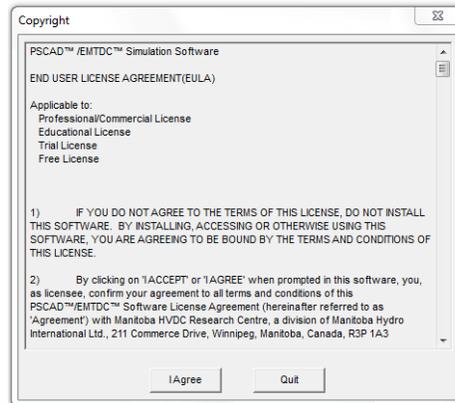
- **On the Client computer:** Configure the licensing as shown:



- f. If the licence has successfully been activated, a message similar to the one shown will display. Select "OK".



- g. If you agree with the software licence agreement, select "I Agree".



- h. Version 4.5 will be licensed to run.
- i. If not already completed, proceed to [Section 2.5](#) to update software on the Client computers.

2.5 Updating Software on the Client Computers

Update software on the Client computers as follows:

Note

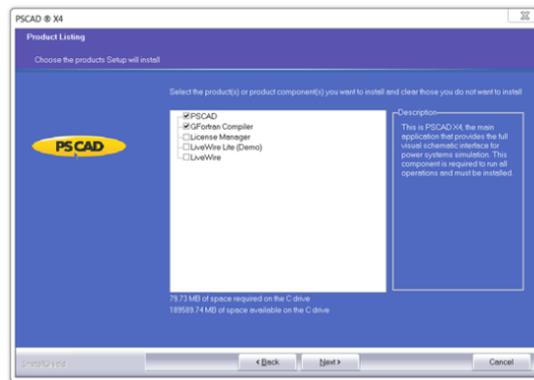
1. If you encounter any issues, refer to [Section 6.1](#).
2. The 32-bit version of PSCAD will be installed on a 32-bit machine, and both the 32-bit and 64-bit versions will be installed on a 64-bit machine. The suitable version may then be launched, as determined in [Step 2.4\(b\)](#).
 - a. If operating on Windows Vista or Windows 7, ensure that you have local administrator privileges prior to beginning the installation.
 - b. Download the installation files from the link provided ([Step 2.1\(b\)](#)) and run "setup.exe".

Note

Ensure that your installation files are saved to a local drive rather than to a network drive.

- c. The "User Account Control" dialog box may display to inquire whether you want to allow "setup.exe" to make changes to your computer. This message is a standard warning to protect your computer when an executable file is detected. Select "Yes" to begin the installation.

- d. The InstallShield Wizard will launch. During the installation, the various installation screens will prompt you to provide some information. When the following screens are displayed, perform the following:
- From the “Product Listing” screen, select all required programs, then select “Next”. Normally, “PSCAD” and “GFortran Compiler” are selected (and “LiveWire Lite (Demo)” to use the free limited version, or “LiveWire” to be licensed using either a trial or permanent license).



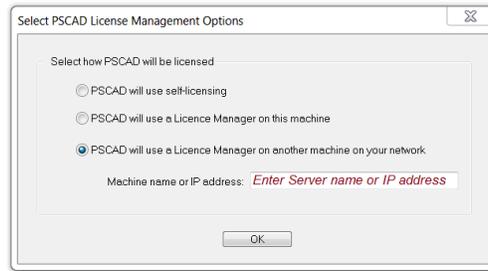
WARNING

Do not select “Licence Manager”. This may cause licensing issues.

WARNING

Ensure that all software to be updated or retained is selected. All previously installed software that is deselected will be uninstalled.

- In the following dialog box, proceed as follows:



- Select "PSCAD will use a Licence Manager on another machine on your network".
- Enter the Server name or IP address in the field provided, then select "OK".

Note

If you do not yet know the Server name nor IP address, select "PSCAD will use self-licensing". This will permit the installation to continue. The Server information will, however, be required to activate a license to run PSCAD ([Section 2.4](#)).

- e. The software will be installed. Proceed to [Section 2.4](#) to activate a licence on the Client computer.

3. Updating Software (MUL)

This section provides instructions for updating software for the following types of licences:

- Professional Multi-User licence for v4.3 and later
- Educational Multi-User licence for v4.2 and later

These instructions include all required installations and configurations, and should be completed in the order presented. Specifically, the Licence Manager will be updated and configured on the Server. On the Client computers (and on the Server if applicable), PSCAD software will be updated and a licence activated.

The instructions for the two types of licences are very similar; any differences are as noted.

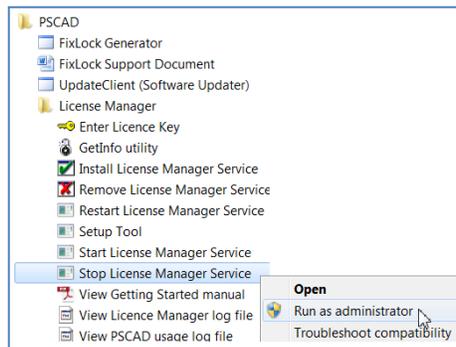
3.1 Updating the Software on the Server

This section provides instructions for updating the Licence Manager (and PSCAD, if applicable) on the Server. Proceed as follows:

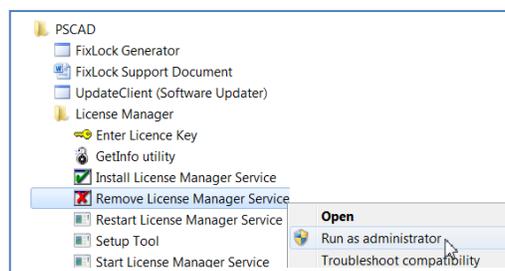
Notes

1. This section is applicable to a Professional Multi-User licence for v4.3.0 and later, and to an Educational Multi-User licence for v4.2 and later.
2. For a PSCAD installation on the Server, the 32-bit version of PSCAD will be installed on a 32-bit machine, and both the 32-bit and 64-bit versions will be installed on a 64-bit machine. The suitable version may then be launched, as determined in [Step 3.3\(b\)](#).
3. If you encounter any issues, refer to [Section 6.1](#).
4. If you require assistance with configuring the Licence Manager for Expanded Licensing, please contact our support desk ([Section 6.5](#)). Ensure to include in your e-mail your licence number and the networks on which the Server and Client computers reside (see [Appendix A](#) for more information).

- a. To initiate this update, inform our sales desk at sales@pscad.com. Include your licence number, which is typically listed on your USB lock.
- b. Upon approval, our sales desk will provide a link to the installation files.
- c. If operating on Windows Vista or Windows 7, ensure that you have local administrator privileges prior to beginning the installation.
- d. Stop and remove the current Licence Manager service as follows:
 - From the Windows “Start” menu, right-click “Stop Licence Manager Service”, then select “Run as administrator”.



- From the Windows “Start” menu, right-click “Remove Licence Manager Service”, then select “Run as administrator”.



Note

At PSCAD v4.5.1 release: If updating the License Manager from v1.31 to v1.32, uninstall v1.31 prior to installing v1.32. This will ensure that all prerequisites are installed.

- e. Download the installation files from the link provided and run "setup.exe".

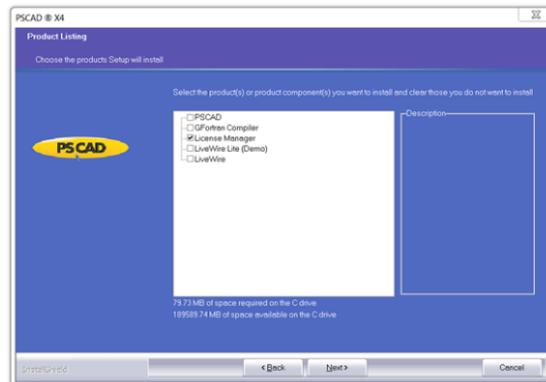
Note

Ensure that your installation files are saved to a local drive rather than to a network drive.

