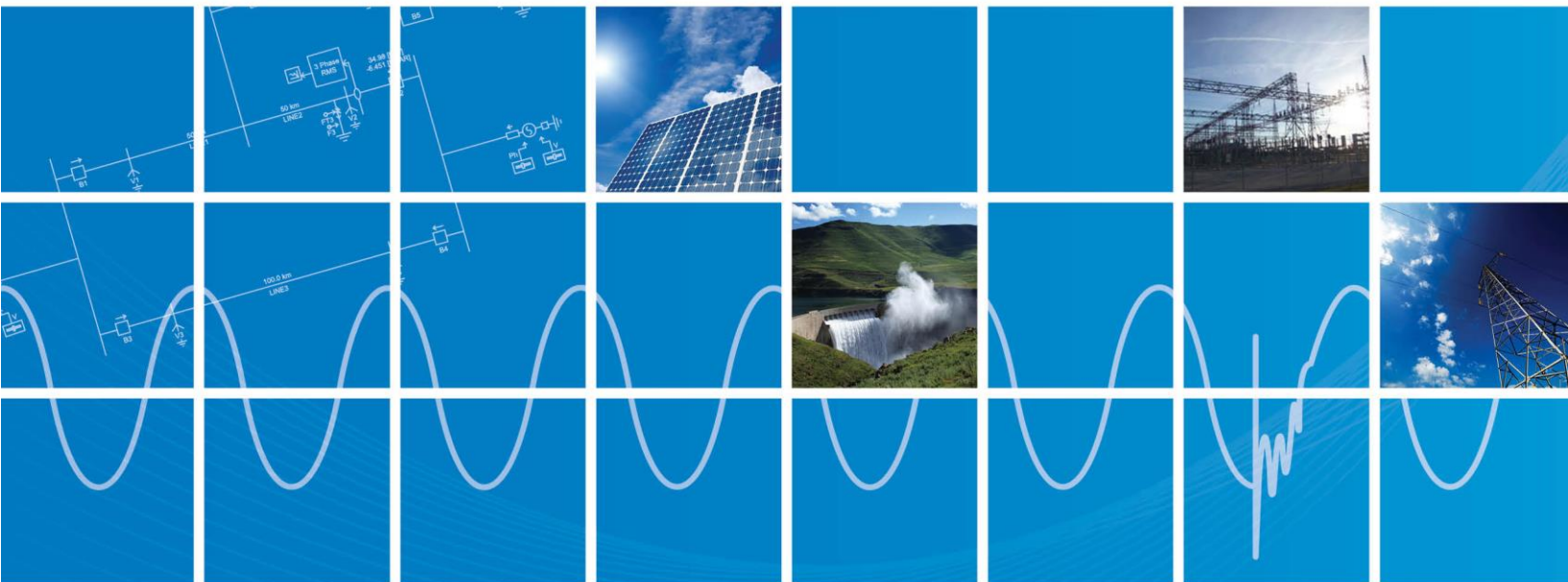PSCAD™

Migrating from Lock-Based Licensing to Certificate Licensing

Written for PSCAD X4: Versions 4.5 and 4.6

November 22, 2018
Revision 7

Manitoba
HYDRO INTERNATIONAL

Contents

1. General

1.1   Introduction

This manual provides instructions for migrating your PSCAD licensing from lock-based to certificate licensing. For a description of both of these licensing configurations, refer to Appendix A.

1.2   The Migration Process

The migration process may be performed as either a full or partial migration. A partial migration involves moving only some of the licensing over to certificate licensing, while some licensing remains on the USB lock. A partial migration would typically be performed in the following situations:

- On a license containing multiple PSCAD seats, some seats can remain lock-based, and the rest may be converted to certificate licensing. This would normally be performed so that earlier versions not supported with certificate licensing may still be used.

- Or, on a license containing PSCAD, but also containing other products such as E-TRAN and LiveWire that are not supported with certificate licensing. Some or all of the PSCAD seats could be migrated over to certificate licensing, while the unsupported software would remain on the USB lock.

A full migration involves moving all licensing over to certificate licensing, with none remaining on the USB lock. This would be applicable for a license that contains one or more PSCAD seats, but does not contain any other products, such as E-TRAN or LiveWire.

The licensing migration process is designed to ensure minimal PSCAD downtime, and involves the following steps:

- You will provide requested licensing information (see Section 2 for more information).

- We will provide temporary certificate licensing for use during the transition, and setup instructions. We recommend that you run a special utility to test connectivity between PSCAD and our license server, to ensure that certificate licensing will work (Section 3).

