Resolving PSCAD Issues

Written for PSCAD X4

June 23, 2016
Revision 24
Contents

1. INTRODUCTION .................................................................................................................. 1
  1.1 OVERVIEW .................................................................................................................. 1

2. ISSUES WHEN LAUNCHING PSCAD .................................................................................. 2
  2.1 RECEIVING A "ROOT ELEMENT IS MISSING" ERROR MESSAGE ..................................... 2
  2.2 THE PSCAD LAUNCH IS PROLONGED ............................................................................ 4
  2.3 RECEIVING A "STOP RUNNING THIS SCRIPT?" ERROR MESSAGE .................................. 5
  2.4 RECEIVING AN "UNABLE TO LOCATE THE MASTER LIBRARY FROM THE GIVEN FILE PATH" ERROR MESSAGE .................................................. 6
  2.5 RECEIVING A "SCRIPT ERROR" ERROR MESSAGE....................................................... 8
  2.6 RECEIVING AN "MFC100.DLL IS MISSING" ERROR MESSAGE .................................... 10
  2.7 RECEIVING A "THE PROCEDURE ENTRY POINT ... DYNAMIC LINK LIBRARY SHELL32.DLL" ERROR MESSAGE .................................................. 11
  2.8 RECEIVING A "THE PROCEDURE ENTRY POINT ... COULD NOT BE LOCATED IN THE DYNAMIC LINK LIBRARY ZSLIB2.DLL" ERROR MESSAGE 12
  2.9 PSCAD CRASHES UPON STARTUP ................................................................................. 13
  2.10 THE PSCAD BETA EDITION CRASHES UPON STARTUP ............................................ 14

3. ISSUES WHEN LICENSING PSCAD – LEGACY LOCK-BASED ........................................... 15
  3.1 LICENSE CANNOT BE ACTIVATED .............................................................................. 15
  3.2 ERRORS WITHIN THE PSCADLMGR.TXT FILE .......................................................... 16
  3.3 ERRORS WITHIN THE LMGRD-LOG.TXT FILE ................................................................ 18
  3.4 ERRORS WITHIN THE GET INFO UTILITY .................................................................... 19
  3.5 RECEIVING A "CLIENT HAS LOCALHOST AND REMOTEHOST IPS" ERROR MESSAGE .................................................................................. 22
  3.6 RECEIVING A "FAILURE: UNABLE TO UPDATE THE LICENCE DB FILE" ERROR MESSAGE .................................................................................. 23
  3.7 UNABLE TO LICENSE PERIODICALLY ........................................................................ 24
  3.8 PSCAD CLIENT CANNOT CONTACT THE SERVER ......................................................... 25
  3.9 LICENSING IS ACTIVATED, BUT PSCAD CLAIMS LICENSING IS EXPIRED ................... 26
  3.10 RECEIVING A "NO LICENSES FOUND ON THE SELECTED LICENSE HOST" ERROR MESSAGE .................................................................................. 27
  3.11 LICENSE CANNOT BE ACTIVATED ON WINDOWS 10 ................................................ 28

4. ISSUES WHEN LICENSING PSCAD – CERTIFICATE-BASED ............................................... 29
  4.1 ADVANCED LICENSING RESULTS IN "PROXY AUTHENTICATION REQUIRED (407)" .................................................................................. 29
  4.2 RECEIVING AN "UNABLE TO OBTAIN THE LICENSE CERTIFICATE" ERROR ............... 31
  4.3 RECEIVING A "UNABLE TO DETERMINE LOGIN STATUS" ERROR MESSAGE .............. 36
  4.4 PSCAD CLIENT CANNOT CONTACT THE SERVER ......................................................... 37
  4.5 RECEIVING A "COMMUNICATION WITH THE SERVER FAILED, (417) EXPECTATION FAILED" ERROR MESSAGE .................................................................................. 39

5. ISSUES WHEN LICENSING PSCAD – LEGACY LOCKLESS ................................................ 42
  5.1 RECEIVING AN "UNABLE TO OBTAIN A LICENSE WITH THE CURRENT LICENSE SETTINGS" ERROR MESSAGE .................................................. 42
  5.2 RECEIVING A "USING AN INVALID COMMUNICATION PROTOCOL: < GNUTELLA" ERROR MESSAGE .................................................................................. 47

6. ISSUES WHEN USING PSCAD .............................................................................................. 48
  6.1 PSCAD CRASHES WHEN THE “ASSOCIATIONS” TAB IS SELECTED ............................... 48
  6.2 THE COMPONENT WIZARD PANE IS NOT DISPLAYING CORRECTLY ........................ 49
  6.3 RECEIVING A "THE PSCAD AUTOMATED EMAIL SYSTEM HAS FAILED TO SEND YOUR REQUEST” MESSAGE .................................................. 51
  6.4 RECEIVING AN "UNABLE TO DISPLAY START PAGE" ERROR MESSAGE ....................... 53
  6.5 COPYING A CONTROL WILL SWIITCH ITS VALUE TO THE DEFAULT SETTINGS ......... 54
  6.6 RECEIVING AN "UNABLE TO CONNECT TO MYCENTRE SERVER" ERROR MESSAGE .... 55
  6.7 RECEIVING A "REVOCATION INFORMATION FOR THE SECURITY CERTIFICATE FOR THIS SITE IS NOT AVAILABLE" ERROR MESSAGE ............ 56
  6.8 RECEIVING A "A PROGRAM IS TRYING TO SEND AN E-MAIL MESSAGE ON YOUR BEHALF" ERROR MESSAGE .................................................. 57
  6.9 A PANE APPEARS TO BE MISSING ............................................................................. 58
  6.10 GRAPHS DO NOT DISPLAY ......................................................................................... 59

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Resolving PSCAD Issues

7. ISSUES WHEN COMPILING CASES IN PSCAD

7.1 Receiving a “1 project(s) was unsuccessful when building” ERROR MESSAGE ................................................. 61
7.2 Receiving an “unresolved external symbol” ERROR MESSAGE ................................................................. 63
7.3 Receiving a “FORTRAN compiler is not detected” ERROR MESSAGE ......................................................... 64
7.4 Receiving a “Cannot execute command” ERROR ......................................................................................... 66
7.5 Receiving a “’Gfortran.exe: Main.f: invalid argument’ ERROR” ............................................................ 68
7.6 Receiving an “ERROR 1 – Multiple definition of ‘...’ - First defined here” ERROR .................................... 69
7.7 Receiving an “ERROR 1 – Syntax error in argument list at (....)” ERROR ................................................ 70
7.8 Receiving a “Make failed to generate a simulation executable for namespace ‘***’. Binary file was not found” ERROR 71
7.9 Receiving a “make: *** [SomeFile.exe] 1’” ERROR .................................................................................. 74
7.10 Receiving an “ERROR U1052 – file ‘data.cpp’ not found” ERROR ....................................................... 76
7.11 Receiving a “Make File Error” ERROR .................................................................................................. 78
7.12 Receiving an “Unable to solve line constants” BUILD MESSAGE .......................................................... 79
7.13 Receiving a “’CL.exe’ is not recognized as an internal or external command” BUILD MESSAGE ............ 80
7.14 Receiving an “The number of projects included in the simulation list must not exceed 96” ERROR MESSAGE ................................................ 81
7.15 Receiving an “Unable to open file...” ERROR MESSAGE .................................................................... 82
7.16 Receiving a “Could not read symbols: Malformed archive” ................................................................. 83
7.17 PSCAD stops unexpectedly, with no Runtime Error .................................................................................. 84
7.18 Receiving “error code = 112” MESSAGE ................................................................................................. 86
7.19 Receiving a “Transmitter ‘*’ cannot be added” BUILD MESSAGE ........................................................... 87
7.20 Receiving a “EMTDC: Error while opening file for read” BUILD MESSAGE ........................................... 88
7.21 Receiving a “make: *** [Station0] 126” ERROR MESSAGE .................................................................... 89
7.22 Receiving a “Winsock Error #10048” ERROR MESSAGE ........................................................................ 90
7.23 Receiving a “connect function failed with error: 10061” ERROR MESSAGE ........................................... 92
7.24 Receiving an “Unable to execute a simulation executable for namespace ‘***’. Binary file was not found” ERROR .......................................................................................... 93
7.25 Receiving a “Simulation set ‘*’ has xx project tasks included, exceeding the workspace selected limit of x tasks” ERROR MESSAGE ................................................................................... 95
7.26 Running a PSCAD v4.6.0 Simulation on Windows 10 is slower than running earlier versions of PSCAD ...... 96
7.27 Receiving a “’Nmake’ is not recognized as an internal or external command...” ERROR MESSAGE .......... 99
7.28 Receiving a “’C:\Program’ is not a valid internal or external command” ERROR MESSAGE .................. 100
7.29 Receiving a “LIBENG = Library is missing” ERROR MESSAGE .............................................................. 101
7.30 Receiving a “The simulation process has stopped unexpectedly” ERROR MESSAGE ............................... 102
7.31 Receiving a “Unable to generate a simulation” ERROR MESSAGE ........................................................ 104
7.32 Receiving a Syntax Error Message when Compiling with GFortran ......................................................... 105
7.33 Receiving a “Severe (41): insufficient virtual memory” ERROR Message .............................................. 106
7.34 Compiling any case containing Many Transmission Lines is extremely slow ........................................ 107
7.35 Receiving a “gcc.exe: C:\PROGRA...LIB: No such file or directory” ERROR Message ....................... 108

8. ISSUES WHEN RUNNING CASES IN PSCAD

8.1 Receiving a “Project output storage requirements are xx MB” WARNING ................................................... 110
8.2 Receiving an “EMTDC Runtime Error” MESSAGE ...................................................................................... 111
8.3 Receiving an “Abnormal termination of EMTDC by *’” ERROR MESSAGE ............................................ 113

9. ISSUES WITH MYCENTRE

9.1 Problem with the Free Download ............................................................................................................. 114
9.2 The MyCentre Registration Halts .............................................................................................................. 115
9.3 Issues with Logging in to MyCentre ......................................................................................................... 116
9.4 An Error is displayed when downloading from the “Downloads” tab .................................................... 117
9.5 Registration in MyCentre freezes during the ReCaptcha Process ............................................................ 118

APPENDIX A USING THE FORTRAN MEDIC UTILITY ...................................................................................... 119
1. Introduction

1.1 Overview

This manual presents known issues and solutions related to PSCAD and associated software. It is intended to be a continuously developing diagnostic tool as the software evolves.

The information in this manual is applicable to PSCAD X4, which includes version 4.3.0 and later, and covers the following categories:

- Launching PSCAD (Section 2)
- Licensing PSCAD – Legacy Lock-based Licensing (Section 3)
- Licensing PSCAD – Certificate-based Licensing (Section 4)
- Licensing PSCAD – Legacy Lockless Licensing (Section 5)
- Using PSCAD (Section 6)
- Compiling Cases in PSCAD (Section 7)
- Running Cases in PSCAD (Section 8)
- Using MyCentre (Section 9)
- Using the Fortran Medic utility – Appendix A
- Using the Get Info utility – Appendix B
- Requirements for the License Manager (legacy lock-based licensing) – Appendix C
- Requirements for connecting to our HTTP license server (certificate licensing) – Appendix D

For issues related to installing PSCAD, refer instead to the manual “Resolving Installation Errors”, located on the following webpage:

https://hvdc.ca/knowledge-library/reference-material

For all issues related to installing and using MyUpdater, refer to the manual “Update Client (MyUpdater) – Common Issues”, which may be found at the following link:


This document is updated as new issues occur. If you encounter any issues that are not covered herein, please forward the details to our Support Desk (support@pscad.com).
2. Issues when Launching PSCAD

2.1 Receiving a “Root element is missing” Error Message

Problem
When launching PSCAD, the following error message displays:

Clicking the “OK” button displays the following error message:

Clicking the “OK” button closes PSCAD.

System
- PSCAD v4.3
- PSCAD v4.5.1
- Windows XP (32-bit) Service Pack 3

Cause
A problem with the PSCAD user_profile.xml file.

Solution 1
Update to PSCAD v4.5.3 or later. Ensure to log out then log back in on your machine to apply the changes.
Solution 2

Fix this using the Fortran Medic utility:

- Run the utility as per Appendix A.
- Once the utility has retrieved the information, scroll down to the following message:

  **Installed PSCAD versions**
  PSCAD X4 Release (4.5.1 (x86)) [Release date: 2012.12.13 16.36.04]

  Workspace file: C:\Documents and Settings\Username\Local Settings\Application Data\Manitoba HVDC Research Centre\PSCAD\user_profile.xml
  File exists but appears to be empty

- Right-click on the “Workspace file” message and select the option to delete this file.
2.2 The PSCAD Launch is Prolonged

Problem
When PSCAD is launched, it may take up to several minutes before the application is ready for user input. Specifically, when PSCAD is launched, the PSCAD splash window remains displayed for an extended time, during which the application is neither licensed nor usable.

System
- PSCAD v4.5.1 to v4.5.3
- All Windows platforms
- Using either the “elevated” or “non-elevated” launch links in the Windows Start menu.

Cause
The PSCAD Start Page cannot load, and is delaying the start of the application.

Solution 1
Update to PSCAD v4.5.4 or later.

Solution 2
Fix this using the Fortran Medic utility:
- Run the utility as per Appendix A.
- Once the utility has retrieved the information, scroll down to the following error message:
  
  Conflicts
  PSCAD will not display the latest Start Page.

- Right-click on the error message and select the option to repair it.
2.3 Receiving a “Stop running this script?” Error Message

**Problem**
When PSCAD is launched, the following error message displays:

![Stop running this script?](image)

**System**
- PSCAD v4.5.1 to v4.5.3
- All Windows platforms

**Cause**
The PSCAD Start Page cannot load, and is delaying the start of the application.

**Solution 1**
Update to PSCAD v4.5.4 or later.

**Solution 2**
Fix this using the Fortran Medic utility:
- Run the utility as per Appendix A.
- Once the utility has retrieved the information, scroll down to the following error message:

  **Conflicts**
  PSCAD will not display the latest Start Page.

- Right-click on the error message and select the option to repair it.
2.4 Receiving an “Unable to locate the master library from the given file path” Error Message

Problem
When launching PSCAD, a message similar to the following is displayed:

PSCAD might crash when “OK” is selected.

Cause
An incorrect file type (for example, .o) was entered into a field reserved only for library files (.pslx). See location of this library file field, below.
Solution

(1) If PSCAD crashed: Delete your PSCAD user profile to restore the master library, as follows:
   - Run the Fortran Medic utility (per Appendix A1).
   - Once the utility has finished retrieving information, scroll down to the PSCAD version number, and note the path for the “Workspace file”.
   - Open a browser to this file path, and delete the user_profile.xml file.
   - Proceed to Step (3) below.