- f. The "User Account Control" dialog box may display to inquire whether you want to allow "setup.exe" to make changes to your computer. This message is a standard warning to protect your computer when an executable file is detected. Select "Yes" to begin the installation.

- g. The InstallShield Wizard will launch. During the installation, the various installation screens will prompt you to provide some information. When the following screens are displayed, perform as follows:

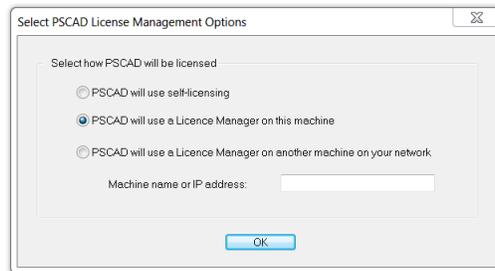
- From the "Product Listing" screen, select all required programs, then select "Next". Normally, only the "Licence Manager" is selected. For Servers also running PSCAD, however, also select "PSCAD" and "GFortran Compiler" (and "LiveWire Lite (Demo)" to use the free limited version, or "LiveWire" to be licensed using either a trial or permanent license).



WARNING

Ensure that all software to be updated or retained is selected. All previously installed software that is deselected will be uninstalled.

- Select "PSCAD will use a Licence Manager on this machine", then select "OK".

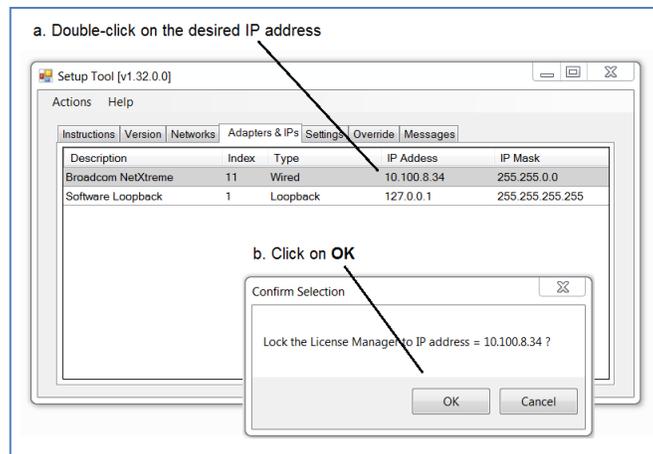


- h. If selected for installation, PSCAD will be installed, followed by the Licence Manager.
- i. Proceed to [Section 3.2](#) to configure the Licence Manager.

Note

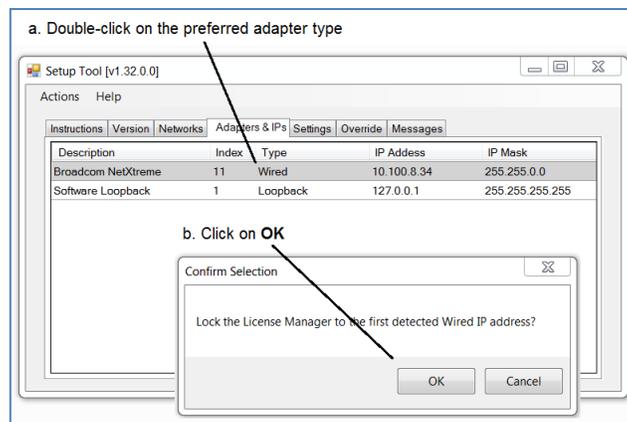
This step is applicable for all Multi-User licences, regardless whether you have Expanded Licensing or not. If you do not have Expanded Licensing, this tab permanently sets the network communication between the Server and Client computers. If you do have Expanded Licensing, this tab sets the default network communication between the Server and Client computers if the Expanded Licensing expires.

- The preferred method to set the network is to lock communication to a specific network, which contains the listed IP address. Proceed as shown.

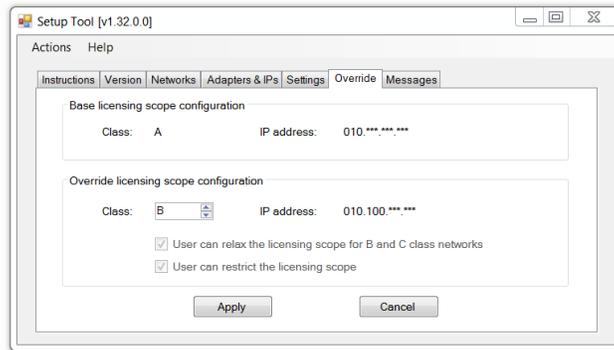


Notes

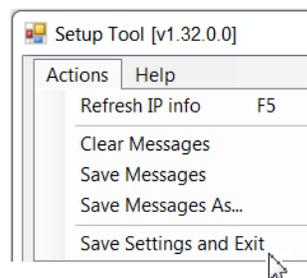
1. The IP address 127.0.0.1 is typically never selected since this is the IP address of the current computer; networking to other computers would not be possible.
2. Alternatively, select IP address 127.0.0.1 if the following two conditions are both met:
 - Your PSCAD licence has multiple PSCAD seats, and
 - You will not share these seats with other computers over the network.
- The second method of configuring the networking is to lock to an adapter type, such as wired or wireless, as shown. The Licence Manager will lock to the first detected adapter of the type selected. This is not the preferred method of setting the networking, as the IP address can vary depending on which adapter type is detected first. Proceed as shown.



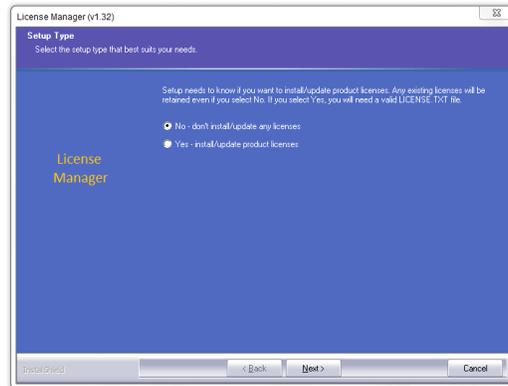
- d. If required, the networking permission that was set in the "Adapters & IPs" tab may be relaxed or restricted by configuring the "Override" tab. Use the up and down arrows to restrict or loosen permission. For more detailed information on networking permissions, see [Appendix A](#).



- e. Save settings and close the utility by selecting "Save Settings and Exit" in the "Actions" menu.



- f. When prompted to install a licence, select “No - don’t install/update any licenses”. The Licence Manager will issue licences using your existing installed licence.



- g. If GFortran or LiveWire was selected for installation, these will be installed next.
- h. Proceed as follows:
- If PSCAD was installed on the Server, go to [Section 3.3](#) to activate the licence.
 - If PSCAD was not installed on the Server, go to [Section 3.4](#) to update software on the Client computers.