- You will run a special utility on your USB lock to modify it as follows:
    - If this is a "full" migration, you will run a utility that will de-activate your USB lock. All licensing will be deleted.
    - If this is a "partial" migration, you will run a utility that will remove specified products from your USB lock, and renumber it to a different license number.

- You will send us the utility log file to confirm the utility has been run on the license.

- Once we validate the log file, we will send you instructions for setting up your certificate licensing.

1.3   Overview of the Migration Process

The procedure for converting lock-based licensing to certificate licensing, as well as some additional details, is as follows:

a. The customer requests the licensing migration, and provides some information:

- License number, and if there more than one seat on this license, whether any of the seats shall remain on the lock.
- A licensing log file using our Get Info tool.
- The name of the staff member/s who will be responsible for managing the certificate licensing.

b. Testing is performed on the customer's system to detect and resolve any connectivity issues between the customer's network and our license server.

c. Temporary certificate licensing is created so that PSCAD is available during the transition.

    Note
    The licensing is hosted on our server. The licensing is held in a special grouping, called a WorkGroup, within a web tool called MyCentre. PSCAD users may access the licensing by creating a MyCentre user account, which will be joined to the licensed WorkGroup.

d. The Administrator creates a MyCentre user account, and is assigned special Administrator privileges. The administrator then manages the certificate licensing as follows:

- Adds/removes a user's access to the PSCAD licensing.
- Adds/removes administrator privileges for other members.

e. Each software user creates a MyCentre user account, obtains access to the licensed WorkGroup from the Administrator, and sets up the software.

f. A software tool is provided, to deactivate the USB lock (or the lock may be physically mailed in).

g. The temporary certificate licensing becomes permanent.

1.4   Eligibility

The following table may be used to determine whether your licensed product qualifies for either a full or partial migration to certificate licensing.

Products on License	No Migration	Full Migration	Partial Migration
License has no PSCAD seats • Does have E-TRAN and/or LiveWire[2]	✓		
License contains one PSCAD Seat[1] • Does not have E-TRAN nor LiveWire • Does have E-TRAN and/or LiveWire[2]		✓	✓
License contains two or more PSCAD Seats[1] Assuming that all PSCAD seats will be migrated: • Does not have E-TRAN nor LiveWire • Does have E-TRAN and/or LiveWire[2] Assuming that not all PSCAD seats will be migrated: • Does not have E-TRAN nor LiveWire • Does have E-TRAN and/or LiveWire[2]		✓	✓ ✓ ✓
1. Consider compatibility before deciding whether to migrate your PSCAD seat/s to certificate licensing: • Certificate Licensing is supported with PSCAD v4.5.3 and later. • Lock-based licensing is supported with PSCAD v4.2 and later. 2. Any E-TRAN or LiveWire licensing must remain on the USB lock, as they are not supported with certificate licensing.			

1.5   Requirements

Certificate licensing may be run on a machine running Windows operating system Vista SP1 and later, with an Internet connection.

Notes
1.   PSCAD v4.6 and better is supported on Windows 7 SP1. Customers also currently run this on Windows 8, 8.1 and 10.

2.   Certificate Licensing, supported with PSCAD v4.5.3 and better, is not recommended on Windows XP.

1.6   How to Use this Manual

Section 2 provides the information we require to process your request for certificate licensing.

Section 3 provides instructions for testing the communications between PSCAD and our license server.

Section 4 contains instructions for a full migration (all licensing will be removed from your USB lock, and it will be de-activated).

Section 5 contains instructions for a partial migration (some licensing will be removed from your USB lock, and the lock will be renumbered to a new license number).

Section 6 provides some information related to obtaining your new certificate licensing.

Section 7 contains instructions for contacting our support desk if you encounter any issues when using our special utility in Section 4 or Section 5.

2. Request Certificate Licensing

If you wish to migrate any of the PSCAD licensing from your USB lock to certificate licensing, please forward the following required information to our sales desk (sales@pscad.com):

1. The PSCAD license number/s that you wish to migrate from lock-based to certificate licensing.

    Note
    A license maintenance renewal fee will be applied if applicable.

2. A Get Info log file to help confirm the licensing information, as per Appendix B.

3. Indicate whether this will be a full or partial migration (see Sections 1.1 to 1.5, as well as Appendix A, for more information). If this will be a partial migration, please specify which products are to be migrated, and which are to remain on the existing lock license.