(2) If PSCAD did not crash: Restore the master library in the PSCAD application as follows:
   - Display the Master Library field:
   - Delete the text text in this field, and enter the following: $(HomeDir)\master.pslx
   - Select “OK” to apply the change:
   - Proceed to Step (3).

(3) Link your file in PSCAD through the Project Settings dialog box, as shown:
2.5 Receiving a “Script Error” Error Message

Problem
When launching PSCAD, a message similar to the following is displayed:

![Script Error]

An error occurred in the script on this page.

- **Line**: 6
- **Char**: 31
- **Error**: __________null________ “module”
- **Code**: 0
- **URL**: https://mycentre.hvdc.ca/static/js/angular/angular-resource.min.js

Do you want to continue running scripts on this page?

Yes  No

Cause
The PSCAD “Start” page is being blocked. Possible causes are firewalls and anti-virus. These blocks might be applied locally on the user’s computer, or more broadly across the network of an organization or even a country.

Note
The Start page is a tab in PSCAD containing the same information and help videos that are available in MyCentre (https://mycentre.hvdc.ca/).

Solution 1
Turn off the software that is blocking the start page (firewall or anti-virus).
Solution 2
Disable the Start Page so that it does not attempt to load upon launching PSCAD, as follows:

- Launch PSCAD.
- Display the Application Options dialog box:

  ![Application Options dialog box](image)

  - In the Workspace page, select “No action” from the “Start Page” drop-down button:

  ![Workspace page](image)

  - Select “Ok” to apply the change:

  ![Start Page dialog box](image)

  - The Start Page will not attempt to display upon PSCAD startup.
2.6 Receiving an “mfc100.dll is missing” Error Message

Problem
When PSCAD is launched, the following error message is displayed:

Cause
This message displays because the Visual C++ 2010 SP1 Redistributables is missing.

Solution
Use the Fortran Medic utility to install the Visual C++ 2010 SP1 Redistributables, as follows:

- Run the latest Fortran Medic utility as per Appendix A.2.
- For a Windows 32-bit machine: Select Help | Install Visual C++ 2010 SP1 Redistributables (x32).
- For a Windows 64-bit machine: Select Help | Install Visual C++ 2010 SP1 Redistributables (x64).
2.7 Receiving a “The procedure entry point … dynamic link library SHELL32.dll” Error Message

Problem
When PSCAD v4.6.0 or later is launched, an error message similar to the following is displayed:

![Error Message]

The procedure entry point SHCreateItemFromParsingName could not be located in the dynamic link library SHELL32.dll.

OK

Cause
This message displays because the user is trying to run PSCAD on an unsupported operating system (Windows XP).

Solution
PSCAD v4.6.0 and later is not supported on Windows XP. This software is officially supported on Windows Vista and Windows 7, but has also been shown to work on Windows 8.
2.8 Receiving a “The procedure entry point ...could not be located in the dynamic link library ZSlib2.dll” Error Message

Problem
When PSCAD is launched, an error message similar to the following is displayed:

![pseudocode](image)

The procedure entry point ??0ZGraphPanelAnalog@@QAE@XZ could not be located in the dynamic link library ZSlib2.dll.

Cause
A problem has developed with the PSCAD program files.

Solution
a. Delete the PSCAD program folder and all subfolders and files. These will typically be located in a path similar to the following:
   - C:\Program Files (x86)\PSCADx

b. Re-install or repair PSCAD. This will re-install all the required files.

For Additional Information
See Appendix A.5, Item 10.
2.9 PSCAD crashes upon startup

Problem
PSCAD crashes upon startup.

System
Most or all versions of PSCAD.

Cause
The corporate security package, Digital Guardian, can cause PSCAD to crash after .NET 4.6.1 is installed.

Solution
Whitelist PSCAD in the corporate security package.
2.10 The PSCAD BETA Edition crashes upon startup

Problem
When launching the PSCAD Beta Edition from MyUpdater, the launch fails:

- The following error message displays in the MyUpdater messages tab:
  
  Process terminated with error: E0434352

- The following dialog message displays:

  ![Runtime Error! Program: C... R6030 CRT not initialized]

System
PSCAD Beta Edition on Windows 7 SP1.

Cause 1
This problem is most often caused by certain security software programs. It is also possible to get this error when another program uses code injection techniques to trap certain DLL library calls. Some intrusive security programs use this technique. In versions of Visual C++ before Visual Studio 2015, it is possible to use a statically-linked CRT library to address the issue, but this is not recommended for reasons of security and application updates.

Solutions 1
1. Disable your security software and see if this resolves the issue.
2. Your security software may have specific instructions for mitigating this issue. Check your security software vendor's website for details.
3. Check for updated versions of your security software, or try different security software.
4. Re-install the Visual C++ Redistributables, then reboot your machine, and then try launching the Beta Edition again.
5. Try this installation on a different machine.

Cause 2
You may have corrupt Windows files.

Solutions 2
Have your IT staff perform an `sfc` scan according to the following instructions:

  [http://support.microsoft.com/kb/929833](http://support.microsoft.com/kb/929833)

If the above step fails to fix the problem, try repairing Windows.
3. Issues when Licensing PSCAD – Legacy Lock-Based

3.1 License Cannot be Activated

Problem
When the “Workspace Settings” dialog box is configured, and the “Activate” button is selected...

...licensing is not activated, and the following error message displays:

Cause
There are many possible causes for a licensing issue.

Solution
Proceed as follows to resolve the licensing issue:

- If the license is installed on the machine running PSCAD, view the causes and solutions in Sections 3.2 and 3.4.
- If the license is installed on a Server, view the causes and solutions in Sections 3.2, 3.3 and 3.4.
3.2 Errors within the PscadLmgr.txt File

When there is a licensing issue, the log file “PscadLmgr.txt” may be used to help identify the cause.

The PscadLmgr.txt file is located on the machine that is running PSCAD, as follows:

- **On Windows XP:**
  - C:\Documents and Settings\All Users\Application Data\Manitoba HVDC Research Centre\License Manager\PscadLmgr.txt
- **On Windows Vista and Windows 7:**
  - C:\Users\All Users\Manitoba HVDC Research Centre\License Manager\PscadLmgr.txt
  - C:\Users\YOUR-USER-ID\AppData\Local\Manitoba HVDC Research Centre\License Manager\PscadLmgr.txt
  - C:\Program Data\Manitoba HVDC Research Centre\License Manager\PscadLmgr.txt

The following table lists some of the common error messages listed in the log file, as well as their possible causes and solutions.

<table>
<thead>
<tr>
<th>Error</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. USB Error: Sentinel driver not installed, status = 524</td>
<td>USB lock is not plugged in.</td>
<td>Plug in USB lock</td>
</tr>
<tr>
<td>2. SENTINEL DRIVERS not installed.</td>
<td></td>
<td>Install Sentinel Drivers per &quot;Installing PSCAD X4&quot; manual, on the webpage: <a href="https://hvdc.ca/knowledge-library/reference-material">https://hvdc.ca/knowledge-library/reference-material</a></td>
</tr>
<tr>
<td>3. Checking for lock on USB&lt;br&gt;USB Error: all licenses are in use, status = 0</td>
<td>User is remotely logging in to machine running PSCAD.</td>
<td>Remotely logging in to the machine running PSCAD is not enabled in this version; you must be directly logged into the machine. This includes running PSCAD on a virtual machine, running PSCAD in Windows XP compatibility mode on Windows 7, and logging in via virtual private network. Remotely logging in is enabled in higher versions (e.g. v4.5).</td>
</tr>
<tr>
<td>4. ERROR: Detected a second instance of &lt; pscad.exe &gt;</td>
<td>On a machine with a valid trial license, this error occurs if a second instance of PSCAD is run. A trial license permits only one instance.</td>
<td>Ensure only one instance of PSCAD is running&lt;br&gt;NOTES&lt;br&gt;1. This limitation is applicable when trying to license a second instance with either Trial or USB-based licensing&lt;br&gt;2. This limitation is not applicable when trying to license a second instance with Certificate Licensing; a second instance of PSCAD using Certificate Licensing may be run</td>
</tr>
<tr>
<td>5. ERROR: Invalid semaphore value</td>
<td>An unexpected second instance of PSCAD was</td>
<td>Ensure only one instance of PSCAD is running</td>
</tr>
</tbody>
</table>
## Resolving PSCAD Issues

<table>
<thead>
<tr>
<th>Error</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
</table>
| ERROR: Refused to renew license [No.] for [machine name] for <PSCAD X4 Professional>. License not active. | being licensed. This would occur for licensing that is only programmed to allow a single instance of PSCAD, either because the license is a legacy lock-based license with one PSCAD seat, or it is a legacy trial license. | NOTES  
1. This limitation is applicable when trying to license a second instance with either a lockless trial license or with lock-based licensing with only one PSCAD seat.  
2. This limitation is not applicable when trying to license a second instance with Certificate Licensing; a second instance of PSCAD using Certificate Licensing may be run. |
| **6.** To be determined | PSCAD v4.5.0 (64-bit) was launched, and an Educational License is being used. The 64-bit version may only be licensed using a Professional License. | There are three options:  
1. Use the Educational License with PSCAD v4.5.0 (32-bit).  
2. Use the Educational License with the 64-bit version of PSCAD v4.5.2 or later; the 64-bit version of PSCAD is enabled for later versions.  
3. If available, switch to a Professional License and use PSCAD v4.5.0. |
### 3.3 Errors within the Lmgrd-log.txt File

When there is a licensing issue, the log file “Lmgrd-log.txt” may be used to help identify the cause.

The Lmgrd-log.txt file is located on the machine hosting the License Manager, as follows:

- **On Windows XP:**
  - C:\Documents and Settings\All Users\Application Data\Manitoba HVDC Research Centre\License Manager\Lmgrd-log.txt

- **On Windows Vista and Windows 7:**
  - C:\Users\All Users\Manitoba HVDC Research Centre\License Manager\Lmgrd-log.txt
  - C:\Users\YOUR-USER-ID\AppData\Local\Manitoba HVDC Research Centre\License Manager\Lmgrd-log.txt
  - C:\Program Data\Manitoba HVDC Research Centre\License Manager\Lmgrd-log.txt

The following table lists some of the common error messages listed in the log file, as well as their possible causes and solutions.

<table>
<thead>
<tr>
<th>Error</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB Error: unable to find a Sentinel lock</td>
<td>USB lock is not plugged in (required in order to authorize licensing)</td>
<td>Plug in USB lock</td>
</tr>
<tr>
<td>ERROR: Unable to open and read Licence Manager database C:\Windows\mgr-hvdc if the database file is missing, run the Enter License Key utility to create it</td>
<td>The license database file is not installed on the computer (required in order to authorize licensing)</td>
<td>If you have the license.txt file that is provided as part of your license, install it. Installation instructions may be found in the &quot;Installing PSCAD X4&quot; manual, on the webpage: <a href="https://hvdc.ca/knowledge-library/reference-material">https://hvdc.ca/knowledge-library/reference-material</a></td>
</tr>
<tr>
<td>ERROR: Client [machine name] [IP address] is not on the same host or net as the LM [IP address] The following are not on the same network:  - Server: 172.17.<em>.</em>  - Client: 172.17.<em>.</em></td>
<td>Options: 1. Move the client to the same network as the server. 2. Request &quot;expanded licensing&quot; from our support desk (<a href="mailto:support@pscad.com">support@pscad.com</a>). 3. Consider switching licensing from &quot;legacy&quot; to &quot;Certificate&quot; (consult <a href="mailto:support@pscad.com">support@pscad.com</a>).</td>
<td></td>
</tr>
</tbody>
</table>
3.4 Errors within the Get Info Utility

When there is a licensing issue, the “Get Info” utility may be used to help identify the cause. The Get Info Utility may be run as per Appendix B, Section B.2.

The following table lists some of the common error messages displayed in the Get Info utility, as well as their possible causes and solutions.

<table>
<thead>
<tr>
<th>Message</th>
<th>Possible Impact</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>User level: User</td>
<td>User does not have administrator rights: Therefore, the user may not install or</td>
<td>1. Obtain temporary administrator rights, then install the license</td>
</tr>
<tr>
<td></td>
<td>update a license</td>
<td>2. Administrator to install the license</td>
</tr>
<tr>
<td>License Info &lt;localhost&gt; Licence DB: &lt;no licenses installed&gt;</td>
<td>No license database file is installed on this machine, which is hosting the</td>
<td>Install the license database file as per the “Installing PSCAD” manual on the webpage:</td>
</tr>
<tr>
<td></td>
<td>license: Therefore the licensing will not work</td>
<td><a href="https://hvdc.ca/knowledge-library/reference-material">https://hvdc.ca/knowledge-library/reference-material</a></td>
</tr>
<tr>
<td>Local License Manager: 1.XX [installed]</td>
<td>The License Manager is installed on a machine that is running a Single-User</td>
<td>Uninstall the License Manager:</td>
</tr>
<tr>
<td></td>
<td>License: Therefore, the licensing might not work</td>
<td>a. Stop the License Manager Service (from the Windows Start menu, browse to “Stop License Manager Service”).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Go to “Add or remove program” in the Windows Control Panel, and remove “Manitoba HVDC Research Centre Licence Manager”.</td>
</tr>
<tr>
<td>ERROR: Unable to read the lock [5]</td>
<td>USB lock is not plugged in on the machine.</td>
<td>Plug in the USB lock.</td>
</tr>
<tr>
<td>Sentinel Driver Info</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB Error: unable to find a sentinel lock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Message</td>
<td>Possible Impact</td>
<td>Solution</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>USB driver version 7.150.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;driver NOT detected, or SUB lock not yet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>inserted&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;driver NOT detected&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lock Info (direct access)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>customer ID XXXX (expected)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>customer ID unknown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cause(s) &lt;Dongle absent, not communicating,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or wrong port in Lmgrd.ini&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installed Sentinel Driver Software:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;non detected&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB error: USB Error: Sentinel driver not</td>
<td>USB lock will not be detected</td>
<td>Install the Sentinel Driver</td>
</tr>
<tr>
<td>installed, status = 524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB info: USB Error: Sentinel driver not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>installed, status = 524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB port: &lt;driver not detected, or USB lock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>not yet inserted&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Par port: &lt;driver not detected&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Par port: &lt;unknown hardware address or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>disabled &gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Par port: &lt;unknown software address or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>disabled &gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERROR: the License Manager appears to be</td>
<td></td>
<td></td>
</tr>
<tr>
<td>unresponsive.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Message</td>
<td>Possible Impact</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Lock Info (from active LM on localhost)</td>
<td>The USB lock does not appear to have ever been programmed, and licensing will not work.</td>
<td>Send your Get Info log file to <a href="mailto:support@pscad.com">support@pscad.com</a> (location of log file will be listed within the utility). We will review your file and forward the solution to you.</td>
</tr>
<tr>
<td>customer ID: xxxxx (expected)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>customer ID: xxxxx (Licence DB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>actual date: Wed Mar 18 08:22:39 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERROR: the Licence Manager appears to be unresponsive.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[The above License Manager error only appears if it is running]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lock Info (direct access)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected on: &lt;no port specified, or Lmgrd.ini does not exist =&gt; assume USB&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected on: USB &lt;default&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>com port: USB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>device: USB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>customer ID: xxx (expected)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>customer ID: 0 &lt;corrupted&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lock ID: xxxx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>user date: &lt;error in date value&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>actual date: Wed Mar 18 08:22:39 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The USB lock does not appear to have ever been programmed, and licensing will not work.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Licence Host</td>
<td>Ping Echo and Ping Reply are not enabled on the server; they must be enabled to allow licensing.</td>
<td>Enable Ping Echo and Ping Reply on the server (see Appendix C).</td>
</tr>
<tr>
<td>LM registry: &lt;.<em>.</em>.* 2053&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LM hostname: <em>.</em>.<em>.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ping LM host: IcmpSendEcho failed: IP request timed out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LM port: 2053</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.5 Receiving a "Client has localhost and remotehost IPs" Error Message

Problem
The license cannot be activated, and the following error message displays in the log file:

```
ERROR: Client [machine name] <[some IP address]>, <127.0.0.1> is not on same net as LM <[some IP address]>. Client has localhost and remotehost IPs
```

Cause
This is a bug in earlier versions of License Manager (v1.28, v1.29).