3.3 Activating a Licence to Run PSCAD

Activate a licence to run PSCAD on the Client computers (and on the Server if applicable) as follows:

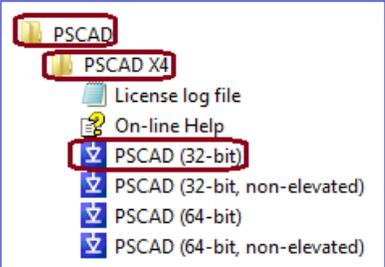
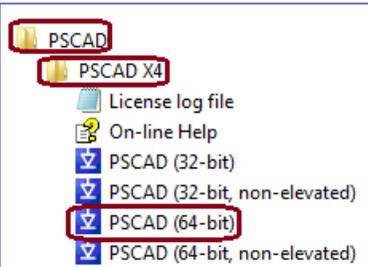
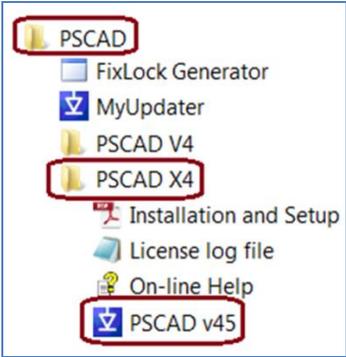
Notes

1. Servers do not typically run PSCAD.
 2. If you encounter any issues, contact our support desk ([Section 6.4](#)).
- a. Ensure the USB lock is plugged in on the Server.
 - b. Launch PSCAD as follows:

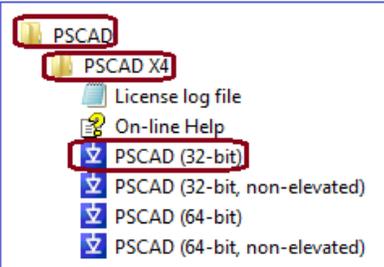
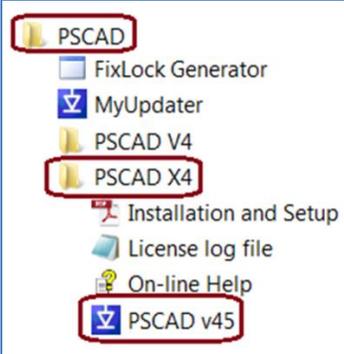
Note

The method for launching PSCAD varies depending on the licence, (Professional or Educational), PSCAD version, and operating system (32-bit or 64-bit).

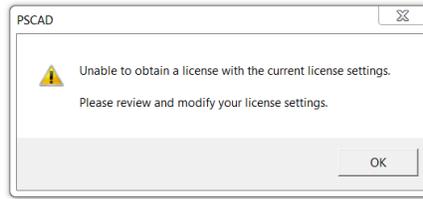
- **For a Professional Licence:** Using the following table, launch PSCAD according to your Windows operating system and PSCAD version:

Operating System PSCAD Version	Windows 32-bit	Windows 64-bit
PSCAD v4.5.0	<p>Browse to "PSCAD (32-bit)" in the Windows "Start" menu:</p> 	<p>Browse to "PSCAD (64-bit)" in the Windows "Start" menu:</p> 
PSCAD v4.5.1 and later	<p>Browse to "PSCAD v45" in the Windows "Start" menu:</p>  <p>Note The version corresponding to the machine's operating system (32-bit or 64-bit) will automatically be selected to run.</p>	

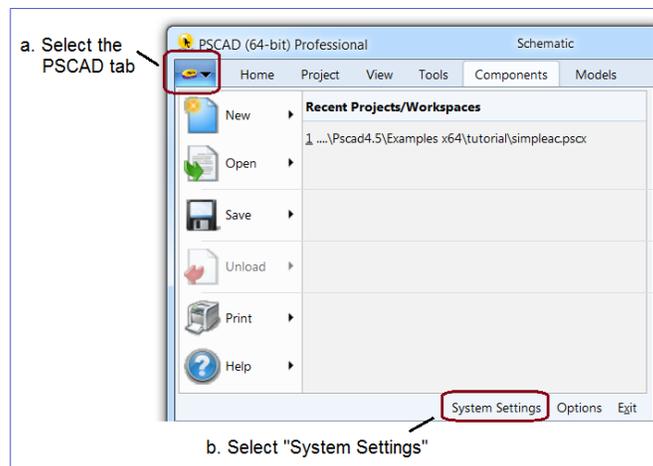
- **For an Educational Licence:** Using the following table, launch PSCAD according to your Windows operating system and PSCAD version:

Operating System PSCAD Version	Windows 32-bit	Windows 64-bit
PSCAD v4.5.0	<p>Browse to "PSCAD (32-bit)" in the Windows "Start" menu:</p>  <p>Notes</p> <ol style="list-style-type: none"> 1. The 64-bit version of PSCAD v4.5.0 is not available for an Educational License. Ensure to select the 32-bit version of PSCAD. 2. The 64-bit versions of PSCAD v4.5.1 and later are available for an Educational License (see below). 	
PSCAD v4.5.1 and later	<p>Browse to "PSCAD v45" in the Windows "Start" menu:</p>  <p>Note</p> <p>The version corresponding to the machine's operating system (32-bit or 64-bit) will automatically be selected to run.</p>	

- c. A licence will not be available at this time. Select "OK".

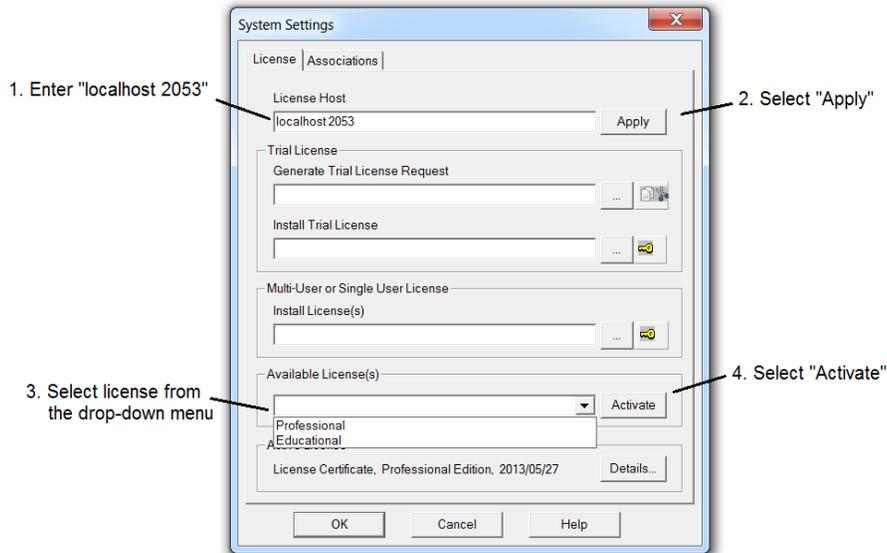


- d. The "System Settings" dialog box will display automatically. To display it manually, browse to "System Settings".

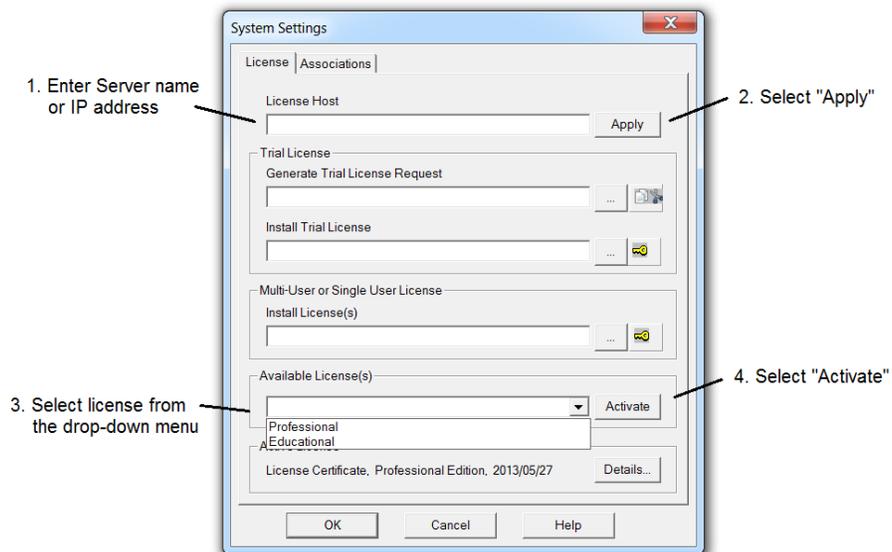


e. Configure the licence on the Server or Client computer as follows:

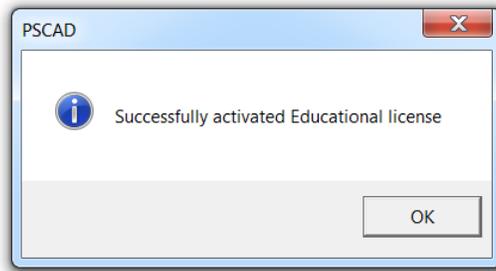
- **On the Server:** Configure the licensing as shown:



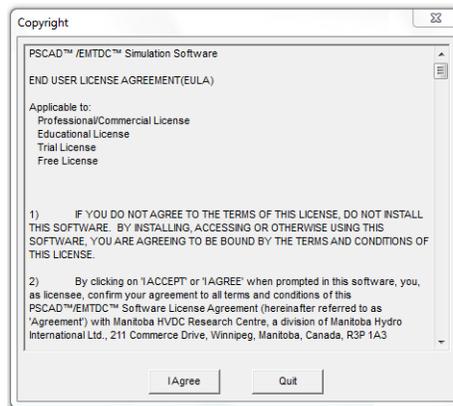
- **On the Client computer:** Configure the licensing as shown:



- f. If the licence has successfully been activated, a message similar to the one shown will display. Select "OK".



- g. If you agree with the software licence agreement, select "I Agree".



- h. Version 4.5 will be licensed to run.
- i. If not already completed, proceed to [Section 3.4](#) to update software on the Client computers.

3.4 Updating Software on the Client Computers

Update software on the Client computers as follows:

Note

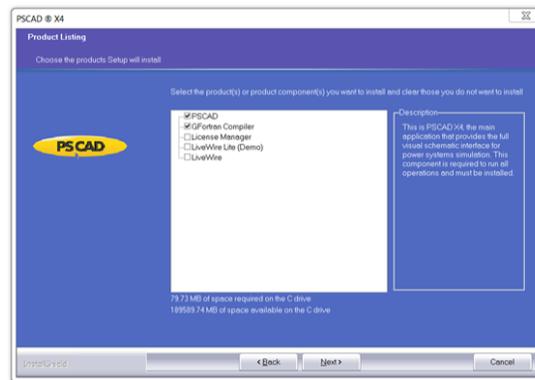
1. If you encounter any issues, refer to [Section 6.1](#).
 2. The 32-bit version of PSCAD will be installed on a 32-bit machine, and both the 32-bit and 64-bit versions will be installed on a 64-bit machine. The suitable version may then be launched, as determined in [Step 3.3\(b\)](#).
- a. If operating on Windows Vista or Windows 7, ensure that you have local administrator privileges prior to beginning the installation.
 - b. Download the installation files from the link provided ([Step 3.1\(b\)](#)) and run "setup.exe".

Note

Ensure that your installation files are saved to a local drive rather than to a network drive.

- c. The "User Account Control" dialog box may display to inquire whether you want to allow "setup.exe" to make changes to your computer. This message is a standard warning to protect your computer when an executable file is detected. Select "Yes" to begin the installation.

- d. The InstallShield Wizard will launch. During the installation, the various installation screens will prompt you to provide some information. When the following screens are displayed, perform the following:
- From the "Product Listing" screen, select all required programs, then select "Next". Normally, "PSCAD" and "GFortran Compiler" are selected (and "LiveWire Lite (Demo)" to use the free limited version, or "LiveWire" to be licensed using either a trial or permanent license).



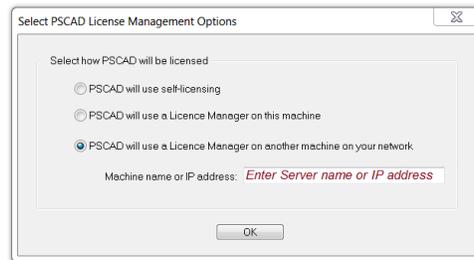
WARNING

Do not select "Licence Manager". This may cause licensing issues.

WARNING

Ensure that all software to be updated or retained is selected. All previously installed software that is deselected will be uninstalled.

- In the following dialog box, proceed as follows:



- Select "PSCAD will use a Licence Manager on another machine on your network".
- Enter the Server name or IP address in the field provided, then select "OK".

Note

If you do not yet know the Server name nor IP address, select "PSCAD will use self-licensing". This will permit the installation to continue. The Server information will, however, be required to activate a license to run PSCAD ([Section 3.3](#)).

- e. The software will be installed. Proceed to [Section 3.3](#) to activate a licence on the Client computer.

4. Updating the Software and Licence (SUL)

This section provides instructions for updating the PSCAD licence and software for the following type of licence:

- Professional Single-User licence for v4.2

These instructions include all required software updates and configurations, and should be completed in the order presented. Specifically, the PSCAD software and licence will be updated, and a licence will be activated to run PSCAD.

4.1 Updating Software

This section provides instructions for updating software; proceed as follows:

Notes

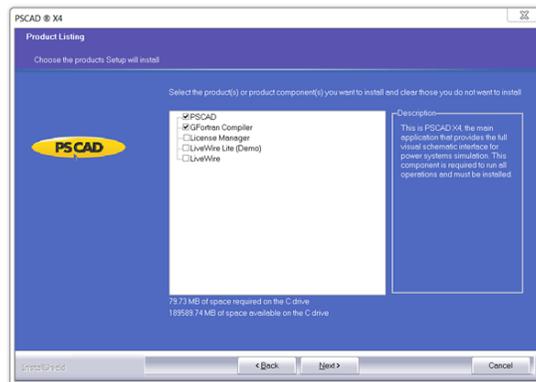
1. This section is applicable to a Professional Single-User licence for v4.2.
 2. The 32-bit version of PSCAD will be installed on a 32-bit machine, and both the 32-bit and 64-bit versions will be installed on a 64-bit machine. The suitable version may then be launched, as determined in [Step 4.3\(b\)](#).
 3. If you encounter any issues, refer to [Section 6.1](#).
- a. To initiate an update to your licence and software, inform our sales desk at sales@pscad.com. Indicate the update is from v4.2, and include your licence number, which is typically listed on your USB lock.
 - b. Upon approval, our sales desk will provide the following:
 - A link to the installation files.
 - A zipped folder containing several files. These files are related to updating the licence. Save the contents of this folder to a folder on your machine.
 - c. If operating on Windows Vista or Windows 7, ensure that you have local administrator privileges prior to beginning the installation.

- d. Download the installation files from the link provided and run "setup.exe".

Note

Ensure that your installation files are saved to a local drive rather than to a network drive.

- e. The "User Account Control" dialog box may display to inquire whether you want to allow "setup.exe" to make changes to your computer. This message is a standard warning to protect your computer when an executable file is detected. Select "Yes" to begin the installation.
- f. The InstallShield Wizard will launch. During the installation, the various installation screens will prompt you to provide some information. When the following screens are displayed, perform as follows:
- From the Product Listing" screen, select all required programs, then select "Next". Normally, "PSCAD" and "GFortran Compiler" are selected (and "LiveWire Lite (Demo)" to use the free limited version, or "LiveWire" to be licensed using either a trial or permanent license).



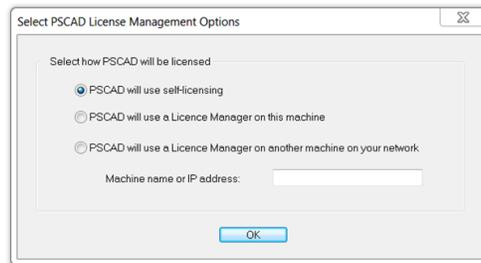
WARNING

Do not select "Licence Manager". This may cause licensing issues.

WARNING

Ensure that all software to be updated or retained is selected. All previously installed software that is deselected will be uninstalled.

- Select "PSCAD will use self-licensing", then select "OK".



- g. All software as selected will be installed.
- h. Proceed to [Section 4.2](#) to update the licence.