4. If you require a download of any supported PSCAD version/s, please specify which one/s.

5. As part of this process, one or more persons within your organization would be designated as a "WorkGroup Administrator" (or simply known as "Administrator"), and will be responsible for controlling access to your certificate licensing. Please provide the name and e-mail address of your new workgroup administrator. For more information on the administrator's duties, refer to Appendix A.

Once we have validated your information, we will provide temporary certificate licensing and setup instructions so that PSCAD is available during the migration process.

We recommend that communications between the customer's network and our server are performed as per Section 3. This will help to identify and resolve any connectivity issues.

3. Test Connections for Certificate Licensing

It is recommended that connections between PSCAD and our certificate licensing server are tested using our tester utility. If any issues are detected, our support desk will assist with resolving them.

Test the network communications as follows:

Notes
1. Requirements for certificate licensing are listed in Appendix C.

2. If there are multiple facilities that will be using the certificate licensing, this testing should be performed on all of them.

3. You will require Windows administratrative privileges on the computer that is running this testing procedure.

a. Download the following zipped file:

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

b. Extract all files to a temporary local folder, for example a new folder on your desktop.

c. Run the utility as administrator (from the extracted files, right-click on "ConnectionTester.exe", and select "Run as administrator").
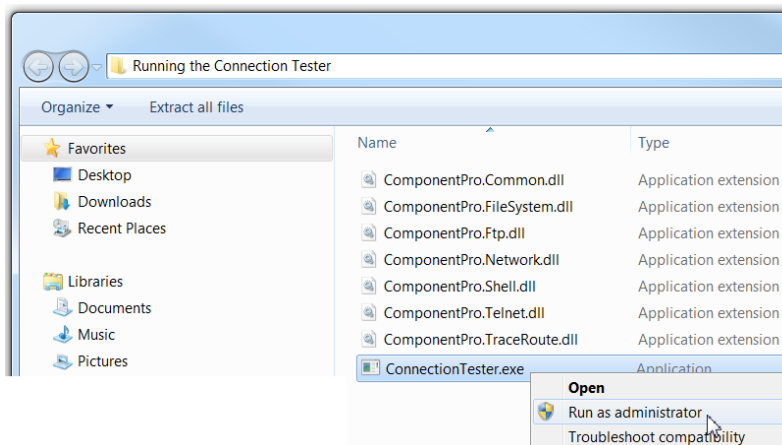
d. When the utility launches, click on Actions | Start connection tests.
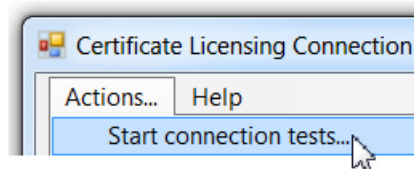
e.   The "Connectivity Test Settings" dialog box will display. If there is an HTTP proxy server in your network and you know its address and login information, enter this in the fields provided. If you do not know this information, simply leave this field blank. Select "Accept".
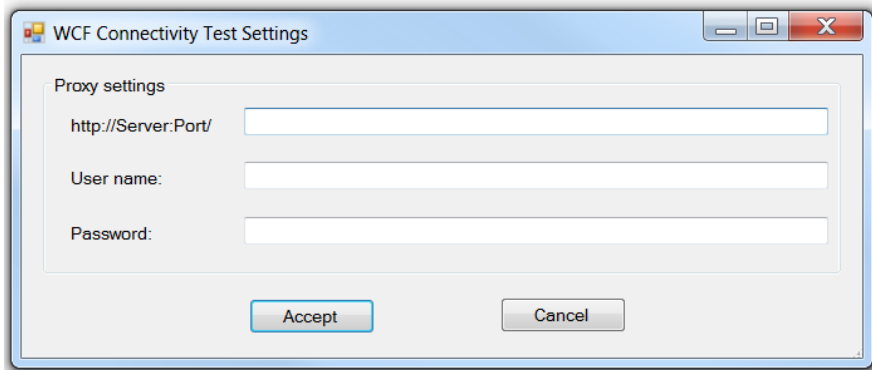

Note
Hovering your cursor over the field in the utility will display a tool tip.