Solution
Update your License Manager to v1.30 or later.
3.6 Receiving a "FAILURE: unable to update the licence DB file" Error Message

Problem
When using the License Update Utility to license PSCAD, the following message displays in the utility:

Unable to save license database file
File: C:\Users\Public\Documents\Manitoba HVDC Research Centre\LicenseManager\lmgr-hvdc
Error: 'C:\Users\Public\Documents\Manitoba HVDC Research Centre\LicenseManager\lmgr-hvdc' Cannot find part of the path.
FAILURE: unable to update the licence DB file

This issue occurs when the following requirements are both met:
- The License Update Utility used is v1.36.0.0 (comes bundled with PSCAD v4.6.0)
- A PSCAD license has not been installed previously on this machine.

Cause
The License Update Utility released with v4.6.0 fails on a new license installation because the expected folder for the license database file does not exist, and the utility fails to create it.

Solution (1)
- Create the following folder:
  C:\Users\Public\Documents\Manitoba HVDC Research Centre\License Manager
- Retry the license installation using the License Update Utility.

Solution (2)
Use a later version of the License Update Utility to license PSCAD (v1.36.2.0 or later):
- Shut down all instances of PSCAD.
- Ensure that the license.txt file is saved to your machine.
- Download the latest License Update Utility from the following link:
  [http://updater.pscad.com/utilities/LicenseUpdate.zip](http://updater.pscad.com/utilities/LicenseUpdate.zip)
- Extract the files to a local folder, and launch the “LicenseUpdate.exe” file.
- From the “Actions” menu, select “Enter license keys”.
- When prompted, browse to and select the “license.txt” file, and select “Open”.
- The license will be installed. Close the utility.
3.7 Unable to License Periodically

Problem
Sometimes a PSCAD license cannot be activated (lock-based). On those occasions, the lmgrd-log.txt file indicates that a USB lock is not detected:

USB Error: unable to find a Sentinel lock

Cause
This issue can occur when running PSCAD on a laptop, and sometimes using a docking station:

- If your laptop is in a docking station, your USB ports are remapped to the docking station USB ports. If you install the Sentinel drivers while your laptop is docked, the USB key will only be detected when your laptop is docked. If you install the Sentinel drivers while your laptop is not docked, the USB key will only be detected when your laptop is not docked.

Note
This is a third party Sentinel driver issue, not a PSCAD or License Manager issue.

Solution
The work-around is to always run PSCAD with your laptop in the same manner (docked or undocked). If you need to re-install the Sentinel Drivers, software and instructions may be found in the manual “Installing PSCAD”, available on the following webpage:

https://hvdc.ca/knowledge-library/reference-material
3.8 PSCAD Client Cannot Contact the Server

Problem
PSCAD cannot ping the Server, nor activate a license from the Server.

Cause 1
This issue can occur if the QuickHeal Antivirus is installed, and blocking the licensing.

Solution 1
Uninstall QuickHeal Antivirus.
3.9 Licensing is Activated, but PSCAD claims Licensing is Expired

Problem
Immediately following a license activation, the license is returned, and the following errors display:

Cause
This licensing issue is due to an incompatible computer setting: The computer is set to use a calendar that is incompatible with PSCAD legacy licensing, for example the Arabic Regional and Language settings. As a result, the PSCAD licensing perceives an issue with the date, and denies licensing.

System
This issue was identified at PSCAD v4.5.4, v4.5.5, and v4.6.0, and has been fixed in later versions.

Solution 1
Switch to PSCAD v4.6.1 or later, as the licensing appears to work when the computer is set to the Arabic Regional Language settings

Solution 2
Or, continue to use PSCAD v4.6.0, but switch your computer to the English language, so that the computer will use the Gregorian calendar (from the Windows Start button, display the Control Panel, browse to ”Language and Region”, and change the setting to ”English”).
3.10 Receiving a “No licenses found on the selected license host” Error Message

Problem
When a license host IP address or name is entered into the PSCAD System Settings dialog box, the following errors display:

Cause 1
The license is not correctly installed on the host machine: The license file and/or USB lock are missing.

Solution 1
Redirect PSCAD to use the license from a different host machine, or Correctly set up the licensing on the host machine. Instructions may be found in the “Installing PSCAD” manual on the following webpage:
https://hvdc.ca/knowledge-library/reference-material

Cause 2
This issue occurs when an incompatible version of OpenVPN client is used to access the license server on Windows 10.

Solution 2
Ensure that a Windows 10 compatible version of OpenVPN client is used to access the license server.
3.11 License cannot be activated on Windows 10

Problem
When the “Workspace Settings” dialog box is configured, and the “Activate” button is selected...

...licensing is not activated, and the following error message displays:

Cause
On a machine running Windows 10, the PSCAD USB lock can not be detected using an earlier version of Sentinel USB Drivers (v7.5.8).

Solution
- Uninstall current Sentinel Drivers.
- Install Sentinel Driver 7.5.9 from the following link (or find a later version):
  [http://updater.pscad.com/utilities/USBDrivers_7.5.9.zip](http://updater.pscad.com/utilities/USBDrivers_7.5.9.zip)
- Log out then log back in to your machine to apply the change.
- Retry licensing PSCAD.
4. Issues when Licensing PSCAD – Certificate-Based

4.1 Advanced Licensing Results in "Proxy Authentication Required (407)"

Problem
When attempting to acquire a license certificate, you encounter the following error:

   Proxy Authentication Error (407)

Log File Evidence
ERROR: ProtocolException:
ERROR:  Cause: The remote server returned an unexpected response: (407)
   Proxy Authentication Required.
ERROR:  Method: Void
   HandleReturnMessage(System.Runtime.Remoting.Messaging.IMessage,
ERROR:  WebException:
ERROR:  Cause: The remote server returned an error: (407) Proxy
   Authentication Required.
ERROR:  Status: ProtocolError
ERROR:  Server:
ERROR:  ResponseUri: http://licensing.pscad.com/Licensing/NormalService
ERROR:  ResponseCode: ProxyAuthenticationRequired (407)

Solution 1
- Have your IT remove the proxy authentication requirement for pscad.com.
- Attempt to activate a certificate.
Solution 2

- Determine the HTTP Proxy address, port and settings.
- Launch PSCAD and go PSCAD | Options | Advanced Licensing.

- Modify the Proxy Server (HTTP) settings as required, then select OK.

- Select “Ok” to apply the change.

- Attempt to activate a certificate.
4.2 Receiving an "Unable to obtain the license certificate" Error

Problem 1
If the time or date on your computer is incorrect, the following message will display when trying to license software:

![Screenshot of PSCAD error message](image)

Solution 1
1. Determine the correct time zone, date and time in either of the following two manners:
   a. Use the "worldtimeserver" website as follows:
      - Go to the following website:
      - Browse to your region using the "Countries" browser:
        ![Countries browser screenshot](image)
      - The time zone, date and time in your region will be displayed. For example:
        ![Time zone example](image)
b. Use the Fortran Medic utility as follows:

- Download the latest “FortranMedic” from our website:
  
  http://updater.pscad.com/utilities/FortranMedic.zip

- In the downloaded zipped file, run the FortranMedic.exe file. Click on the Actions menu and select Start.

- After the utility is done retrieving information, scroll down to “Machine Info”, and note the time zone, date and time that the computer should be set to:

  ![Machine Info](image)

- If your computer time is different from the global time by more than three minutes, you will see the following error in the conflicts section:

  Your system clock is not synchronized to global network time.

- Right-clicking on the error will display instructions on setting the correct time, date and time zone. An example is shown in the following screenshot; more detailed instructions are below, in Steps (2) and (3):

  ![Incorrect System Time](image)
2. Configure the correct time zone, date and time on your computer as follows:
   a. From your Windows Start menu, browse to: Control Panel | Clock, Language and Region | Date and Time, then select “Change time zone”.

   ![Date and Time dialog box]

   b. Select the correct time zone from the drop-down menu (as determined in Step (1)), then select “OK”.

   ![Time Zone Settings dialog box]

   c. Select “Change date and time”:

   ![Date and Time dialog box]
d. Select the correct date and time (as determined in Step 1), then select “OK”:

![Date and Time Settings]

3. Retry licensing the software. If the issue persists, repeat Steps (1) and (2) to further refine and correct the time.
Problem 2
When the user attempts to activate a license certificate for the Free Edition, the request is refused, and the following information is displayed in a dialog box:

Cause 1
The Windows operating system, Vista, is not compatible with PSCAD. This is determined as per the PscadLmgr.txt file, in which the following data is displayed:

```
Advanced Licence Manager <version (date)> starting on Windows Vista (6.00.6000)
...  
ERROR:   Error processing request.  
ERROR:   Exception:  
ERROR:   Cause: License does not support this Windows version.
```

Solution 1
Update operating system to Vista Service Pack 1 (SP1) or to Windows 7.

Cause 2
The user does not have access to the license in their MyCentre account.

Solution 2
Contact support@pscad.com to request access.
4.3 Receiving a "Unable to determine login status" Error Message

Problem
When logging in to PSCAD using your MyCentre login credentials, the following error message displays:

![Login error message]

And the PscadLmgr.txt file reveals an error message similar to the following:

Hostname contains non-English characters. User: USERNAME, Host: HOSTNAME
Error: Login failed. Cannot convert UnknownType object to System.String

Cause
The machine host name contains non-English characters.

Solution
Switch the machine name to one which is composed of English characters.
4.4 PSCAD Client Cannot Contact the Server

Problem

PSCAD cannot ping the Server, nor activate a license from the Server.

Cause

You are not able to access off-site websites, or our License Server, without all outgoing traffic going through your mandatory corporate proxy server. Therefore, PSCAD is not able to access our License Server.

And, if you run our ProxyDetector utility, it will attempt to reach our License Server via your default proxy server. An error similar to the following may display:

```
Exception:
  Cause: The HTTP request was forbidden with client authentication scheme 'Anonymous',
WebException:
  Cause: The remote server returned an error: (403) Forbidden.
  Status: ProtocolError
  Server: ResponseUri: http://licensing.pscad.com/Licensing/PingService
  ResponseCode: Forbidden (403)
```

Background

In order to secure web traffic, IT personnel or applications will install one or more certificates generated by trusted certificate authorities on web-facing servers.

When web clients, such as PSCAD or the ProxyDetector want to communicate with, or through, a server, they request a list of certificates stored on the server, then verify the certificate chain of trust and open up a secure communications channel with the desired endpoint.
It appears that the primary cause of the error that you are encountering is that a server between the ProxyDetector and our License Server is trusting too many certificate authorities, and as a result, sends only a truncated (partial) list of certificates to our web client, such as PSCAD or the ProxyDetector, which then cannot verify the chain of trust. This is a known Windows issue, as described in the following link:

https://support.microsoft.com/en-us/kb/2801679  SSL/TLS communication problems after you install KB 931125

This error may be due to a server on your site, most likely your proxy server.

Solution

The following are possible workarounds:

1. Have your IT administrator of the proxy server review the certificate authorities trusted for client authentication and remove those certificates that do not really need to be trusted.

2. Have your IT department remove the proxy requirements for all web traffic destined for:
   - http://licensing.pscad.com:80/Licensing/NormalService
   - http://licensing.pscad.com:80/Licensing/FreeService
   - http://licensing.pscad.com:80/Licensing/PingService

   This would allow the licensing web traffic to completely bypass the proxy server.

3. Take your laptop offsite or home, and acquire a license certificate. As the acquired certificate expires in 28 days, you would need to do this at least once every 28 days or less.
4.5 Receiving a “Communication with the server failed. (417) Expectation failed” Error Message

Problem
When trying to activate certificate licensing using correct MyCentre login credentials, the following error message is displayed:

![Error Message]

When the Retry button is pressed, the Login dialog box displays, and the user enters correct MyCentre login credentials. However, the following error then displays:

![Login Dialog]

To resolve this issue…
Please review your licensing proxy settings, and then try again. If still unable to contact the server, then please locate and e-mail the PscadLmgr.txt file to PSCAD support.
And, the PscadLmgr.txt log file displays the following messages:

Attempting to contact server using HTTP. (Fri May 20 12:58:03 2016) Connecting...
Endpoint = http://licensing.pscad.com:80 (Fri May 20 12:58:03 2016) 201
Active binding: WSHttpBinding
ERROR: ProtocolException:
ERROR: ProtocolException:
ERROR: Cause: Unexpected response from the remote server has been returned: (417) Expectation Failed.
ERROR: Method: Void HandleReturnMessage(System.Runtime.Remoting.Messaging.IMessage,
ERROR: WebException:
ERROR: Cause: The remote server returned an error: (417) Expectation Failed
ERROR: Status: ProtocolError
ERROR: Server: squid
ERROR: ResponseUri: http://licensing.pscad.com/Licensing/FreeService
ERROR: Http code = 26417
Aborting...
Attempting to contact server using TCP. (Fri May 20 12:58:03 2016) Connecting...
Endpoint = net.tcp://licensing.pscad.com
Active binding: NetTcpBinding
ERROR: Exception:
ERROR: Exception:
ERROR: Cause: net.tcp://licensing.pscad.com:443/Licensing/FreeService could not connect. The duration of the connection attempt was 00:00:21.0444369. TCP Error Code 10060: Because the connection already callee did not properly respond after a period of time, it was unable to connect. Or because connected host has failed to respond, established connection failed. 198.163.208.32:443.
ERROR: Type: System.ServiceModel.EndpointNotFoundException
ERROR: Method: Void HandleReturnMessage(System.Runtime.Remoting.Messaging.IMessage,
ERROR: TargetSite: Void HandleReturnMessage(System.Runtime.Remoting.Messaging.IMessage,
ERROR: SocketException:
ERROR: Cause: Because the connection already callee did not properly respond after a period of time, it was unable to connect. Or because connected host has failed to respond, established connection failed. 198.163.208.32:443
ERROR: ErrorCode: 10060
ERROR: SocketErrorCode: TimedOut
ERROR: NativeErrorCode: 10060
ERROR: MethodERROR: Tcp code = 10060
ERROR: Failed to contact server

**Cause**

A proxy server in the customer’s network is blocking communication with our server, preventing the activation of certificate licensing.
Solution 1
Bypass the proxy server in your network, to allow the certificate licensing to work.