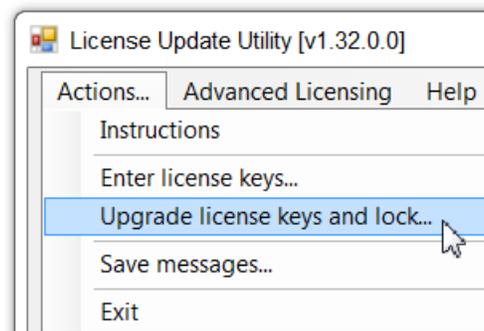
4.2 Updating the Licence

This section is a continuation from [Section 4.1](#). The “License Update Utility” will be used to update a Professional licence, as follows:

Note

If you encounter any issues, contact our support desk ([Section 6.3](#)).

- a. Ensure that the USB lock is plugged in on the computer.
- b. If not already displayed, display the “License Update Utility” from the Windows “Start” menu by browsing to “Enter License Key”.
- c. From the “Actions” menu, select “Upgrade license keys and lock”.



- d. When prompted to install the “Upgrade.txt” file, browse to this file, as saved in [Step 4.1\(b\)](#), then select “Open”.
- e. When prompted to install the “License.txt” file, browse to this file, as saved in [Step 4.1\(b\)](#), then select “Open”.
- f. The licence database and the USB lock will be updated. The licence number will also be changed to a new licence number.

- g. Once the update has been completed, the "License Update Utility" will display information about the installed licence. From this information, ensure to take note of the new licence number. Also, it is recommended to attach a tag that lists the new number to the USB lock to easily identify your licence number when contacting the sales or support desk.
- h. Close the "License Update Utility".
- i. Go to [Section 4.3](#) to activate the licence.

4.3 Activating a Licence to Run PSCAD

Activate a licence to run PSCAD as follows:

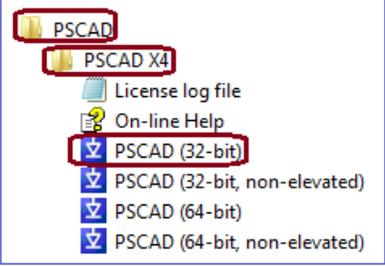
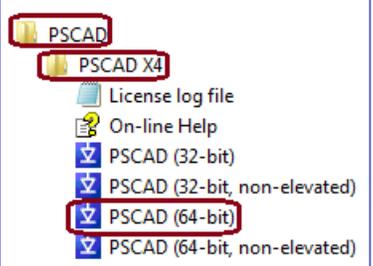
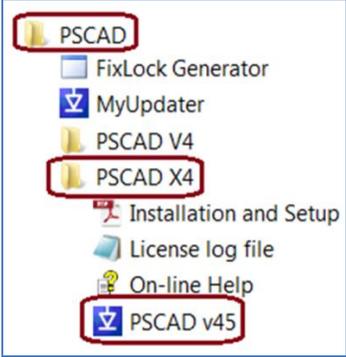
Note

If you encounter any issues, contact our support desk ([Section 6.4](#)).

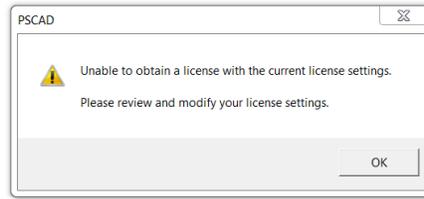
- a. Ensure the USB lock is plugged in and the licence is updated ([Section 4.2](#)).
- b. Launch PSCAD as follows:

Note

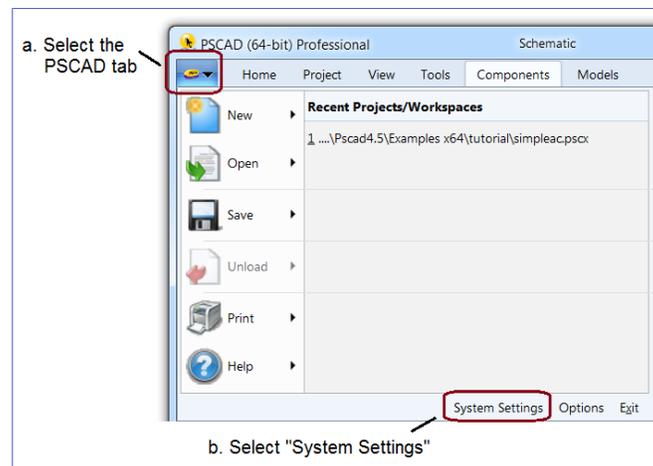
The method for launching PSCAD varies depending on the PSCAD version and operating system (32-bit or 64-bit).

Operating System PSCAD Version	Windows 32-bit	Windows 64-bit
PSCAD v4.5.0	Browse to "PSCAD (32-bit)" in the Windows "Start" menu: 	Browse to "PSCAD (64-bit)" in the Windows "Start" menu: 
PSCAD v4.5.1 and later	Browse to "PSCAD v45" in the Windows "Start" menu:  Note The version corresponding to the machine's operating system (32-bit or 64-bit) will automatically be selected to run.	

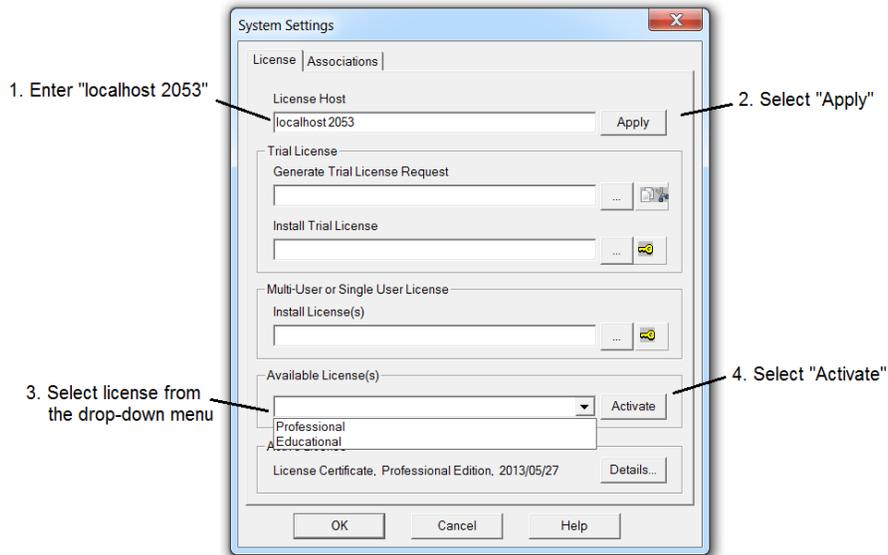
- c. A licence will not be available at this time. Select "OK".



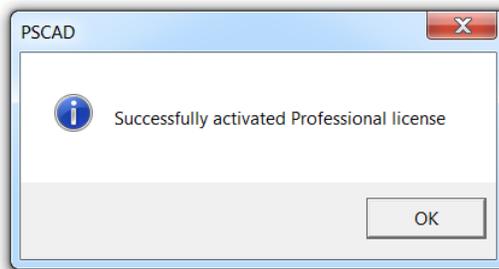
- d. The "System Settings" dialog box will display automatically. To display it manually, browse to "System Settings".



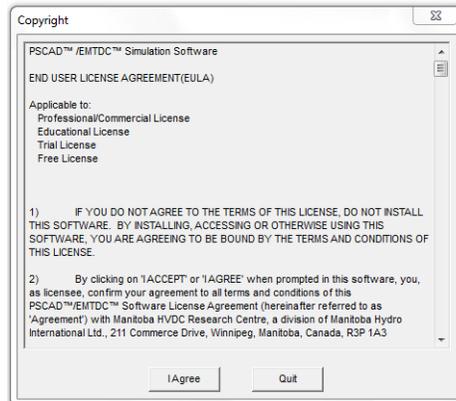
e. Configure the licence as shown.



f. If the licence has successfully been activated, a message similar to the one shown will display. Select "OK".



g. If you agree with the software licence agreement, select "I Agree".



h. Version 4.5 will be licensed to run.