f.   The utility will perform some tests, and after a short delay, a message similar to the following will display. Note that the actual number of tests might be different. Select "OK" to proceed with the tests.
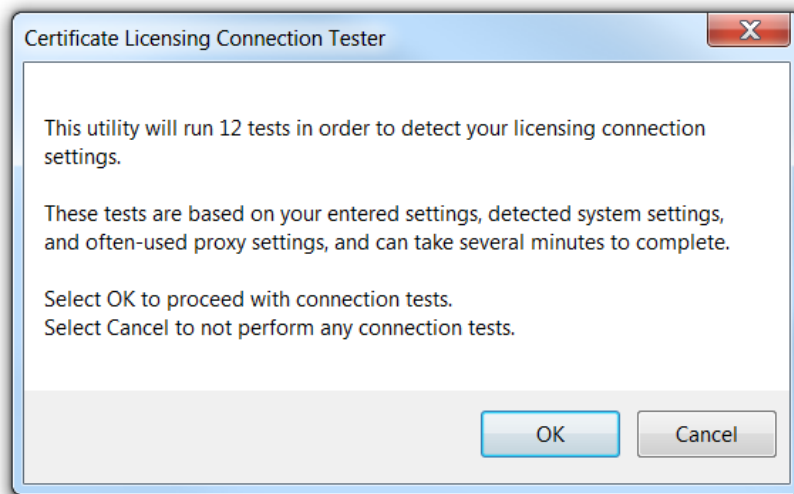

g.   Wait for the utility to complete its testing. This might take several minutes.

h. When the testing is complete, a summary will be displayed. The following screenshot is an example of a summary. Select "OK":
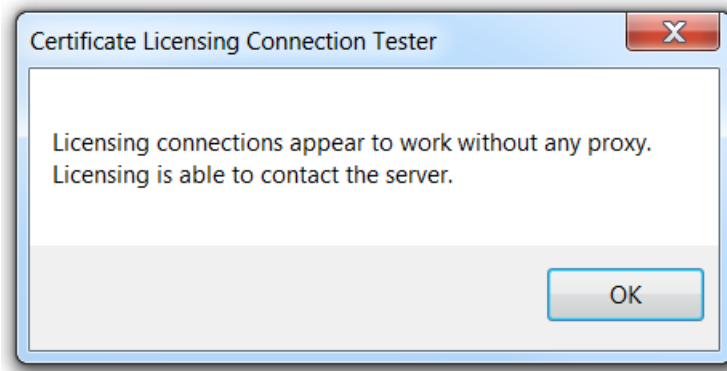
i. If there were any issues displayed, please consult with your IT department to try to resolve them. Or, if you are unable to resolve the issues, save the utility messages as shown in the following screenshot, copy them to an e-mail, and send them in to our support desk (support@pscad.com).
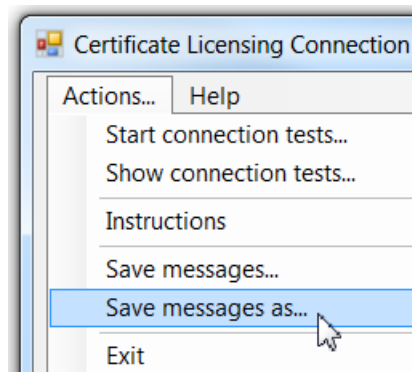
j. Once it has been determined that there are no issues with your network connecting with MyCentre, proceed as follows:

-   If this will be a full migration, proceed to Section 4 to de-activate your USB lock.
-   Or, if this will be a partial migration, proceed to Section 5 to remove some of the licensing from your USB lock.

4. Full Migration – De-Activating your USB Lock

This section provides instructions for de-activating your USB lock, to erase all licensing. Please follow these instructions when you receive this download tool from our office.

Proceed as follows:

> **Notes**
> 1. If you encounter any issues during this procedure, refer to Section 7.1 for assistance.
>
> 2. You will require Windows administratrative privileges on the computer that is running the de-activation procedure.

a. You will receive a zipped folder containing the following files from our office. Extract the files, and save them to a local folder, for example a new folder on your desktop.
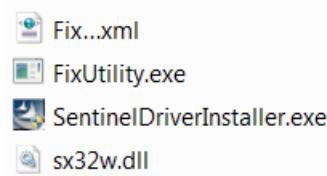

b. If applicable, shut down any instances of PSCAD.

c. If applicable, stop the License Manager (rom the Windows Start menu, browse to and right-click on "Stop License Manager Service", then select "Run as administrator").

d. Plug the PSCAD USB lock that will be de-activated into the USB port.