Solution 2
- Launch PSCAD, and display the Application Options dialog box (from the PSCAD Start menu, select “Options”):

- Select the Certificate Licensing page from the drop-down menu:

- Change the Expect 100-Continue to “Disable”:

- Select OK to apply the change:

- Close PSCAD.
- Launch PSCAD, and see if it becomes licensed.
5. Issues when Licensing PSCAD – Legacy Lockless

5.1 Receiving an "Unable to obtain a license with the current license settings" Error Message

Problem
When trying to activate a license, the following error message displays:

![License Manager Error](image1)

When you click on “OK” on the above dialog box, the following error message then displays:

![PSCAD Error](image2)
**Cause 1**
If the following error message is listed in the PscadLmgr.txt file (this log file may be displayed as instructed in Section 3.2):

```
Trial Licence Manager V1.34 starting on Windows 7
Found 1 licence for <Educational v4/x4>
ERROR: Damage after Normal block (#196) at <0x00000000:000>
```

...then in a Lockless Trial License (i.e. v4.2.0 to v4.5.3), licensing is halted because an incorrect time setting on the computer has been detected – the clock has been set back.

**Solution 1**
Set the clock to the correct time, and forward the following to our Support Desk ([support@pscad.com](mailto:support@pscad.com)):

- A brief description of the issue
- Your PscadLmgr.txt file
- The trial.txt file that was provided by our Sales Desk

You will receive a fix lock utility to run to fix your license.

**Cause 2**
If the following error message is listed in the PscadLmgr.txt file (this log file may be displayed as instructed in Section 3.2):

```
Machine1 requesting Professional X4
=================================
Trial License Manager V1.34 starting on Windows 7
Rejected 1 licence: Cause: Trial licence for <Professional 4> expired on Sat Apr 01 23:59:59 2006
ERROR: No valid trial licenses detected
```

...then the lockless trial license is expired.

**Solution 2**
Contact our Sales Desk ([sales@pscad.com](mailto:sales@pscad.com)) to purchase PSCAD.
**Cause 3**

If the following messages are listed in the PscadLmgr.txt file (this log file may be displayed as instructed in Section 3.2):

```
Attempting to contact server using HTTP...
Connecting...
Endpoint = http://licensing.pscad.com:80/Licensing/NormalService
Active binding: WSHttpBinding
Succeeded
Processing request...
License is already owned by this user.
Saving certificate to C:\Users\Public\Documents\Manitoba HVDC Research Centre\Licensing\Licenses
ERROR: Unable to save certificate.
ERROR: Cause: This implementation is not part of the Windows Platform FIPS validated cryptographic algorithms
```

...then a setting on your computer is not allowing a required encryption algorithm.

**Solution 3**

This issue may be fixed using the Fortran Medic utility as follows:

- Run the latest Fortran Medic utility as per Appendix A.2.
- When the utility has finished gathering information, scroll down to the “**Licensing**” heading (towards the bottom of the utility). One of the following three messages will be displayed:

```
Use only FIPS compliant algorithms
Value: 1 (Enabled)
Conflicts
This computer is not configured to support a required algorithm
```

Or

```
Use only FIPS compliant algorithms
Status: <Registry value not found>
Conflicts
This computer is not configured to support a required algorithm
```

Or

```
Use only FIPS compliant algorithms
Value: 5
Status: <Registry value is invalid>
Conflicts
This computer is not configured to support a required algorithm
```
- Right-click on the error message, and the following dialog box will display:

![Confirm Registry Action](image)

A required encryption algorithm is not allowed as this computer is configured to only use FIPS compliant algorithms.

As a result:
- The MyUpdater will not be able to display your authorized products
- PSCAD will not be able to use certificate licensing unless you select to allow non-FIPS-compliant algorithms.

To resolve this issue, this utility needs to create/update the following registry value:

Folder: HKEY_LOCAL_MACHINE (32-bit registry)
Key: System\CurrentControlSet\Control\Lsa\FIPSAlgorithmPolicy
Name: Enabled
Value: 0

Select OK to allow non-FIPS-compliant protocols
Select Cancel to leave the registry value unmodified

- Select “OK” to allow the Fortran Medic utility to make the change to your computer.
- Retry activating a PSCAD certificate license.
Cause 4

If the following messages are listed in the PscadLmgr.txt file (this log file may be displayed as instructed in Section 3.2):

*ERROR: Invalid semaphore value*
*ERROR: Refused to renew license [No.] for [machine name] for <PSCAD X4 Professional>. License not active.*

...an unexpected second instance of PSCAD was being licensed. This would occur for licensing that is only programmed to allow a single instance of PSCAD, either because the license is a legacy lock-based license with one PSCAD seat, or it is a legacy lockless trial license).

Solution 4

Ensure only one instance of PSCAD is running.

Notes

1. This limitation is applicable when trying to license a second instance with either a lockless trial license or with lock-based licensing with only one PSCAD seat.

2. This limitation is not applicable when trying to license a second instance with Certificate Licensing; a second instance of PSCAD using Certificate Licensing may be run.
5.2 **Receiving a "using an invalid communication protocol: < GNUTELLA" Error Message**

**Problem**
When trying to activate a license, the following messages display in the lmgrd-log.txt file:

```
ERROR: System [IP ADDRESS] using an invalid communication protocol: < GNUTELLA CONNECT/0.4
```

**Cause**
The use of GNUTELLA may block or interfere with PSCAD communications with the License Manager

**Solution**
The following are two options to resolve this:

- Uninstall GNUTELLA, and do not use this software on your network.
- Or, set the GNUTELLA port to something other than 2053

[case 11184, 185724, 22352]
6. Issues when Using PSCAD

6.1 PSCAD Crashes when the “Associations” tab is selected

**Problem**
PSCAD crashes when the “Associations” tab is selected in the “System Settings” dialog.

**System**
PSCAD v4.5.1

**Cause**
PSCAD v4.5.1 crashes due to a missing file: "external_tools.xml".

**Solution 1**
Use the Fortran Medic utility to repair the problem:

- e. Download the latest "FortranMedic" from our website: [http://updater.pscad.com/utilities/FortranMedic.zip](http://updater.pscad.com/utilities/FortranMedic.zip)
- f. In the downloaded .zip file, run the FortranMedic.exe file.
- g. Click on the “Actions” menu and select “Start”.
- h. After the utility is done retrieving information:
  - Scroll down to: Installed PSCAD versions | PSCAD 4.5.1.
  - Locate the error in red text related to the missing file: “external_tools.xml”.
  - Right-click on the error, and from the displayed menu, select the option to restore this file.

**Solution 2**
Obtain the file “external_tools.xml” from our Support Desk, and save it to the following location on Windows Vista and Windows 7:

```
C:\Users\YourUserID\AppData\Local\Manitoba HVDC Research Centre\PSCAD
```

**Solution 3**
Update your software to v4.5.2 or later (contact our Sales Desk at sales@pscad.com).
6.2 The Component Wizard Pane is not Displaying Correctly

Problem

The Component Wizard pane is not displaying correctly:
Note
The correct layout for the Component Wizard is as follows:

System
PSCAD v4.5.2 and v4.5.3 x64, on platform with Windows 7 (6.01.7601 Service Pack 1)

Note
This problem does not exist using Windows 7 x86 platform.

Cause
An issue with Internet Explorer 11.

Solution
Uninstall all Internet Explorer versions, then install and use Internet Explorer 9.
6.3 Receiving a “The PSCAD automated email system has failed to send your request” Message

Problem
When the “Submit” button is selected in the PSCAD application...

...the following four messages are displayed, and the support request is not e-mailed:
System
This occurs in PSCAD v4.5 on a select number of machines.

Cause
The cause is unknown, but is likely related to machine settings.

Solution
Consult with your IT personnel to determine what machine settings are preventing PSCAD from sending an e-mail using your e-mail tool and your e-mail server.
6.4 Receiving an “Unable to display start page” Error Message

Problem
When PSCAD is launched, the following error message is displayed in the canvas:

```
Unable to display start page. Detected version of Internet Explorer is not supported.
Required: Version 7 or better
Detected: Version 7
```

Applicable Software
This is applicable to licensed versions of PSCAD (Educational, Professional, Trial), for versions 4.5.1, 4.5.2, and 4.5.3.

Solution 1
This has been fixed in later versions; update your software to v4.5.4 or later.

Solution 2
Use the Fortran Medic utility to resolve this issue as follows:

- Download the latest “FortranMedic” from our website: [http://updater.pscad.com/utilities/FortranMedic.zip](http://updater.pscad.com/utilities/FortranMedic.zip)

- In the downloaded .zip file, run the FortranMedic.exe file.
- Click on the “Actions” menu and select “Start”.
- After the utility has finished retrieving information:
  - Scroll down to “Installed PSCAD versions”, and right-click on the ”Conflicts” message as shown:

```
Conflicts
Internet Explorer 11 may cause PSCAD to not to display the Start Page.
```

  - When prompted, select “OK”.

- The PSCAD Start Page in the PSCAD application should be available for display.
6.5 Copying a Control will Switch its Value to the Default Setting

Problem
When a control is copied, the value of the original control switches to the default setting.
For example, if the following controls are copied...

...the value of original On/Off control is switched from ON to OFF:

Solution
Update to v4.5.4 or later; this is a bug that was present in earlier versions of PSCAD.
6.6 Receiving an “Unable to connect to MyCentre server” Error Message

Problem
When PSCAD is opened, the following error message displays in the canvas:

Unable to connect to MyCentre server.

Applicable Software
This is applicable for versions 4.5.1, 4.5.2, and 4.5.3. It is less likely to appear when running v4.5.4.

Cause
This message is displayed in the following situations:
- If you do not have internet connection, or
- If your internet is too slow, or
- If MyCentre is down

Solution
Update your software to v4.5.4.
Version 4.5.4 has slightly better handling for this. Version 4.5.3 tries to connect once, whereas version 4.5.4 will try to connect several times before giving up and displaying this message.

Solution 2
Press the F5 key to prompt the start page to try loading again.
6.7 Receiving a “Revocation information for the security certificate for this site is not available” Error Message

Problem
When PSCAD is run, the following error message is displayed:

Cause
This message displays when PSCAD attempts to obtain information from our server to display in the Start Page, and may be caused by an incorrect setting in your Windows Internet Properties.

Solution
Change your LAN settings to “Automatically detect settings”, as shown below:
6.8 Receiving a “A program is trying to send an e-mail message on your behalf” Error Message

Problem
When a support question is submitted through the PSCAD application...

...the following error message is displayed:

Cause
The Microsoft Outlook application displays the above message when it is invoked by another application, and if it detects that a virus scanner is not installed or is not current.

Solution 1
Select the “Allow” button once the progress bar is 100% complete. The e-mail will be sent.

Solution 2
Install or update your virus scanner in order to prevent this message from displaying again.
6.9 A Pane Appears to be Missing

**Problem**

A PSCAD pane is not displayed in the PSCAD application, even though it is selected for display in the View | Panes drop-down menu:

**Solution 1**

The pane is docked, or minimized as a tab along the outer edge of the application.

Display the pane by left-clicking on the tab. Left-clicking outside the application will cause this pane to revert back to the docked position.
Solution 2
The pane is hidden behind another pane. Resize the top pane to reveal the pane underneath:

![Resize the "Workspace" Pane to reveal the "Build Message" Pane underneath]

Solution 3
If the above solutions do not resolve the issue, you may reset the PSCAD docked windows to the default state. This is performed by deleting the workspace key in the registry for the particular version of PSCAD that you are using. For example, this is the path for v4.6.0:

![Delete this folder]

6.10 Graphs do not Display

Problem
When PSCAD is run, no results are displayed in the graphs.

Solution
There is an issue with one or more of the components in your network.
6.11 Issues with Debugging PSCAD

Problem
User is unsure how to debug his Fortran files.

Solution
Refer to the PSCAD Help system, available as follows:

- Launch PSCAD.
- Display the Help system from the PSCAD Start menu:

- Browse to the “Project Debug and Refinement” section:
7. Issues when Compiling Cases in PSCAD

7.1 Receiving a “1 project(s) was unsuccessful when building” Error Message

Problem
When compiling a case, an error message similar to the following displays:

Cause 1
Simulations are crashed in the background.

Solution 1
Reboot your computer.

Cause 2
A program called “Cygwin” is installed on this machine, and the GFortran compiler is being used to run the case. Cygwin has a GNU compiler that interferes with GFortran, which comes bundled with PSCAD.

Solution 2
- Uninstall Cygwin from this machine, or
- Run PSCAD on a machine on which Cygwin is not installed.
Cause 3

If the Build messages are similar to the following...

> Fatal Error: Can’t open module file ‘xxx.xx’ for reading at (1): No such file or directory
gfortran.exe: Internal error: Aborted (program f951)
make: ***[user_source_1.o] Error 1
Unable to generate a simulation executable for namespace ‘xxx’
Make failed to generate a simulation executable for namespace ‘xxx’. Binary file was not found.

...then the error is due to a conflict in Fortran compilers. This project is compiling with GFortran, but it is calling an object or library that was precompiled with Intel Fortran.