5. Updating Software (SUL)

This section provides instructions for updating software for the following types of licences:

- Professional Single-User licence for v4.3 and later
- Educational Single-User licence for v4.2 and later

These instructions include all required installations and configurations, and should be completed in the order presented. Specifically, PSCAD software will be updated, and a licence will be activated to run PSCAD.

The instructions for the two licences are very similar; any differences are as noted.

5.1 Updating Software

Update software as follows:

Notes

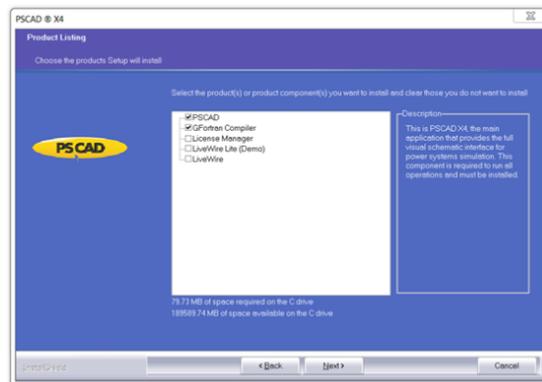
1. This section is applicable to a Professional Single-User licence for v4.3 and later, and to an Educational Single-User licence for v4.2 and later.
2. The 32-bit version of PSCAD will be installed on a 32-bit machine, and both the 32-bit and 64-bit versions will be installed on a 64-bit machine. The suitable version may then be launched, as determined in [Step 5.2\(b\)](#).
3. If you encounter any issues, refer to [Section 6.1](#).
 - a. To initiate this update, inform our sales desk at sales@pscad.com. Include your licence number, which is typically listed on your USB lock.
 - b. Upon approval, our sales desk will provide a link to the installation files.
 - c. If operating on Windows Vista or Windows 7, ensure that you have administrator privileges prior to beginning the installation.

- d. Download the installation files from the link provided and run "setup.exe".

Note

Ensure that your installation files are saved to a local drive rather than to a network drive.

- e. The "User Account Control" dialog box may display to inquire whether you want to allow "setup.exe" to make changes to your computer. This message is a standard warning to protect your computer when an executable file is detected. Select "Yes" to begin the installation.
- f. The InstallShield Wizard will launch. During the installation, the various installation screens will prompt you to provide some information. When the following screens are displayed, perform as follows:
- From the "Product Listing" screen, select all required programs, then select "Next". Normally, "PSCAD" and "GFortran Compiler" are selected (and "LiveWire Lite (Demo)" to use the free limited version, or "LiveWire" to be licensed using either a trial or permanent license).



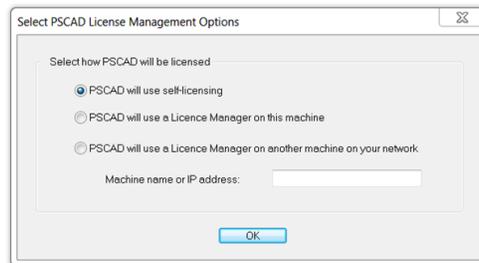
WARNING

Do not select "Licence Manager". This may cause licensing issues.

WARNING

Ensure that all software to be updated or retained is selected. All previously installed software that is deselected will be uninstalled.

- Select "PSCAD will use self-licensing", then select "OK".



- g. All software as selected will be installed.
- h. Go to [Section 5.2](#) to activate the licence.

5.2 Activating a Licence to Run PSCAD

Activate a licence to run PSCAD as follows:

Note

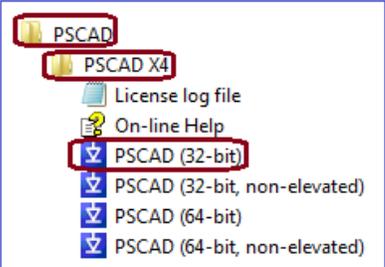
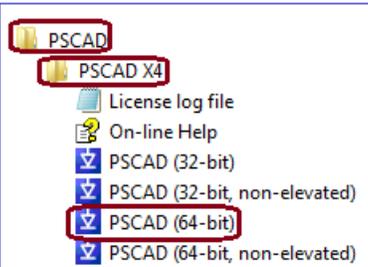
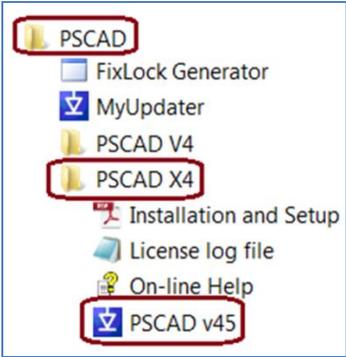
If you encounter any issues, contact our support desk ([Section 6.4](#)).

- a. Ensure the USB lock is plugged in.
- b. Launch PSCAD as follows:

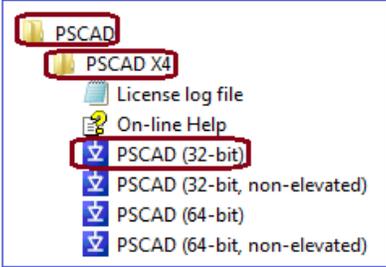
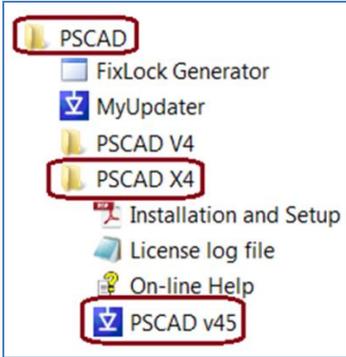
Note

The method for launching PSCAD varies depending on the licence, (Professional or Educational), PSCAD version, and operating system (32-bit or 64-bit).

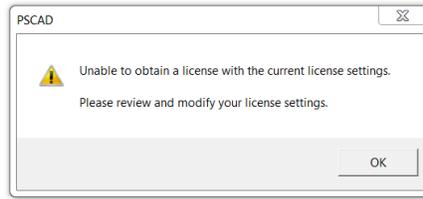
- **For a Professional Licence:** Using the following table, launch PSCAD according to your Windows operating system and PSCAD version:

Operating System PSCAD Version	Windows 32-bit	Windows 64-bit
PSCAD v4.5.0	<p>Browse to "PSCAD (32-bit)" in the Windows "Start" menu:</p> 	<p>Browse to "PSCAD (64-bit)" in the Windows "Start" menu:</p> 
PSCAD v4.5.1 and later	<p>Browse to "PSCAD v45" in the Windows "Start" menu:</p>  <p>Note The version corresponding to the machine's operating system (32-bit or 64-bit) will automatically be selected to run.</p>	

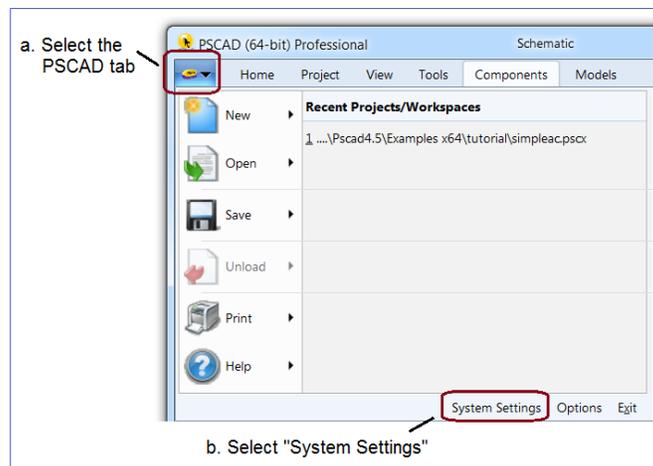
- **For an Educational Licence:** Using the following table, launch PSCAD according to your Windows operating system and PSCAD version:

Operating System PSCAD Version	Windows 32-bit	Windows 64-bit
PSCAD v4.5.0	<p>Browse to "PSCAD (32-bit)" in the Windows "Start" menu:</p>  <p>Notes</p> <ol style="list-style-type: none"> 1. The 64-bit version of PSCAD v4.5.0 is not available for an Educational License. Ensure to select the 32-bit version of PSCAD. 2. The 64-bit versions of PSCAD v4.5.1 and later are available for an Educational License (see below). 	
PSCAD v4.5.1 and later	<p>Browse to "PSCAD v45" in the Windows "Start" menu:</p>  <p>Note</p> <p>The version corresponding to the machine's operating system (32-bit or 64-bit) will automatically be selected to run.</p>	

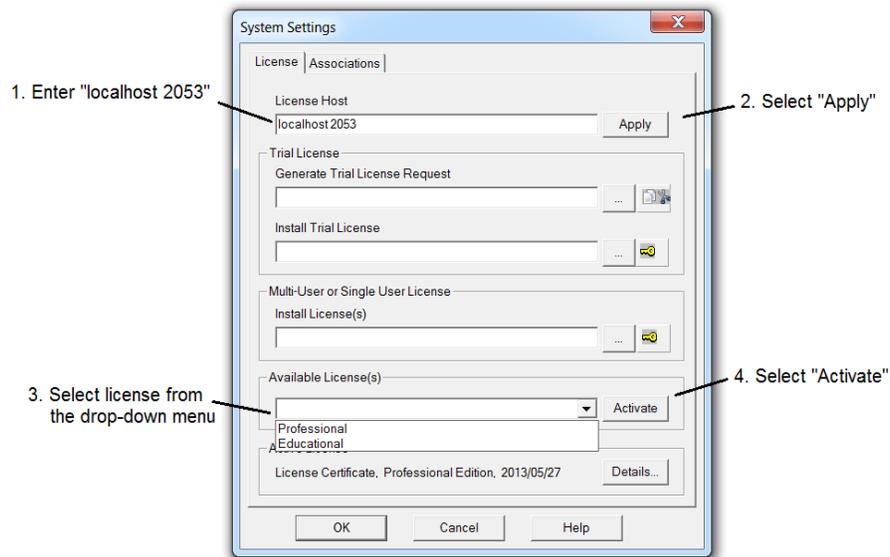
- c. A licence will not be available at this time. Select "OK".



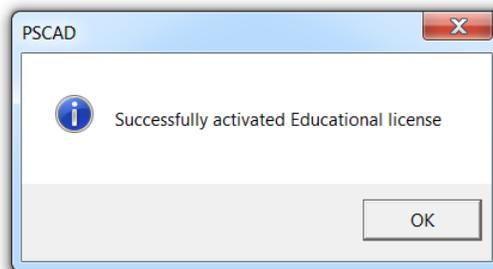
- d. The "System Settings" dialog box will display automatically. To display it manually, browse to "System Settings".



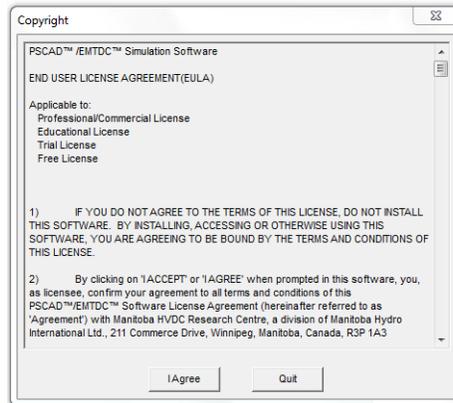
e. Configure the licence as shown.



f. If the licence has successfully been activated, a message similar to the one shown will display. Select "OK".



g. If you agree with the software licence agreement, select "I Agree".



h. Version 4.5 will be licensed to run.

6. Resolving Issues

Refer to the following sections if you encounter any issues:

- See [Section 6.1](#) for issues when updating the software
- See [Section 6.2](#) for issues when configuring the Licence Manager
- See [Section 6.3](#) for issues when updating a licence
- See [Section 6.4](#) for issues when activating a licence
- See [Section 6.5](#) to contact our support desk

6.1 Issues with Updating the Software

If you encounter any issues when updating the software, you may troubleshoot the problem with our “PSCAD Installation Errors” document, available at the following link:

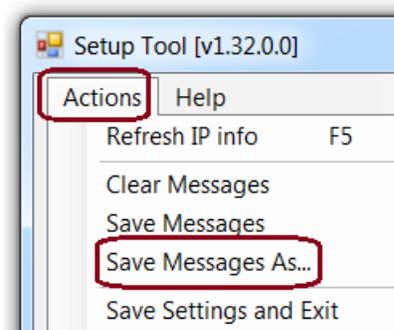
<http://updater.pscad.com/docs/PSCAD%20Installation%20Errors.pdf>

If you are still unable to resolve the problem, please contact our support desk ([Section 6.5](#)). Ensure to include as much information as possible to describe when the problem occurred and snapshots of any error messages, as well as a “getinfo” log file, which is generated as described in [Step 6.4\(a\)](#).

6.2 Issues with Configuring the Licence Manager

If you encounter any issues with configuring the Licence Manager, proceed as follows:

- a. In the "Actions" menu of the "Setup Tool", select "Save Messages As".



Note

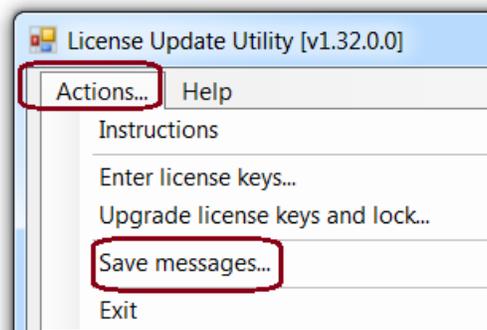
The messages will be saved as a log file to the location you specify, and named "Setup Tool", followed by the date and time.

- b. Forward the saved log file to our support desk ([Section 6.5](#)).

6.3 Issues with Updating a Licence

If you encounter any issues with updating a licence, proceed as follows:

- a. In the "Actions" menu of the "License Update Utility", select "Save Messages".



- b. When prompted, enter a file name and browse to a folder in which to save the messages. The messages will be saved as a log file.
- c. Forward the log file to our support desk ([Section 6.5](#)).

6.4 Issues with Activating a Licence

If you encounter any issues with activating a licence, please forward the following log files, as applicable, to our support desk ([Section 6.5](#)) to determine the reason:

a. **GetInfo.txt file:** This file is available on computers running the Licence Manager or PSCAD, as follows:

- Download the “GetInfo32” utility from the following link and save to your computer:

<http://updater.pscad.com/utilities/GetInfo32.zip>

- Select the “GetInfo32.exe” file to run the utility.
- The generated file will be saved to your computer and opened on your desktop; the file location will be listed within the file, towards the bottom.

b. **PscadLmgr.txt file:** This file is available on computers running the PSCAD application, and is located according to the Windows operating system and PSCAD version, as follows:

PSCAD Version	Windows Operating System	
	Windows XP	Windows Vista and Windows 7
PSCAD v4.2.1	<ul style="list-style-type: none"> • C:\Windows\PscadLmgr.txt 	<ul style="list-style-type: none"> • C:\Windows\PscadLmgr.txt
PSCAD v4.3, v4.4, v4.5	<ul style="list-style-type: none"> • C:\Documents and Settings\All Users\Application Data\Manitoba HVDC Research Centre\LicenseManager\PscadLmgr.txt 	<ul style="list-style-type: none"> • C:\Users\All Users\Manitoba HVDC Research Centre\LicenseManager\PscadLmgr.txt • C:\Users\YOUR-USER-ID\AppData\Local\Manitoba HVDC Research Centre\LicenseManager\PscadLmgr.txt • C:\ProgramData\Manitoba HVDC Research Centre\LicenseManager\PscadLmgrd.txt <p style="text-align: right;">(send all available files)</p>