e. From the unzipped files, right-click on "FixUtility.exe", and select "Run as administrator".
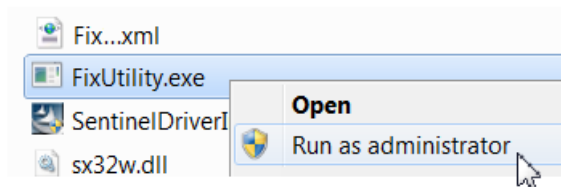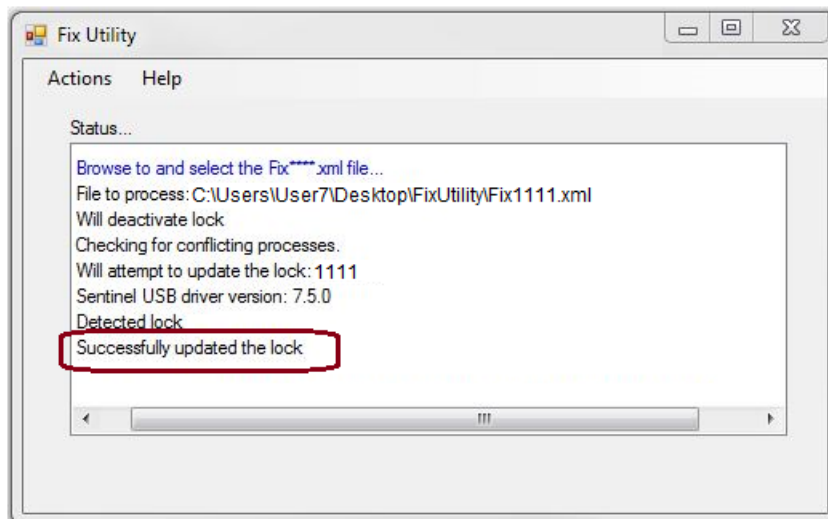
f.   When the Fix Utility displays, go Actions | Start.
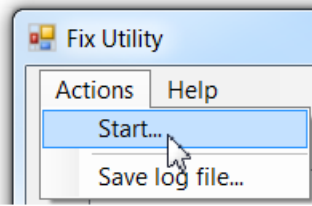

g.   When prompted, browse to the unzipped XML file: "Fix[your lock number]", and select "Open".
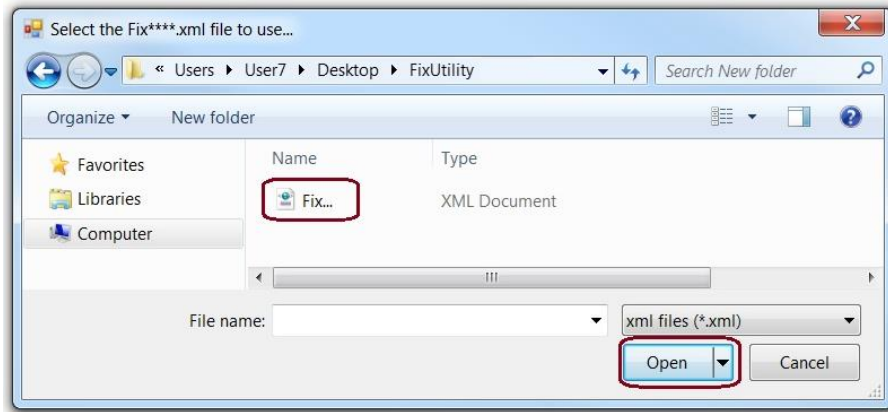
h.   The utility will de-activate the USB lock. This process may take a few moments.

i.   Once the message "Successfully updated the lock" is displayed, the process is complete.

    j.   Before closing the utility, perform the following steps:

- Save the utility log file to your computer (go Actions | Save log file, and when prompted, enter a file name and folder to save the file to).
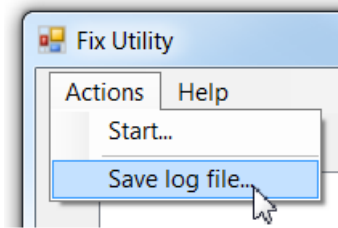
- Attach this file to an e-mail, and send it to sales@pscad.com.

    k.   You may uninstall the License Manager if applicable, as it will no longer be required (from the Windows Programs & Features, uninstall the "Manitoba HVDC Research Centre Licence Manager").

    l.   Once we have validated the log file you sent to us (Step j), we will update your temporary certificate licensing to permanent licensing (proceed to Section 6).

5. Partial Migration – Modifying your USB Lock

This section provides instructions for performing a partial migration to certificate licensing, in which some of the licensing will be removed from your USB lock and license. This procedure will also renumber your lock and license database file to a new license number.

Please follow these instructions when you receive this download tool from our office.