Solution 3

The following are possible solutions:

- Install Intel Fortran Compiler, and compile the project using Intel instead of GFortran.
- Obtain the original source code for this item, then recompile the item using GFortran.
- Request that the developer of this item re-compile it using GFortran.

Cause 4

If the Build messages are similar to the following...

> Creating EMTDC executable...
> \<some network drive path>.gf42
> CMD.EXE was started with the above path as the current directory.
> UNC paths are not supported. Defaulting to Windows directory.
> C:\Windows>call
> C:\Program~2\GFortran...gf42vars.bat
> Make: <name.mak>: No such file or directory

...then the error is due to running a project on a network drive.

Solution 4

- Move your case files to a local drive (e.g. desktop) and run the project from there.

Cause 5

See Section 7.5, Problem 2.
7.2 Receiving an “unresolved external symbol” Error Message

Problem
When compiling a case, an error similar to the following is displayed in the Build Messages:

*.obj : error LNK20# : unresolved external symbol _xxx

Cause 1
The case is dependent on an object or library that has not yet been declared in PSCAD.

Solution 1
- Ensure that the object or library is saved to your machine.
- Link the object or library in PSCAD. Instructions may be found in the On-Line Help System:

Cause 2
PSCAD is not configured to run with the selected compiler; there is an issue with the environment variables.

Solution 2
Run the Fortran Medic utility and send in the generated log file (see Appendix A.3).
7.3 Receiving a “Fortran compiler...is not detected” Error Message

Problem
When compiling a case, the Fortran compiler that was specified within PSCAD is not detected, and the following error message is displayed:

Cause 1
The Fortran compiler has not yet been installed.

Solution 1
Install the Fortran compiler, then log out and log back in on your computer to apply the changes.

Cause 2
There is an issue with the Windows operating system.

Solution 2
Defragment the Windows operating system.

Cause 3
PSCAD and GFortran compiler v4.2.1 were initially both installed, and were used to run a project. However, the GFortran compiler v4.2.1 was later uninstalled.

Solution 3
There are two options:

- Re-install the GFortran compiler v4.2.1, then log out and log back in on your computer to apply the changes. See the manual “Installing PSCAD”, posted on the following webpage, for installation instructions:
  
  https://hvdc.ca/knowledge-library/reference-material

- Or, install GFortran compiler v4.6.2, log out and log back in on your computer, and select GFortran 4.6 in the Application Options (from the PSCAD Start button, select the Options link, select the Dependencies page, then select the compiler.

Note
This option is applicable if you are running PSCAD v4.6.0 or later, or the Free Edition.
If the Problem Persists

Please send an e-mail containing the following information to our Support Desk at support@pscad.com:

- Provide a synopsis of the problem, including a screenshot(s) of the message(s).
- Indicate which versions of PSCAD and Fortran compiler that you are trying to run.
- Provide your Fortran Medic log file (per Appendices A.2 and A.3).
- Provide screenshots showing your installed programs (from the Windows Start Menu, go to Control Panel | Programs and Features).
- If using MyUpdater for this installation, provide a screenshot of your MyUpdater utility when logged into this utility:
7.4 Receiving a "Cannot execute command" Error

Problem 1
When compiling a PSCAD case, the following error message displays:

![Error Message](image)

**Cause 1-1**
This error can occur if a previous simulation is still active in the background, either because it crashed or stopped responding for some reason.

**Solution 1-1**
To resolve this, reboot your computer to force it to shut down the previous simulation. Then retry the simulation.

In the future, you can check the processes running on your computer and manually end the process if required. For example if your project is called HVSIM and it crashes, you may be left with an orphaned simulation called HVSIM.exe that is still running.

**Cause 1-2**
PSCAD was able to compile the emtdc executable, but was not able to launch/start it due to: Error #5

**Solution 1-2**
Error 5 = Access denied. The following are possible reasons for why access is denied:

- Firewall or anti-virus is preventing the launching of the EMTDC executable.
- Machine is otherwise locked down by IT.
- User did not launch PSCAD with elevated privileges on a Windows Vista/7 operating system.
Problem 2
When running a PSCAD case, the following messages display:

![Process Error Message]

Cannot execute command
<file path...>
Error 1455

![PSCAD Error Message]

1 project(s) was unsuccessful when building.
All system binaries must be available in order for the simulation(s) to proceed to completion.

Cause 2-1
This issue may be due to the anti-virus or a firewall being set too aggressively.

Solution 2-1
Turn off all anti-virus programs and firewalls and see if that fixes your problem. If it fixes the problem, then PSCAD should be put on the anti-virus and/or firewall exceptions list.
7.5 Receiving a "gfortran.exe: Main.f: Invalid argument" Error

Problem
When compiling a case, the following compiling error is displayed:

```
Will execute: call C:\Program Files\GFortran\4.2.1\bin\gf42vars.bat
Will execute: make -f vdiv.mak
Will execute:
C:\Users\Public\DOCUME~1\PSCAD44\examples\tutorial\VDIV~1.GF4\vdiv.bat
Creating EMTDC executable...
C:\Users\Public\Documents\PSCAD44\examples\tutorial\vdiv.gf42>call
C:\PROGRA~1\GFortran\428484~1.1\bin\gf42vars.bat
cygwin warning:
MS-DOS style path detected:
C:\Users\rkrayudu\AppData\Local\Temp\make44882.sh
Preferred POSIX equivalent is:
/cygdrive/c/Users/rkrayudu/AppData/Local/Temp/make44882.sh
CYGWIN environment variable option "nodosfilewarning" turns off this warning.

Consult the user's guide for more details about POSIX paths:
   http://cygwin.com/cygwin-ug-net/using.html#using-pathnames
```

Compiling Main.f

cygwin warning:
MS-DOS style path detected:
C:\Users\rkrayudu\AppData\Local\Temp\make44883.sh
Preferred POSIX equivalent is:
/cygdrive/c/Users/rkrayudu/AppData/Local/Temp/make44883.sh
CYGWIN environment variable option "nodosfilewarning" turns off this warning.

```
Consult the user's guide for more details about POSIX paths:
   http://cygwin.com/cygwin-ug-net/using.html#using-pathnames
```

gfortran.exe: Main.f: Invalid argument
gfortran.exe: no input files
make: *** [Main.o] Error 1
```

Cause
A Cygwin product was interfering with GFortran.

Solutions
- Uninstall Cygwin, or
- Uninstall GFortran and use an Intel FORTRAN compiler.
7.6 Receiving an “Error 1 – Multiple definition of ‘...’ - first defined here” Error

Problem
When compiling a case, the following compiling error is displayed:

- Linking object code and libraries into binary ‘*.exe’
- Main.o:Main.f:(.text+0x0): multiple definition of ‘dsdyn_’
- DS.o:DS.f:(.text+0x0): first defined here
- Main.o:Main.f:(.text+4ec): multiple definition of ‘dsout_’
- DS.o:DS.f:(.text+0x803): first defined here
- Main.o:Main.f:(.text+0x743): multiple definition of ‘dsdyn_begin_’
- DS.o:DS.f:(.text+0xac5): first defined here
- Main.o:Main.f:(.text+9bc): multiple definition of ‘dsout_begin_’
- DS.o:DS.f:(.text+0xc02): first defined here
- collect2: Id returned exit status
- make: ***[config1.exe] Error 1

Cause
The case had a definition titled ‘DS’, which is a reserved name that cannot be used in PSCAD.

Solution
Rename the definition DS and then recompile the case.
7.7 Receiving an “Error 1 – Syntax error in argument list at (…)” Error

Problem
When compiling a case, the following compiling error is displayed:

Error: Syntax error in argument list at (1)
Make: ***[Main.o] Error 1
Unable to execute make.

Cause
The PSCAD 4.3.0 master library had a bug in the synchronous machine model.

Solution
Upgrade to the latest release of PSCAD X4.
7.8 Receiving a “Make failed to generate a simulation executable for namespace ‘***’. Binary file was not found” Error

Problem 1
When compiling a case, the following compiling error is displayed:

```
Creating EMTDC executable...
C:\Users\Public\Documents\Pscad4.5\Examples\tutorial\vdiv.gf42> call
C:\PROGRA~2\GFortran\420484~1.1\bin\gf42vars.bat
'make' is not recognized as an internal or external command, operable program or batch file
Unable to generate a simulation executable for namespace ‘***’
Make failed to generate a simulation executable for namespace ‘***’. Binary file was not found.
```

Cause 1
This error occurs if GFortran 4.2.1 (and possibly GFortran 4.6) is installed, but the user did not log out of Windows then log back in after installing GFortran.

Solution 1
After installing GFortran 4.2.1 or GFortran 4.6, the user should log out of Windows, then log back in.

Cause 2
Some problems with your settings.

Solution 2
- Ensure that the "Compiler...Environment Variables" in the "Workspace Settings" are set to "Private to process only":

  ![Workspace Settings](image)

  ![Workspace Options](image)

  ![Environment Variables](image)

  ![Private to process only](image)

- Turn off your anti-virus or firewall, as it may be preventing the compiler from being launched.
- Test your setup by running a simple PSCAD example:

  ```
  C:\Users\Public\Documents\PSCAD\...\Examples\tutorial\vdiv.pscx
  ```

- If the example does not run, send your Build Messages and your Fortran Medic log file (Appendix A.3) to our Support Desk (support@pscad.com).
Problem 2
The following compiling error is displayed:

```
make: [<file.exe>] Error 1
Unable to generate a simulation executable for namespace `<file>`
Make failed to generate a simulation executable for namespace `<file>`. Binary file was not found.
```

Cause 1
The case calls an object and library; these are not properly linked.

Solution 1
Link the object and library properly in PSCAD as follows:

- Ensure the case files are all saved in the same folder (not required at v4.6.0 and later).
- Ensure the library is loaded ahead of the case. For example, “Library_1” is loaded ahead of (or, above) “Project_1”:

![Diagram of Project Settings]

- Open the PROJECT’S Project Settings, delete any links in the field, then select “OK”:

![Diagram of Project Settings - Project_1]

- Open the LIBRARY’S Project Settings, and delete any links in the field:

![Diagram of Project Settings - Library_1]
- Still in the library project settings, select the "Browse" button, browse to and select the object, then select "Open".

- Select "OK". The object will be linked in your library.
7.9 Receiving a “make: *** [SomeFile.exe] Error 1” Error

Problem 1

When compiling a case, the following compiling error is displayed:

```
C:\Users\user\DOCUME~1\tmp\hello\gf46\multiply.o: multiply.f:(.text+0x4):
   undefined reference to `__e_s1_MOD_timezero'
collect2: ld returned 1 exit status
make: *** [fortran_test.exe] Error 1
```

(Where test case e_s1 is the module name and timezero is one of the variables in that module.)

Cause

This error occurs if you are using GFortran 4.6, and linking in a GFortran 4.2 library when using any of EMTDC include files.

Solution 1

Use GFortran 4.2 to compile this project.

Solution 2

Recompile the library using GFortran 4.6, and run the case with these files using GFortran 4.6.
Problem 2

The following compiling error is displayed:

```
C:\Users\user\DOCUME~1\tmp\hello\gf42\multiply.o: multiply.f:(.text+0x4):
  undefined reference to `__e_s1__timezero'
collect2: ld returned 1 exit status
make: *** [fortran_test.exe] Error 1
```

(Where test case e_s1 is the module name and timezero is one of the variables in that module.)

**Cause**

This error occurs if you are using GFortran 4.2, and linking in a GFortran 4.6 library when using any of EMTDC include files.

**Solution (a)**

Use GFortran 4.6 to compile this project.

**Note**

GFortran 4.6 is compatible with PSCAD v4.6 and later.

**Solution (b)**

Recompile the library using GFortran 4.2, and run the case with these files using GFortran 4.2.

---

Problem 3

The following compiling error is displayed:

```
C:\<user>\DOCUME\tmp\hello\gf46\*.o:*f:(.text+0x59): undefined reference to `__gfortran_transfer_character_write'
collect2: ld returned 1 exit status
make: *** [fortran_test.exe] Error 1
```

**Cause**

This error occurs if you are using GFortran 4.2, trying to run a simple program with just a PRINT statement in it, and trying to link in a GFortran 4.6 library.

**Solution (a)**

Use GFortran 4.6 to compile this project.

**Note**

GFortran 4.6 is compatible with PSCAD v4.6 and later.

**Solution (b)**

Recompile the library using GFortran 4.2, and run the case with these files using GFortran 4.2.
7.10 Receiving an "Error U1052 – file’data.mak’ not found " Error

Problem
When compiling a case, the following compiling error is displayed:

```build
Will execute: call C:\Program\Files\Intel\Compiler\11.0\061\fortran\bin\ifortvars.bat ia32
Will execute: nmake -f BRK_Test.mak
Will execute: \\UKGLASFP02\Edrive$\Projects\PSB\EEG\2010PR~1\269371~1\PSCAD\BRK_Te
st_if9\BRK_Test.bat
Creating EMTDC executable...
CMD.EXE was started with the above path as the current directory.
UNC paths are not supported. Defaulting to Windows directory.
C:\\\PROGRA~1\Intel\Compiler\11.0\061\fortran\bin\IFORTV~1.BAT ia32
Intel(R) Visual Fortran Compiler Professional for applications running on IA-
32, Version 11.0.061
Copyright (C) 1985-2008 Intel Corporation. All rights reserved.
Microsoft (R) Program Maintenance Utility Version 8.00.50727.42
Copyright (C) Microsoft Corporation. All rights reserved.
NMAKE : fatal error U1052: file 'BRK_Test.mak' not found
Stop.
Unable to execute make.
``` 

Software
PSCAD X4, Intel 11.0

Cause 1
The error occurred when using PSCAD X4 to compile a case located on a network drive (no error occurs if PSCAD 4.2.1 is used). PSCAD X4 does not allow you to compile cases stored on a network drive.

Solution 1
Copy the case to your local machine and then open it with PSCAD.
**Cause 2**  
PSCAD case names should NOT contain spaces.

**Solution 2**  
Rename the PSCAD case so that it does not contain spaces.

**Cause 3**  
User was trying to re-compile a previously compiled case, but was not running with elevated privileges.

**Solution 3**  
Launch PSCAD with elevated privileges, then re-compile the case.
7.11 Receiving a "Make File Error" Error

Problem
When compiling a case, a Build Message error similar to the following is displayed:

```
Make File Error: The local project requires a link library:
'C:\....o'
that does not exist with the given path.
```

Cause
An object is not properly linked to the project in the PSCAD settings.

Solution
Link the object in the PSCAD settings as per the section “Link” in the On-Line Help System:
7.12 Receiving an “Unable to solve line constants” Build Message

**Problem**

When compiling a case, the following message is displayed in the Build Messages:

Unable to solve line constants, check the log file for details.

**Cause**

There is a flaw with the design of the circuit. For example, improper grounding, or a component open at one side.

**Solution**

Review the case and build messages and all T-Line messages.

For more information on reviewing the messages, refer to the PSCAD On-Line Help System:

For further analysis of a particular error message, please forward a request for assistance to our Support Desk (support@pscad.com), along with all Build messages, and a snapshot of any error dialog boxes.

**Note**

Certain restrictions apply related to PSCAD license and version.
7.13 Receiving a “‘cl.exe’ is not recognized as an internal or external command”
build message

Problem
When compiling a case, the following build messages display:

- Compiling “<file path and object name>.c”.
- cl.exe ... “<object name>.c”
- ‘cl.exe’ is not recognized as an internal or external command.

Cause
The case is trying to build an object containing c-code, but a c-compiler is not installed.
“<object>.c” is the object programmed in c-code; “cl.exe” is the c-compiler.

Solution
Install a c-compiler (the full version of Microsoft Visual Studio) along with Intel Fortran composer.
The Visual Studio that comes bundled for free with Intel Fortran (i.e. premier partner) is not a c-
compiler; the full version is commercially available.

Once Intel Fortran and the c-compiler have been installed, test your setup by trying to run one of
the c-code examples located at the following path:

C:\Users\Public\Documents\Pscad<version>\examples\CInterface
7.14 Receiving a “The number of projects included in the simulation list must not exceed %d” Error Message

Problem
When compiling a case, the following error message displays:

![](image)

Version
This is a bug present in PSCAD v4.5.1 and earlier.

Solution
Update software to v4.5.2 or later.
7.15 Receiving an “Unable to open file...” Error Message

**Problem 1**

When compiling a case, the first compile passes and the case runs fine, however, some subsequent compiles fail with the following error message:

File Write Error
Unable to open file “<drive>:<path><case>.mak.bat

**Cause 1**

Aggressive anti-virus scanner

**Solution 1**

Attempt to disable the virus scanner or reduce it aggressiveness, or add PSCAD to the scanner’s “exceptions” list as a trusted program.

**Cause 2**

System process with PID 4 is holding onto this previously created file.

**Solution 2**

In the Windows Services Control Panel, re-enable Application Experience Service, which is used to process application compatibility cache requests for applications as they are launched.

**Problem 2**

When compiling a case, an error message similar to the following displays:

File Write Error Unable to open file [SOME DRIVE]:[SOME PATH][SOME PROJECT]

For example:

File Write Error: Unable to open file F:\........\Project1

**Cause**

The user does not have Windows administrator permissions for the specified drive.

**Solution**

Copy the project files to a different folder on which you have permissions (e.g. desktop, My Documents...).
7.16 Receiving a “Could not read symbols: Malformed archive”

Problem
When compiling a case, the compile fails with the following error message:

\<path>\emtdc\gf42\windows\emtdc.lib: could not read symbols: Malformed archive

Cause
Possible corruption of PSCAD installation due to reasons unknown.

Solution
Uninstall, then re-install, PSCAD.
7.17 PSCAD Stops Unexpectedly, with no Runtime Error

Problem
When compiling a case, PSCAD stops unexpectedly, with no runtime error.
Running the PSCAD case manually outside of the PSCAD application results in the following error message:

![Error Message](image)

Note
Running a project manually outside of PSCAD is performed by first building the case in PSCAD, closing PSCAD, then running the .exe file from the build folder.

Cause
A required DLL file is missing.

Solution 1
Locate this DLL and place it inside the .if12 folder.
Solution 2
Locate this DLL and add the location to your PATH environment variable. That way the simulation will know where to look when it tries to link in the DLL.
7.18 Receiving “Error code = 112” Message

Problem
When building a case, the following error message displays:
  Coding aborted due to Error: Unable to create output directory. Error code = 112

Cause 1
User is not an administrator on the computer and has limited access.
Solution 1
Obtain administrator rights on the computer.

Cause 2
The user is an administrator, but the Network is imposing limits on folder permissions.
Solution 2
  - Move case files to a folder for which user has permissions, or
  - Remove limits on folder permissions (this might require the assistance of your organization’s IT staff).

Cause 3
Overly aggressive virus scanner.
Solution 3
Turn your virus scanner down or off, then retry the build.
7.19 Receiving a “Transmitter ‘*’ cannot be added” Build Message

Problem
When building a case, the following message displays in the Build Messages:
Transmitter ‘*’ cannot be added. The storage table is at capacity of 256.

Cause
The number of allowed radio links is exceeded.

Solution
Increase the number of allowed wireless radio links as shown:

1. Right-click on the workspace, and select "Workspace Options."
2. Select the "Build" page from the drop-down menu.
3. Increase the number of "Wireless Radio Links".
7.20 Receiving a “EMTDC: Error while opening file for read” Build Message

Problem

When compiling a case that is declaring an external file, the following build error is displayed:

- EMTDC: Error while opening file for read: [some file name]
- ERROR: Abnormal termination of EMTDC by OPENFILE
- Non-standard Messages:
  - Abnormal progress termination
  - EMTDC Runtime Error: abnormally terminated
  - Simulation stopped

Cause 1

The error is related to the project being unable to open the declared file, because the declared file is residing in a folder that is different from where the PSCAD project file resides.

Solution 1

Copy the declared file to the same folder as the project resides in.

Cause 2

The error is related to the project being unable to open the declared file, because there is an error in the declared path.

Solution 2

Correct any errors in your path.
7.21 Receiving a “make: *** [Station.o] Error 126” Error Message

Problem
When compiling a case in the Free Edition using the GFortran compiler, the following error is displayed:

```
make: *** [Station.o] Error 126
Unable to generate a simulation executable for namespace '***'
```

Cause
WinAVR is installed, and is somehow interfering with compiling the PSCAD case.

Solution
- Locate the WinAVR folder (e.g. C:\WinAVR-20081205).
- Slightly change the folder name so that it won’t be able to be executed. For example:

  **Note**
  You must be an administrator on your machine to perform this step.

  - Change this:
    
    ```
    C:\WinAVR-20081205
    ```

  - To this:
    
    ```
    C:\WinAVR-20081205_1
    ```

- Load your project in PSCAD.
- Clean the directory (right-click on the project in the Workspace, and select “Clean Temporary Directory”):

  ![Clean Temporary Directory](image)

- Re-compile your case.
7.22 Receiving a “Winsock Error #10048” Error Message

Problem
When compiling a case in PSCAD v4.5.3, the following error is displayed:

![Exchange Error](image)

Possible Causes and Solutions
When PSCAD (GUI) starts a simulation (project), a socket connection is created so that PSCAD and the simulation can exchange data. PSCAD will randomly pick a communications socket on your computer to do this and there are times when this socket may not be available. The following are three typical scenarios that cause this error, along with their solutions.

1. **Crashed simulation**
Sometimes when a simulation has crashed, it will be stuck running in the background and will still be holding that communications socket open. If you try to run PSCAD again and it tries to use that same socket, then you will see this error. Try looking in your task manager to see if there are any simulations running in the background, and if so, end the process. This should free up the socket. Another sure way to do this is to restart your computer.

2. **Aggressive anti-virus or firewall**
Try shutting off the anti-virus and firewall and see if the simulation works. If the simulation works, then PSCAD should be added to the “white list”. You may require assistance from your IT department for this setup.
3. Two PSCAD cases are trying to run simultaneously

Sometimes, when two instances of PSCAD are started up on the same computer, they both try to use the same communications socket. You can prevent this by simply changing the port range on one of the instances. As the default is the 30000 range of ports, change the second instance of PSCAD to use 31000. This may be performed as follows:

a. Display the Workspace Setting dialog box (right-click on the Workspace, and select "Workspace Options"):

b. When the Workspace Settings dialog box displays, perform the following:
   - Select the “Runtime” page from the drop-down menu.
   - Select “31000” from the “Communication Port Base Value” drop-down menu:
   - Select “Ok” to apply the change:
7.23 Receiving a “connect function failed with error: 10061” Error Message

Problem
When compiling a case in PSCAD v4.6.0 or later, the following error is displayed:

Cause
This is an error thrown by the EMTDC Client side of Electric Network Interface (ENI) configuration. The description is as follows:

WSAECNNREFUSED 10061 Connection refused.
No connection could be made because the target computer actively refused it. This usually results from trying to connect to a service that is inactive on the foreign host—that is, one with no server application running.

This error can occur if the Windows firewall or anti-virus program is too aggressive. This may be tested by shutting off the anti-virus and firewall, then running PSCAD again.

Solution
Add PSCAD to the firewall or anti-virus whitelist of trusted programs.
7.24 Receiving an “unable to execute a simulation executable for namespace ‘*’” Error Message

Problem 1
When compiling a PSCAD case using an Intel Fortran compiler, the following errors are displayed:

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LINK: fatal error LNK1104: cannot open file 'dfor.lib'</td>
</tr>
<tr>
<td>NMAKE: fatal error U1077: ' &quot;C:\Program Files (x86)\Microsoft Visual Studio *\VC\BIN\linkexe&quot; ': return code '0x450'</td>
</tr>
<tr>
<td>Unable to generate a simulation executable for namespace ‘*’</td>
</tr>
</tbody>
</table>

Cause 1
These errors are due to a compatibility issue: You are using an Intel Fortran compiler to compile a case that contains a library that was precompiled using the Compaq Fortran compiler. It is not supported to run a case using a compiler that is different from the precompiled library.

Solution 1
The preferred solution is to obtain an Intel Fortran-precompiled copy of this library, and set it up as follows:

- Unload the Compaq Fortran-precompiled library and the project from your PSCAD workspace.
- Load the Intel Fortran-precompiled library and the project (in that order) into your PSCAD workspace.
- Clean the project directory.
- Run your case.

The least preferred solution is to run your case using Compaq Fortran 6. There are two things to note with this solution:

- Compaq is not supported as of PSCAD v4.6 and later.
- Compaq is old technology and may be difficult to install.
Problem 2
When compiling a PSCAD case using an Intel Fortran compiler, the following build message is displayed:

\S was unexpected at this time.
Unable to generate a simulation executable for namespace '

Or similar to the following message:

'MySQL' is not recognized as an internal or external command,
Unable to generate a simulation executable for namespace '

The Fortan Medic utility will detect this issue: refer to Appendix A.5, Item #14.

Cause 2
The PATH environment variable key for a software contains the "&" symbol. This symbol can affect PSCAD, Intel Fortran, Microsoft Visual Studio, and other software.

Solution 2
- Uninstall the software that contains the "&" symbol in the PATH environment variable key.
- Re-install this software, but during the installation, select a folder path name that does not include the "&" symbol. For example, replace "&" with "and".
7.25 Receiving a “Simulation set ‘*’ has xx project tasks included, exceeding the workspace selected limit of * tasks” Error Message

Problem
When running a simulation set in PSCAD, the following error is displayed:

![Error Message](image)

Cause
This error is due to exceeding the maximum number of projects that may be included in a simulation set.

Solution 1
Decrease the number of projects in your simulation set as required.

Solution 2
Update your PSCAD version and/or licensing configuration in order to accommodate the desired number of projects in your simulation set. The following specifications may be used to determine the best setup:

- For PSCAD v4.5.3, a limit of 8 projects per simulation set is imposed.
- For PSCAD v4.5.4 and later using lock-based licensing, four projects per simulation set are allowed.
- For PSCAD v4.5.4 and later using certificate-based licensing:
  - A base of 4 projects per simulation set is allowed.
  - If additional instances of EMTDCs[^1] are purchased, a simulation set may run the equivalent number of additional simulation projects.

[^1]: A new feature introduced at v4.6.0 called Electric Network Interface (ENI) is an example of one feature that allows the use of multiple processor cores for running PSCAD. The number of cores that may be used is limited to the number of “Instances of EMTDCs”. Additional EMTDCs may be purchased from our sales desk ([sales@pscad.com](mailto:sales@pscad.com)). For further information on this feature, refer to Section 12.2 Item (1) of the manual “What’s new in PSCAD (v4.3, v4.4, v4.5, v4.6)”, available on the following webpage:

https://hvdc.ca/knowledge-library/reference-material
7.26 Running a PSCAD v4.6.0 Simulation on Windows 10 is slower than running earlier versions of PSCAD

Problem
When running simulations on Windows 10, using v4.6.0 is sometimes slower than using an earlier version of PSCAD.

Cause
Windows 10 defender, which is the anti-virus that is released with Windows 10, can slow the simulation for v4.6.0.

Solution 1
Turn off the Windows 10 Defender, as follows:

- From the Start menu, open Windows Defender.
- In the Windows Defender dialog box, select “Settings”.
- Turn off Windows Defender, otherwise known as “Real-time protection”:
- Restart the computer.
- Retry running the simulation, to see if there is an improvement in the speed.
Solution 2
Add PSCAD v4.6.0 to the Windows Defender exclusion list, as follows:

- From the Start menu, open Windows Defender.

- In the Windows Defender dialog box, select “Settings”.

- Scroll down to “Exclusions”, and select “Add an exclusion”.

- Select “Exclude a folder”.
• When prompted, select a folder to exclude, and then select “Exclude this folder”.

• The selected folder should be listed in the excluded folders listing.

• Restart the computer.

• Retry running the simulation, to see if there is an improvement in the speed.
7.27 Receiving a “‘nmake’ is not recognized as an internal or external command...” Error Message

Problem
When compiling a PSCAD case using the Intel Fortran compiler, the following build errors display:

Creating EMTDC executable...
C:\Users\...
ERROR: Visual Studio 2010, 2012 or 11 is not found in the system.
’nmake’ is not recognized as an internal or external command, operable program or batch file.

Cause
The INTEL_LICENSE_FILE environment variable has duplicate path segments, such as:

C:\Program Files (x86)\Common Files\Intel\Licenses; C:\Program Files (x86)\Common Files\Intel\Licenses

Which is effectively:

C:\Program Files (x86)\Common Files\Intel\Licenses;
C:\Program Files (x86)\Common Files\Intel\Licenses

Solution
The Fortran Medic may be used to replace the duplicated path segments with a single path segment, which in the above example, would be

C:\Program Files (x86)\Common Files\Intel\Licenses

Note
Double slashes, \, are converted to single slashes prior to any comparison for duplicates.

For more information on using the Fortran Medic for this repair, see Appendix A.5, Item 11.
7.28 Receiving a “‘C:Program’ is not a valid internal or external command” Error Message

Problem
When building a PSCAD case, the following build error is displayed:

'C:Program’ is not a valid internal or external command

When the latest Fortran Medic tool is run, an error message is displayed as indicated in Appendix A, Item 15.

Cause
The computer is not correctly generating short filenames.

Version
This issue affects PSCAD v4.5.3.

Solution
This issue has been resolved in PSCAD v4.5.4. Update your software to v4.5.4 or later.
7.29 Receiving a “libeng – Library is missing” Error Message

Problem
When building one of the Matlab examples that comes bundled with PSCAD, a build error similar to the following is displayed:

libeng – Library is missing

Cause
When Matlab R2015a (64-bit) or better is installed, but not the 32-bit version, PSCAD incorrectly thinks that the 32-bit version of Matlab was also installed. PSCAD would then incorrectly list them both as the following in the application:

R2015b, 8.5, (64-bit): This points to the 32-bit path, in which a 32-bit version SHOULD be installed, but is not installed.

R2015b, 8.5, (64-bit): This correctly points to the 64-bit path to where the 64-bit version IS installed.

The issue arises because regardless which installation is selected in the PSCAD application, the code will always select the first match from the list, which points to the non-existent 32-bit installation, and the error will display when the case is run.

Version
PSCAD v4.6.0 (64-bit), together with Matlab R2015a or better

Solution
- Use PSCAD v4.6.1 or later (this issue is corrected in these versions), or
- Use PSCAD v4.6.0 or earlier, and install both the 32-bit and the 64-bit versions of Matlab R2015a or better (unverified)
7.30 Receiving a “The simulation process has stopped unexpectedly” error message

Problem
The following build error message is displayed when running a PSCAD case:

The simulation has stopped unexpectedly.
The simulation is no longer responding and may have an unexpected disconnect.
This can be due to forced termination or break in communications.
Review the exception details?

The following notification displays:

When “OK” is selected above, the following dialog displays:

When “Yes” is selected above, the following dialog displays:
Furthermore, the build messages indicate that Visual Studio 2015 version 221 is being used in the simulation:

   Intel(R) Parallel Studio XE 2015 Update 4 Composer Edition (package 221)
   Microsoft (R) Program maintenance utility version 14.00.23506.0
   Copyright (C) Microsoft Corporation. All rights reserved.

Furthermore, the run messages display the following error message:

   Spawn_command  "*.exe –v4 localhost * locale=English-us"

Also refer to Appendix A, Item 16 to see the message that is displayed in the Fortran Medic utility.

**Cause**

This error is due to incompatible software:

If Intel Fortran Composer 15.0.221 and earlier detects that Microsoft Visual Studio 2015 (v14) is installed, it will try to use that software for the compilation. However, these software programs do not appear to be compatible, and as a result, the simulation terminates.

**Note**

Intel Fortran Composer 15.0.208 and later is compatible with Microsoft Visual Studio 2015, according to Intel Fortran Release Notes.

**Solution**

Two options are as follows:

- To retain Microsoft Visual Studio 2015 (v14), switch out your compiler:
  - Install a compatible version of Intel Fortran (e.g. v15.0.208 or later, or v16). During this installation ensure to integrate Intel Fortran with the installed VS2015.
  - Log out then log back in on your computer to apply the changes.
  - Launch PSCAD, and set PSCAD to use the newly installed compiler (in the Application Options dialog box, display the Dependencies page, and select the compiler from the “Fortran Compiler...Version” field).

- Or, to retain Intel Fortran 15.0.221 or earlier, switch out your Visual Studio version:
  - Uninstall Visual Studio 2015 (or at least rename the VS installation folder in C:\Program Files (x86) so that Intel Fortran does not try to use it).
  - Install a compatible version of Visual Studio software (VS2010, VS2012 or VS2013).
  - Re-install Intel Fortran 15.0.221 or earlier, ensuring to integrate it with the new VS software.
  - Log out then log back in on your computer to apply the changes.
  - Launch PSCAD, and ensure PSCAD is still set to use this compiler (in the Application Options dialog box, display the Dependencies page, and select the compiler from the “Fortran Compiler...Version” field).
7.31 Receiving a “Unable to Generate a simulation” error message

Problem
The following build error messages are displayed when running any PSCAD case:

```
C:\Windows>call "*.bat"
CMD does not support UNC paths as current directories.
make: * .mak: No such file or directory
make: *** No rule to make target `*.mak`. Stop.
Unable to generate a simulation executable for namespace '*'
```

Cause
The project files are being run from a network folder. PSCAD can not run projects from network folders.

Solution
Move your project files into a local folder (e.g. on your desktop), load the project from your local folder, and run the simulation.
7.32 Receiving a Syntax Error Message when Compiling with GFortran

Problem

A build error message similar to the following is displayed when running any PSCAD case:

```
CALL E_VARIMPBRANCH( (IBRCH(3)+10),SS(3),1,0,0,R_B,,0.0)  
Error: Syntax error in argument at (1)
```

The correct text should look something like this:

```
CALL E_VARIMPBRANCH( (IBRCH(3)+10),SS(3),1,0,0,R_B,1.0,1.0)
```

Cause

PSCAD is incorrectly generating Fortran code with missing parameters when using GFortran 4.2.1 or 4.6.2, which generates compile errors.

Solution

- Update to PSCAD 4.6.1 or better (if available), or
- Install and use an Intel FORTRAN compiler
7.33 Receiving a “severe (41): insufficient virtual memory” Error Message

Problem
When running a PSCAD case, the following error displays in the build messages:

```fortran
forrtl: severe (41): insufficient virtual memory
```

Cause 1
Your project is exceeding the 2 GB memory limit imposed on any 32-bit application. Your simulation is demanding more memory than is physically possible to address. For more information on this, please refer to the following link:

https://en.wikipedia.org/wiki/2_GB_limit

Solution 1
- Decrease the size of your network, or
- Switch to a PSCAD 64-bit application, available as of PSCAD v4.5. To update your software, please forward your license number to our Sales Desk (sales@pscad.com).

Note
See Cause 2 to ensure that you have enough RAM for your 64-bit application.

Cause 2
Your computer does not have enough RAM installed.

Solution 2
- Use PSCAD v4.5.3 or later, as this is optimised to handle large cases, and/or
- Ensure that you have adequate RAM for your case size. As a general rule, the Windows operating system requires 2 GB, the PSCAD GUI requires 2 GB to load the case and set up the memory for the simulation run, and the simulation and frequency scan require 2 to 4 GB of RAM, depending on network size.
7.34 Compiling any Case Containing Many Transmission Lines is Extremely Slow

Problem
Compiling cases containing many transmission lines is extremely slow to solve.

Version
Applicable to PSCAD v4.5.0 and later.

Cause
The anti-virus, Webroot, is installed on your machine, and is causing extremely slow simulations. This software forces PSCAD to solve all lines in series rather than in parallel, and it starts solving them quite slowly.

This issue is applicable to PSCAD v4.5.0 and later, as the feature of solving transmission segments in parallel was first introduced at v4.5.0.

To determine whether you have Webroot installed on your machine, look for the icon in the notifications taskbar, similar to the following:

![Webroot SecureAnywhere](image)
Webroot SecureAnywhere Endpoint Protection v8.0.876 - No Infections Found

Solution
Webroot should be removed from your computer if you are running PSCAD cases with many transmission lines.
7.35 Receiving a “gcc.exe: C:PROGRA...lib: No such file or directory” Error Message

Problem
Compiling a PSCAD case results in the following error in the Build Messages:

```
gcc.exe: C:PROGRA...lib: No such file or directory
```

Possible Cause
An installed compiler, OpenModelica, might be conflicting with the GFortran compiler that is used with PSCAD.

Solutions
Try one of the following:

**Note**
You will require admin privileges on your machine to perform the first two options.

- Rename the compiler’s folder:
  - From: C:\OpenModelica1.9.1
  - To: C:\OpenModelica1.9.1_
- Uninstall OpenModelica.
- Run PSCAD on a different machine.
8. Issues when Running Cases in PSCAD

8.1 Receiving a “Project output storage requirements are xx MB” Warning

Problem
The following warning displays during a project run:

![PSCAD warning dialog]

Project output storage requirements are 367 MB.
Large storage requirements may result in the application becoming unstable if you run out memory during the simulation. It is highly recommended that you save your project before continuing.

Save the project and then continue with the simulation?

Yes
No

Cause
This warning is displayed to reduce the risk that any unsaved changes in the project are lost. Unsaved changes will be lost if the operating system becomes unstable and crashes due to the large simulation storage requirements.

Solution
Select from the following options:

- Select “Yes” to save the project and proceed with the simulation.
- Select “No” to not save the project and proceed with the simulation.
8.2 Receiving an "EMTDC Runtime Error" Message

Problem
When a case is run, the following dialog box is displayed:

Cause
PSCAD is compiling cases using GFortran, and the computer is set to use non-English decimal number format. However, GFortran is affected by Regional and Language Settings.

Solution 1
Switch to Intel Fortran compiler, as this compiler is not affected by regional and language settings.

Solution 2
Continue to use GFortran, but perform the following configurations:

- Launch the Fortran Medic utility (see instructions in Appendix A.2).
- In the utility, locate the following error message:
  - For v4.2, the error will appear as follows:

```
GNU-compiled cases might not work due to non-English decimal number formats
```

  - For v4.3 and later, the error will appear as follows:

```
GFortran-compiled cases might not work due to non-English decimal number formats
```

- Right-click on the error, and a “Solution” dialog box will display. Follow the instructions in the dialog box to resolve the issue. Note the following:
  - If prompted to modify the Control Panel, see instructions below for more details, below (for v4.2.1 and v4.3.0).
If prompted to Modify the Control Panel (Solution 2): Perform the following:

- In the Windows Control Panel, go to the “Region and Language” dialog, and select “Additional settings”:
  - Change the default “Decimal symbol” from comma’s (,) to decimals(.):
  - Change the default “Digit grouping symbol” from decimals(.) to commas(,):
  - Press “OK” to save your settings.
8.3 Receiving an “Abnormal termination of EMTDC by *” error message

Problem
The following error message is displayed when performing a multi-run using GFortran 4.2:

Abnormal termination of EMTDC by *

Solution
There is a bug in GFortran 4.2, in which GFortran does not release the "handles" when running a multi-run simulation, and it crashes the simulation. The following are work-arounds:

- Switch to a commercial compiler, such Intel Fortran or Compaq Fortran.
- If running PSCAD v4.6.0 and later, switch to GFortran 4.6, which comes bundled free with PSCAD (this version of GFortran is not compatible with PSCAD versions 4.5 and earlier).
9. Issues with MyCentre

9.1 Problem with the Free Download

Problem 1
Selecting the “Free Download” button in MyCentre (see below) results in an error message.

Solution 1
This issue is related to installing the MyUpdater utility. To resolve this issue, refer to the manual "Update Client (MyUpdater) – Common Issues”, which may be found at the following link:


Problem 2
A message similar to the following is displayed:

Solution 2
This is to notify you that newer software is already installed on your computer. As such, the stated software will not be installed. Select the “Close” button, and the next installation step will proceed.
9.2 The MyCentre Registration Halts

Problem
After filling in the Registration page for registering in MyCentre, clicking the “Next” button results in the registration being halted.

Cause 1
There is a compatibility issue with Internet Explorer.

Solution 1
Retry the registration using Google Chrome or FireFox.

Cause 2
The Google ReCaptcha feature is blocked.

Solution 2
Install a Virtual Private Network (VPN), and retry the registration using the VPN.
9.3 Issues with Logging in to MyCentre

Problem
User is unable to log in to MyCentre account

Solution 1
The following are login tips:

- Ensure to enter your login credentials the same as were registered in MyCentre.
- If you have other login accounts, ensure that you are not entering the login credentials from those accounts.
- Login text is case sensitive (upper/lower case).
- For continued login issues, please contact support@pscad.com for assistance.

Solution 2
If you have forgotten your MyCentre Username, simply enter your e-mail address in the “Username” field, then enter your password.

Once you are logged in, you may display your user profile to determine your username:

Solution 3
If you have forgotten your password, enter your username or e-mail address in the “Username” field, and select “Forgot Password?”:

An e-mail will be sent to you containing a link to reset your password.

If you do not receive this email:
- Check whether this email is in your junk or spam email box, or
- Ensure that emails from mycentre@hvdc.ca are not blocked, then retry the reset.
9.4 An Error is Displayed when Downloading from the “Downloads” Tab

Problem
An error message is displayed when downloading from the “Downloads” tab.

Solution
If using Internet Explorer 8.x, switch to a different web browser:

- For Windows XP: Switch to Mozilla Firefox or Google Chrome
- For Windows Vista and Windows 7: Switch to Internet Explorer 9.x and later, or Mozilla Firefox, or Google Chrome
9.5 Registration in MyCentre freezes During the ReCaptcha Process

Problem
When registering for a MyCentre user account, the registration freezes during the ReCaptcha process, and the following errors display:

![MyCentre registration screen](image)

Cause
Google products (for example, ReCaptcha) are being blocked by the network.

Solution
Some users have employed a work-around, by registering for a MyCentre user account through a virtual private network (VPN).
Appendix A  Using the Fortran Medic Utility

A.1  Overview

The Fortran Medic utility is used to detect system parameters for troubleshooting compiler issues. Some of the more important parameters include software installation and environment variables. This information is gathered and displayed in the utility, and may be saved to a file to be forwarded to our Support Desk to assist with troubleshooting. Section A.5 lists some of the common issues that are identified using this utility.

A.2  Running the Fortran Medic Utility

The utility may be run as follows:

a. Download the latest “FortranMedic” from our website:
   \[http://updater.pscad.com/utilities/FortranMedic.zip\]

b. In the downloaded .zip file, run the “FortranMedic.exe” file.

c. Click on the “Actions” menu and select “Start”. The utility will retrieve information about your computer.

A.3  Generating the Log File

The utility log file may be generated as follows:

a. Run the utility as per Appendix A.2.

b. Click on the “Actions” menu and select “Save Messages”. The FortranMedic message window will display the location of the saved messages text file on your computer.

c. Send this log file to support@pscad.com, along with any other relevant details.

A.4  Fixing Issues using the Utility

The utility may be used to fix issues as follows:

a. Run the utility as per Appendix A.2.

b. Right-click on any red arrow to display a menu to fix it.

c. Right-click on any green arrow to optionally perform additional actions only if instructed by support@pscad.com.

Specific errors within this utility are listed in Appendix A.5.
### A.5 Errors Listed in the Utility

The following table lists common errors within the utility along with solutions:

<table>
<thead>
<tr>
<th>Error</th>
<th>Location</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflicts Intel MKL Segments C:\Program Files (x86)\Intel...\bin</td>
<td>Under the heading: PATH (Machine) Environment Variable</td>
<td>Right-click on the error and select the option to remove it. This environment variable will be removed.</td>
</tr>
<tr>
<td>Conflicts Missing expected file File: C:\Program Files (x86)\Intel...\ifort.exe PSCAD V4 will not recognize this compiler</td>
<td>Under the heading: &quot;Intel Fortran (xx.x.xxx)&quot;</td>
<td>Right-click on the error and select the option to update the .exe file.</td>
</tr>
<tr>
<td>Workspace file: C:...user_profile.xml File exists but appears to be empty</td>
<td>Under the heading: &quot;Installed PSCAD versions&quot;... &quot;PSCAD X4 Release...&quot;</td>
<td>Right-click on the message and select the option to delete this file.</td>
</tr>
<tr>
<td>Conflicts PSCAD will not display the latest Start Page.</td>
<td>Under the heading: &quot;Installed PSCAD versions&quot;... &quot;PSCAD X4 Release...&quot;</td>
<td>Right-click on the message and select the option to restore the start page.</td>
</tr>
</tbody>
</table>
| Visual Studio [VS2005] Installation Folders: VS folder: C:\Program Files (x86)\Microsoft Visual Studio 8\ Folder exists VC folder: Visual Studio VS2005 is not installed. Folder not specified. | Under the heading: "Visual Studio [VS2005]" | You are running an older version of the Fortran Medic, and the following is occurring:  
- This version does not correctly detect Visual Studio Premier Partner (Shell Edition).  
- This version interprets this information as an incomplete installation of the full (commercial) Visual Studio.  
The solution is to:  
- Download and re-run our latest version of the Fortran Medic utility.  
- Check the installation of Visual Studio. |
<p>| Firewalls and anti-virus software can affect PSCAD | Under the heading: &quot;Firewalls and anti-virus programs&quot; | See “Update Client – Common Issues”, available on the following web page: <a href="https://hvdc.ca/knowledge-library/reference-material">https://hvdc.ca/knowledge-library/reference-material</a> |</p>
<table>
<thead>
<tr>
<th></th>
<th>Error</th>
<th>Location</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Conflicts The required VS7CommonDir registry value is not set.</td>
<td>Under the heading: “Visual Studio [Premier Partner Edition - VS 2005 Shell]”</td>
<td>This does not seem to affect performance when compiling in PSCAD X4 v4.5.4.</td>
</tr>
<tr>
<td>8.</td>
<td>Environment [Actual]: IFORT_COMPILER10: Environment variable does not exist</td>
<td>Under the heading: “Intel Fortran (10.1...)”</td>
<td>Right-click on the error and select “OK” to add the path segment or “Cancel” to leave the environment value unmodified.</td>
</tr>
<tr>
<td>9.</td>
<td>Use only FIPS compliant algorithms Value: 1 (Enabled) Conflicts This computer is not configured to support a required algorithm Or Use only FIPS compliant algorithms Status: &lt;Registry value not found&gt; Conflicts This computer is not configured to support a required algorithm Or Use only FIPS compliant algorithms Value: 5 Status: &lt;Registry value is invalid&gt; Conflicts This computer is not configured to support a required algorithm</td>
<td>Under the heading: “Licensing”</td>
<td>See Section 5.1, Solution #3 for the solution.</td>
</tr>
<tr>
<td>Error</td>
<td>Location</td>
<td>Solution</td>
<td></td>
</tr>
<tr>
<td>-------</td>
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<td></td>
</tr>
<tr>
<td>10. <strong>ZSLib2.dll appears to be from a different version of PSCAD</strong></td>
<td>Under the heading: &quot;Installed PSCAD versions&quot;... &quot;PSCAD X4 Release...&quot;</td>
<td>Right-clicking on the message displays a dialog with the solution steps: To fix this issue, you need to: - install or repair PSCAD 4.x.y which will re-install this file. See Section 2.8 for additional information.</td>
<td></td>
</tr>
<tr>
<td>11. <strong>Conflicts</strong> INTEL_LICENSE_FILE – Duplicate path segments may cause this compiler to fail</td>
<td>Under the heading: &quot;Intel Fortran (*)&quot;</td>
<td>Right-clicking on the message displays a dialog with the solution steps: Select &quot;OK&quot; to proceed with fixing the variable. Select &quot;Cancel&quot; to leave the environment value unmodified. See Section 7.27 for additional information.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conflicts</td>
<td>Under the heading:</td>
<td>Right-clicking on the error displays the following dialog:</td>
</tr>
<tr>
<td>---</td>
<td>-----------</td>
<td>-------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>12.</td>
<td>The PATH variable is excessively long and you may lose your shortcuts to Notepad and other system programs.</td>
<td>“PATH (Machine) Environment Variable”</td>
<td>Click “OK” to hide the warning. This conflict results in a problem with trying to launch some software, in this case, MyUpdater. For further details, refer to the manual “Update Client – Common Issues”, posted on the following webpage: <a href="https://hvdc.ca/knowledge-library/reference-material">https://hvdc.ca/knowledge-library/reference-material</a></td>
</tr>
<tr>
<td>13.</td>
<td>Your system clock is not synchronized to global network time.</td>
<td>“Machine Info”</td>
<td>Your computer time is different from the global time by more than three minutes. Set the correct time, date, and time zone as per Section 4.2 Problem 1.</td>
</tr>
<tr>
<td>14.</td>
<td>Segments containing a ‘&amp;’ character &quot;C:\Program Files (x86)***”</td>
<td>“PATH (Machine) Environment Variable”</td>
<td>Resolve as per Section 7.24, Problem #2.</td>
</tr>
<tr>
<td>15.</td>
<td>Short path conversion: Not working</td>
<td>“Folder Info”</td>
<td>Resolve as per Section 7.28.</td>
</tr>
<tr>
<td>16.</td>
<td>Intel Fortran 15.0.0 to 15.0.221 might not work due to Visual Studio 2015 being installed.</td>
<td>“Detecting Intel Compilers”</td>
<td>Right-clicking on the error displays a message similar to the following: Resolve as per Section 7.30.</td>
</tr>
</tbody>
</table>

In order to resolve this issue, you need to use the FortranMedic to remove unnecessary paths from the PATH environment variable.
### Resolving PSCAD Issues

<table>
<thead>
<tr>
<th></th>
<th>Required Environment and Registry Values</th>
<th>Under the heading:</th>
<th>This error does not affect compiling PSCAD cases using Intel Fortran. This error may be ignored.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>17</strong></td>
<td><strong>Required Environment and Registry Values</strong>&lt;br&gt;VS90COMNTOOLS (environment) does not exist</td>
<td><strong>Under the heading:</strong>&lt;br&gt;&quot;Visual Studio [Premier Partner Edition VS2008 Shell]&quot;</td>
<td></td>
</tr>
<tr>
<td><strong>18.</strong></td>
<td><strong>Products file</strong>&lt;br&gt;C:\Users\[Your Windows Username]\AppData\Local\Manitoba HVDC Research Centre\UpdateClient\Products.xml&lt;br&gt;File does not exist&lt;br&gt;Or&lt;br&gt;Products file&lt;br&gt;C:\Users\[Your Windows Username]\AppData\Local\Manitoba HVDC Research Centre\UpdateClient\Products.xml&lt;br&gt;File exists&lt;br&gt;File does not contain a MyCentre identity</td>
<td><strong>Under the heading:</strong>&lt;br&gt;&quot;MyUpdater&quot;</td>
<td><strong>These messages indicate that a utility has been installed on this machine (MyUpdater), but has never been logged into. Therefore the corresponding user file has not been created. This message is intended to assist users experiencing an issue with logging in to MyUpdater due to their computer or network restrictions. For further assistance on this a MyUpdater login issue, please contact our Support Desk (<a href="mailto:support@pscad.com">support@pscad.com</a>).</strong></td>
</tr>
</tbody>
</table>
19. **PATH (User) Environment Variable**

Listing: [ length = * characters ]
...
Conflicts
  Duplicated segments
  ▶ C:\***

Under any of the “Environment Variable” headings

Multiple unnecessary segments should be removed because they might cause performance issues on your computer.
Right-click on each duplicated segment, and select “OK” when prompted:

The Fortran Medic utility will retain only the first occurrence of this segment, and delete all duplicates.
The following message will display following a successful deletion of duplicates:
Appendix B  Using the Get Info Utility

B.1  Overview
The Get Info utility is used to detect system parameters for troubleshooting licensing issues. Some of the more important parameters include software and license installation, operating system, and user level.

This information is gathered and displayed in the utility, as well as saved to a file which may then be forwarded to our Support Desk to assist with troubleshooting.

Section 3.4 lists some of the common issues that are identified using this utility.

B.2  Running the Get Info Utility
The Get Info utility may be run as follows

- Ensure the PSCAD USB lock is plugged in (if applicable).
- Download “GetInfo32.zip” from the following link: http://updater.pscad.com/utilities/GetInfo32.zip
- In the downloaded folder, open “GetInfo32.exe”.
- When prompted whether to test shortcuts, select “No”.
- The Get Info utility will gather information about your system and display it.

B.3  Using the Utility to Detect Licensing
The Get Info utility may be used to detect the license number associated with a USB lock and license database file installed on a machine. Proceed as follows:

- Run the utility as per Section B.2.
- Ensure the USB lock is securely plugged in (if applicable).
- Once the utility has finished running, scroll down to “Lock Info (direct access)”. If detected, the licensing information related to the license database file and/or USB lock will be displayed.
Appendix C  Lock-based Legacy Licensing - License Manager Requirements

The following are requirements when using the Standalone License Manager:

- On the license host server, Ping Echo and Ping Reply must be enabled on the Firewall.
- The protocol for communication between the server and clients is UDP/IP on port 2053 and 2054.
- The license database file must be installed on the server.
- The Sentinel USB lock must be plugged in on the server.
- PSCAD client machines must be able to send out ping requests and receive ping replies.
Appendix D  Certificate Licensing – Requirements

When using certificate licensing, PSCAD requires access to the following license server URL:

- http://licensing.pscad.com:80/Licensing (preferred)
- net.tcp://licensing.pscad.com:443/Licensing (fallback)
## DOCUMENT TRACKING

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<th>Description</th>
<th>Date</th>
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<td>Initial</td>
<td>17/Jul/2014</td>
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<td>1</td>
<td>Added new sections (7.3, 8.1, 8.2, A.5); Updated sections (6.1, 10.1, A.4); Updated the document title</td>
<td>29/Jul/2014</td>
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<td>2</td>
<td>Changed section numbers (Section 6); Added new sections (1.2, 2.1, 2.2, 8.3-8.11, 10.3); Updated sections (1.1, 6.1-6.3, 8.1)</td>
<td>08/Aug/2014</td>
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<td>3</td>
<td>Updated sections (3.1, 6.4, 8.1, 8.2, 8.5, 8.8, 8.9, 10.1, 10.2, A.2); Deleted Section 8.4; Renumbered Sections 8.5-8.11 to 8.4-8.10; Added new sections (7.4, 7.5, 8.11-8.17, 10.4-10.6)</td>
<td>17/Oct/2014</td>
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<td>28/Nov/2014</td>
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<td>5</td>
<td>Deleted Section 6.6 (duplicated); Added new Sections 6.6, 6.7, 7.17, 7.18, 7.19</td>
<td>28/Jan/2015</td>
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<td>6</td>
<td>Update to Section 3.4, Section 9.2, Appendix A.5; Added new Section 7.20</td>
<td>20/Apr/2015</td>
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<td>7</td>
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<td>20/May/2015</td>
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<td>8</td>
<td>Update to Sections 4.1, 7.8; Added New Sections 2.5, 2.6, 7.21, 7.22</td>
<td>28/May 2015</td>
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<td>9</td>
<td>Update to Section 7.8</td>
<td>07/Jul/2015</td>
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<td>10</td>
<td>Added new Section 2.7, populated Section 3.3</td>
<td>28/Jul/2015</td>
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<tr>
<td>11</td>
<td>Added new Sections 5.1, 3.5, and 6.8</td>
<td>15/Sep/2015</td>
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<td>12</td>
<td>Added new Cause #3 within Section 5.1; Added new Section 3.6; Update to Appendix A.5</td>
<td>22/Sep/2015</td>
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<td>13</td>
<td>Added new Cause #3 within Section 7.3, Added new Section 3.7 and new Appendix C</td>
<td>24/Sep/2015</td>
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<td>14</td>
<td>Added new Sections 3.8, 7.23, 7.24, and 7.25; Update to Section 3.6</td>
<td>02/Nov/2015</td>
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<td>15</td>
<td>Added new Section 2.8; Update to Sections 2.7, 3.4 and Appendix C</td>
<td>13/Nov/2015</td>
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<td>16</td>
<td>Added new Item 10 to Appendix A.5; Added new Section 7.26 and new Appendix D; Update to Sections 2.8 and 3.8</td>
<td>12/Jan/2016</td>
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<td>Split contents of Section 3 into existing Section 3, New Section 4 and New Section 5; Renumbered sections (Sections 4 to 8 became Sections 6 to 10); Added new Cause 4 to NEW Section 5.1; Update to Section 3.2 Item 5; Deleted NEW Section 10; Correction to Appendix A.5 Item 7</td>
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<td>18</td>
<td>Update to Section 1.1; New Section 7.27; New Item 11 in Appendix A.5</td>
<td>04/Feb/2016</td>
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<td>19</td>
<td>Added new Sections 2.9 and 7.28; Update to Section 4.2, Solution 1; Added new Problem 2 to Section 7.24; Added new Items 12 to 15 in Appendix A.5</td>
<td>29/Feb/2016</td>
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<td>20</td>
<td>Added new Cause 2 to Section 3.1; Added new Problem 2 to Section 7.15; Added new Section 7.29;</td>
<td>31/Mar/2016</td>
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<td>21</td>
<td>Added new Sections 3.9, 3.10, 5.2, 7.30 and 7.31</td>
<td>5/Apr/2016</td>
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<td>22</td>
<td>Added new Sections 6.9 and 7.32; Added new Items 16 and 17 in Appendix A.5; Update to Section 3.9, Section 7.24 (Problem 2), Section 9.3, and Appendix A.5 (Item 10)</td>
<td>27/Apr/2016</td>
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<td>Moved Cause/Solution 2 from Section 3.8 to new Section 4.4; Moved Cause/Solution2 from Section 3.1 to new Section 3.11; Added new Sections 6.10 and 7.33; Update to Section 7.24; Added new Item 18 to Appendix A.5</td>
<td>18/May/2016</td>
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<td>24</td>
<td>Added new Sections 2.10, 4.5, 6.11, 7.34, 7.35; Added new Item 19 in Appendix A.5</td>
<td>23/June/2016</td>
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