- c. **Lmgrd-log.txt file:** This file is available on computers running the Licence Manager, and is located according the Windows operating system and version of License Manager, as follows:

Version of Licence Manager (LM)	Windows Operating System	
	Windows XP	Windows Vista and Windows 7
LM 1.27 (or earlier)	<ul style="list-style-type: none"> C:\Windows\Lmgrd-log.txt 	<ul style="list-style-type: none"> C:\Windows\Lmgrd-log.txt
LM 1.28 (or later)	<ul style="list-style-type: none"> C:\Documents and Settings\All Users\Application Data\Manitoba HVDC Research Centre\LicenseManager\Lmgrd-log.txt 	<ul style="list-style-type: none"> C:\Users\All Users\Manitoba HVDC Research Centre\LicenseManager\Lmgrd-log.txt C:\Users\YOUR-USER-ID\AppData\Local\Manitoba HVDC Research Centre\LicenseManager\Lmgrd-log.txt C:\ProgramData\Manitoba HVDC Research Centre\LicenseManager\Lmgrd-log.txt <p>(send all available files)</p>

6.5 Contacting the Support Desk

There are two methods for contacting the support desk if you encounter any issues with updating or licensing. In each case, the necessary log files as described in [Sections 6.2 to 6.4](#) may be attached. Contact the support desk as follows:

- Submit a support request in an e-mail to support@pscad.com.
- Register in our “MyCentre” website utility, and submit a support request from within this utility. Refer to the following document for instructions:

https://mycentre.hvdc.ca/_Downloads/ManagingMyCentre.pdf

Appendix A Licensing Across Networks

This appendix provides information about licensing software across networks, and is used to determine the appropriate configuration for your networking system.

For Multi-User licences (MULs), the Licence Manager resides on a Server and issues licences remotely to Client computers across the networking system. There are two kinds of remote-licensing, briefly described as follows:

- **Legacy Licensing:** Legacy Licensing is the traditional configuration, in which the Client computers are on the same network as the Server.
- **Expanded Licensing:** Expanded Licensing occurs more infrequently, when the Client computers are not on the same network as the Server.

Legacy Licensing is the recommended method for licensing across networks as it is simple to configure within the Licence Manager. Conversely, the Expanded Licensing is only recommended if absolutely essential due to the following limitations:

- It requires prior approval
- It is limited to two networks
- Updated maintenance is required on a Professional license
- It expires, and must be re-applied for

Legacy Licensing

This section provides the background on network classes, and how the Licence Manager applies them for issuing licences. This information may be used to determine whether your networking system supports Legacy Licensing. If it does not support Legacy Licensing, proceed to the section on Expanded Licensing to support your networking requirements.

The Licence Manager considers networks as defined according to RFC-960. Classes and class levels of networks are shown in Table 1.

Network Class	Start Address	End Address	Class Level
A	1.0.0.0	126. 0. 0.0	↑ Higher class
B	128.0.0.0	191.255. 0.0	
C	192.0.0.0	223.255.255.0	
D	224.0.0.0	239.255.255.0	↓ Lower class

Table 1. Network Classes and Class Levels

Source: Internet Protocol Standards, page 2

Four network classes, from A to D, are listed in Table 1. Each network class possesses a range of network addresses, as listed in the "Start Address" and "End Address" columns. Each network address consists of four sets of digits separated by periods.

The four network classes are ranked according to their networking restrictions, as shown in the "Class Level" column. The higher the class level, the lower the networking restrictions.

Networking restrictions are more fully explained using Table 2. This is the same table as Table 1, with the addition of the "IP Mask" column.

Network Class	Start Address	End Address	Class Level	IP Mask
A	1.0.0.0	126. 0. 0.0	↑ Higher class	255. *. *. *
B	128.0.0.0	191.255. 0.0		255.255. *. *
C	192.0.0.0	223.255.255.0		255.255.255. *
D	224.0.0.0	239.255.255.0	↓ Lower class	255.255.255.255

Table 2. Network Classes and IP Masks

For each network class, the "IP Mask" column specifies the IP address configuration that is required for a computer to reside on a particular network. The digits "255" represent those digits in the Client computer's IP address that must be exactly the same as the corresponding digits on the Server's IP address in order for the Client computer to reside on the same network as the Server. The "*" is a wild card, and represents the digits in the Client computer's IP address that do not have to match the corresponding digits on the Server's IP address in order for the Client computer to reside on the same network as the Server.

Table 2 demonstrates the limitations of a Class D network. A Class D network requires all four sets of digits to be the same for the Server and Client computer. Therefore, a Class D network may only network to itself, and thus may only issue a licence to itself. This network is typically not used, except in a very uncommon situation, in which a Multi-User licence with two or more seats is installed, with the result that multiple instances of PSCAD may be run on a single computer.

The Licence Manager may be configured to alter the IP Mask restrictions in Table 2. In this manner, certain network classes may be artificially elevated to a higher class, and certain network classes may be artificially lowered to a lower class.

Elevating a class is useful for lowering the restriction, thereby permitting more computers to network to that Server. Lowering a class is useful for increasing restriction, thereby restricting the access of Client computers.

Table 3 lists all of the available re-configurations for classes A to C. Table 3 assumes a Licence Manager version 1.30 or later and NET Framework 4.0 (or better). The latest version of Licence Manager may be obtained by contacting the support desk ([Section 6.5](#)).

Original Configuration			Re-Configuration	After Re-Configuration	
Network Class	Example of IP Address	IP Mask		IP Address	Network Class
A	12.11.21.31	12. *. **	No Change	12. *. **	A
			Increase Restriction	12.11. **.*	B
			Increase Restriction	12.11.21.*	C
B	132.11.21.31	132.11. **.*	Lower Restriction	132. *. **	A
			No Change	132.11. **.*	B
			Increase Restriction	132.11.21.*	C
C	192.11.21.31	192.11.21.*	Lower Restriction	192.11. **.*	B
			No Change	192.11.21.*	C

Table 3. Re-Configuring Network Classes

The following may be observed from this table:

- In all classes, the first set of digits must always match.
- Class A may remain Class A, or be lowered to Class B or Class C.
- Class B may remain Class B, or be either raised to Class A or lowered to Class C.
- Class C may remain Class C, or be raised to Class B.

If you have determined that the Server and Client computers are on different networks after reviewing your configuration against Table 3, then the Licence Manager will refuse to issue a licence if it is configured for Legacy Licensing. In this case, Expanded Licensing may be required.

Expanded Licensing

Expanded Licensing must be obtained if the PSCAD Client computer is on a different network than the Server. This is determined by reviewing the section on Legacy Licensing.

Expanded Licensing permits the Licence Manager to be configured to issue licences to Client computers that reside on different networks than the Server. To request approval for this licence, please forward the following information to our support desk in accordance with [Section 6.5](#):

- Your licence number.
- Your networking configuration (the networks on which the Server and Client computers reside).

If approved, we will provide a licence containing the time-limited Expanded Licensing along with installation and configuration instructions.

DOCUMENT TRACKING

Rev.	Description	Date
0	Initial	19/Dec/2012
1	Revision (update copyright, uninstall Licence Manager)	1/Feb/2013
2	Generalized to cover v4.5.0 to v4.5.2; Amalgamated licence activation for Server/Client computers; Revised support desk contact information; General corrections and improvements	14/Jun/2013
3	Minor updates for v4.5.3 release, minor corrections, updated title page	22/Nov/2013