Proceed as follows:

Notes
1. If you encounter any issues during this procedure, refer to Section 7.2 for assistance.

2. You will require Windows administrative privileges on the computer that is running this procedure.

a. You will receive a zipped folder containing the following files from our office. Extract the files, and save them to a local folder, for example a new folder on your desktop.
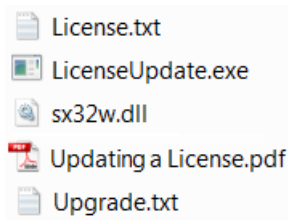

b. If applicable, shut down any instances of PSCAD.

c. If applicable, stop the License Manager (rom the Windows Start menu, browse to and right-click on "Stop License Manager Service", then select "Run as administrator").

d. Plug the PSCAD USB lock to be modified into the USB port.

e. From the extracted files, right-click on "LicenseUpdate.exe", and select "Run as administrator".
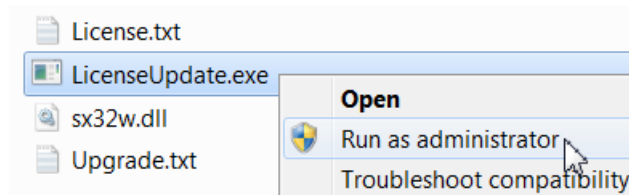
f.   When the License Update Utility displays, go Actions | Upgrade license keys and lock.
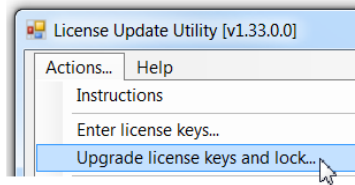
g.   When prompted, browse to the extracted "Upgrade" text file, and select "Open".
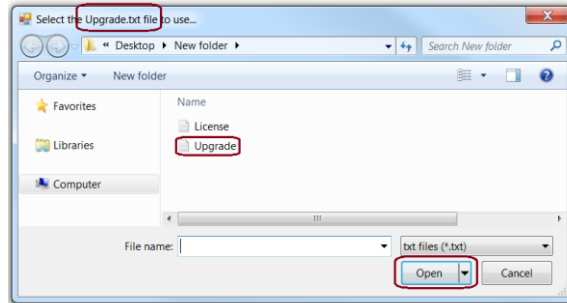
h.   When prompted, browse to the extracted "License" text file, and select "Open".
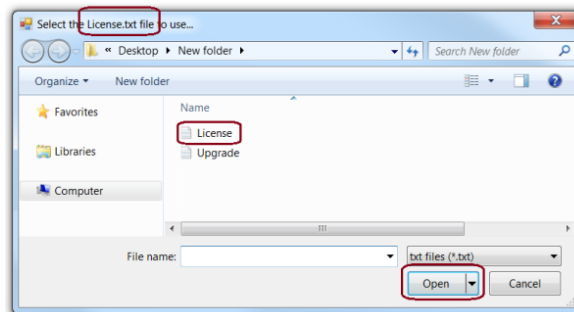
Note

The utility will update the products on the USB lock and renumber the lock to a new license number. The utility will also install the new corresponding license database file.

i.   Once the message "Upgrade was successful" is displayed, the process is complete.

j.   Before closing the License Update Utility, perform the following steps:

- Save the utility messages to your computer (go Actions | Save messages, and when prompted, enter a file name and folder to save the file to).

- Attach this file to an e-mail, and send it in to sales@pscad.com.
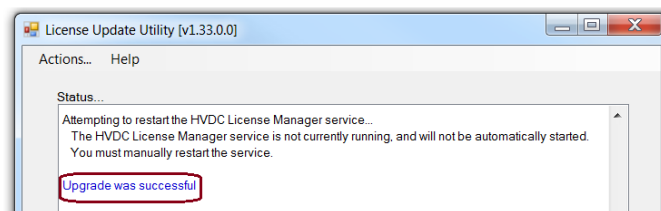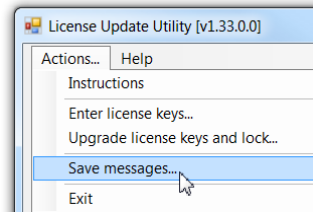- Take note of your new license number, which may be dislayed by scrolling through the utility. It is recommended to attach a tag listing the new number to the USB lock to easily identify your license number when contacting the sales or support desk.
- If you wish to view the remaining products on your license, simply scroll through the information listed in the License Update Utility.

k.   Following this procedure, the USB lock along with the License.txt file that was provided in the update package make up your new PSCAD license. Together, these may be installed on any computer to host the PSCAD license.

l.   If the License Manager is used with this lock-based license, restart the License Manager (from the Windows Start menu, right-click on "Restart License Manager Service", and select "Run as administrator").
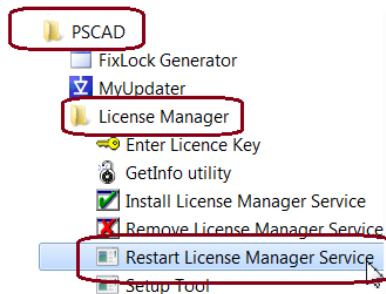
m.   Once we have validated the log file you sent to us (Step j), we will update your temporary certificate licensing to permanent licensing (proceed to Section 6).

6. Your New Certificate Licensing

Once your license has been de-activated or modified (Sections 4 or 5), your temporary interim certificate licensing will be made permanent.

In broad terms, the certificate licensing setup will involve the following steps:

- Your designated workgroup administrator will be authorized for managing the certificate licensing. Instructions for managing the licensing are listed in this article.

- Your workgroup administrator may then assist members of your organization with accessing the licensing. Instructions for setting up the software are listed in this article.

Our support desk (support@pscad.com) will be pleased to assist throughout this process, to help the administrator to become familiar with the licensing tools.

7. Resolving Issues

7.1   Fix Utility

If there are any errors that you are unable to resolve when using the Fix Utility (Section 4), please do the following:

    a.   Save screenshots of any error dialog boxes that display.

    b.   Save the utility messages to your computer (go Actions | Save log file, and when prompted, enter a file name and folder for saving the file to).
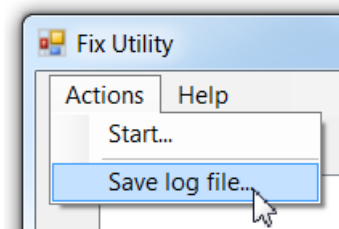
    c.   E-mail the log file and any screenshots to support@pscad.com.

7.2   Update Utility

If there are any errors that you are unable to resolve when using the License Update Utility (Section 5), please do the following:

    a.   Save screenshots of any error dialog boxes that display.

    b.   Save the utility messages to your computer (go Actions | Save messages, and when prompted, enter a file name and folder for saving the file to):

    c.   E-mail the log file and any screenshots to support@pscad.com.

Appendix A: Overview of Licensing Configurations

Certificate Licensing and Lock-based Licensing are described as follows.
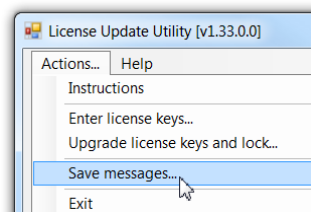
Certificate Licensing Configuration

Certificate licensing is supported with PSCAD versions 4.5.3 and better.

> **Notes**
> 1.   PSCAD v4.5.3 is only supported with the Professional Edition.
>
> 2.   If you will be using a version that is not supported with certificate licensing, then lock-based licensing will still be required. Or, if you have multiple PSCAD licenses, a combination of both lock-based and certificate licensing can be provided.

Certificate licensing uses a web portal called MyCentre to host an organization's licenses and authorize licensing. Any members of the organization who are eligible for this licensing will each register a MyCentre member account, and will be granted access to the licenses through that account by the "workgroup administrator" (see below for further information) or by the PSCAD sales staff.

Licensing is authorized when an eligible member launches PSCAD while online and logs in using their MyCentre login credentials. A license certificate will be checked out on their machine, and may either be retained on that machine when PSCAD is exited, or returned to MyCentre so that another user may check it out. The user must be online to return the certificate. 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 PSCAD is launched with Internet access. The benefit to retaining a certificate on a machine is that PSCAD may be run for up to four weeks without requiring Internet access, making it portable.

Access to the licensing is controlled by the organization itself, specifically, by a designated person within the organization, known as the "WorkGroup Administrator" (also known as "Local Administrator" or simply "Administrator"). The administrator may add or remove access to the licenses, and may also designate other administrators for replacement or backup as needed. For more information on the administrator's roles, refer to the manuals posted to the following webpage:

https://hvdc.ca/knowledge-base/read,article/279/managing-a-workgroup/v:

Three different PSCAD editions are available with certificate licensing. The two fully-featured editions are the Professional and Educational Editions. These editions are used with permanent licenses and temporary leases and evaluations (trials).

The PSCAD Free Edition is a free, limited-feature edition. This edition includes permanent licensing, and is automatically awarded to anyone registered in MyCentre.

For an overview of features available in the Professional, Educational and Free Editions, refer to Section 2 of the "Getting Started Manual", available on the following webpage:

https://hvdc.ca/knowledge-base/topic:114/v:

Lock-based Licensing Configuration

The lock-based licensing configuration uses a combination of Sentinel USB lock (dongle) and license database file to authorize licensing. Lock-based licensing is supported with PSCAD versions 4.2.1 to 4.6.2 (and better).

A lock-based license is available as either a Single-User License (SUL) or a Multi-User License (MUL). The SUL is hosted locally on the machine that is running PSCAD. The MUL may either be hosted locally on the machine that is running PSCAD, or it may be hosted on a server and shared with client machines over a network.

An SUL permits one instance of PSCAD to be launched and licensed locally. An MUL, on the other hand, may permit one or more instances of PSCAD to be launched and licensed, depending on the number of PSCAD seats on that license. For example, a three-seat MUL will license up to three instances of PSCAD. These instances may be shared with one or more machines over the Internet, or one or more instances may be run on the license host machine.

An SUL or MUL that is hosted on the client machine is portable, and is therefore suited for either in-house or remote usage. The MUL license that is hosted on a server is more suited to in-house usage because it requires frequent communication between the client and server machines to retain licensing validation, which can be challenging if Internet connections are unreliable. This configuration was never intended for remote licensing, however, some customers have managed to set up their licensing to be shared over long distances.

Both lock-based and lockless licensing are used for licensing our fully-featured Professional and Educational editions. For an overview of features available in these editions, refer to Section 2 of the "Getting Started Manual", available on the following webpage:

> https://hvdc.ca/knowledge-base/topic:114/v:

Appendix B: Running the Get Info Tool

When applying to migrate a license from lock-based to certificate licensing, a "Get Info" log file for each license is required. The Get Info tool will gather required information about your USB lock/s, and generate a log file.

Proceed as follows for each license you wish to migrate:

a. Download "GetInfo32.zip" from the following link:

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

Note
Please ensure that you are downloading this utility, as opposed to using a version that may already be installed on your computer. The downloaded edition will be the most current and helpful.

b. Securely plug in the PSCAD USB lock.

c. In the downloaded folder, open "GetInfo32.exe".

d. When prompted whether to test shortcuts, select "No".

e. The Get Info utility will display information about your system, and save the file to your machine (listed in the bottome of the tool. The location of this file is normally located as shown in the following path:

C:\ProgramData\Manitoba HVDC Research Centre\LicenseManager\

f. If multiple licenses will be migrated, each getinfo.txt file must be renamed upon creation; otherwise the file will be over-written each time the Get Info utility is run. In this case, open a Windows browser, and browse to the getinfo.txt file. Modify the name of the file to include the license number, for example, getinfo_12345.txt.

g. Close the Get Info utility.

h. Perform Steps (b) to (g) for all USB locks that will be migrated.

Please send the Get Info file/s, along with all other required information, to sales@pscad.com.

Appendix C: Certificate Licensing Requirements

Certificate licensing supports running PSCAD on a local desktop, or on a remote desktop or over virtual private network (VPN). Certificate licensing is not supported when running PSCAD in a cloud desktop environment.

PSCAD requires access to the following license server URL for certificate licensing:

- http://licensing.pscad.com:80/Licensing (preferred)

- net.tcp://licensing.pscad.com:443/Licensing (fallback)

> **Note**
> One or both of the above addresses should be added to the whitelists of the anti-virus and firewall software.

> **Warning**
> Do not use the above information to update any settings in the PSCAD application. The above information should only be used for white-listing anti-virus and firewall software.

Users must have permission to create the folders listed below, as well as to create and delete files within this path:

C:\Users\Public\Documents\Manitoba HVDC Research Centre\Licensing\Licenses

DOCUMENT TRACKING

Rev.	Description	Date
0	Initial	30/Jun/2015
1	Complete revision; Update to v4.5.5 release	14/Dec/2015
2	Added Appendix B	13/Jan/2016
3	Update to Section 2	13/May/2016
4	Update to webpage links	26/Apr/2016
5	General improvements	08/Nov/2017
6	Update to New Branding Guidelines Update to Appendix B	04/May/2018
7	Renumbered Sections 1.3-1.5 to 1.4-1.6; Added new Section 1.3; Renumbered Appendix B to Appendix C; Added new Appendix B	22/Nov/2018