PSCAD

Resolving Software Issues

Written for PSCAD X4

October 17, 2014
Revision 3
Resolving Software Issues

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APPENDIX A
USING THE FORTRAN MEDIC UTILITY

A.1 Overview
A.2 Running the Fortran Medic Utility
A.3 Generating the Log File
A.4 Fixing Issues Using the Utility
A.5 Errors Listed in the Utility

APPENDIX B
USING THE GET INFO UTILITY

B.1 Overview
B.2 Running the Get Info Utility
B.3 Using the Utility to Detect Licensing
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:

- Installing PSCAD (Section 2)
- Launching PSCAD (Section 3)
- Licensing PSCAD (Section 4)
- Using PSCAD (Section 5)
- Running Cases in PSCAD (Section 6)
- Using other software (Section 7)
- Using MyCentre (Section 8)

Appendix A and Appendix B contain instructions for using the Fortran Medic utility and Get Info utility respectively, and are referenced within this manual.

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 issue that are not covered herein, please forward the details to our Support Desk (support@pscad.com).

1.2 Sources

Issues and solutions were recorded from customer support cases, as well as from the following source:

“PSCAD X4 Compile and Build Issues”, Revision 4, June 4, 2014 (rescinded)
2. Issues when Installing PSCAD

2.1 Receiving an “Another instance of this setup is already running” Message

Problem
When running the installation, the following warning displays:

![Warning Message](image)

Cause
Two instances of the InstallShield were invoked.
InstallShield does not permit two installations of the same or different software to run concurrently. The above warning is displayed if this detected.

Solution
- Close out of all instances of InstallShield, then retry the installation.
- If the above solution does not work, then an installation may be “hung up” and running as a background process. Stop all instances of InstallShield as follows:

  ![Task Manager Instructions](image)

- If the above solutions do not work, log out of your machine, log back in, and retry the installation.
2.2 Receiving a "The Installed version of the application could not be determined" Message

Problem
The following error message is displayed when PSCAD products are launched for installation:

![Error Message](image)

Cause
The installation was not launched with administrator rights.

Solution
- Ensure that the installer has administrator rights on this machine.
- Launch the installation with administrator rights:

![Run as Administrator](image)
3. Issues when Launching PSCAD

3.1 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](image)

- Right-click on the "Workspace file" message and select the option to delete this file.
3.2 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 v4.5.3, Windows 7 (64-bit)
- 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.
3.3 Receiving a “Stop running this script?” Error Message

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

![Stop running this script? dialog box](image)

System
- PSCAD v4.5.3
- Windows 7 (64-bit)

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.
4. Issues when Licensing PSCAD

4.1 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 4.2 and 4.4.
- If the license is installed on a Server, view the causes and solutions in Sections 4.2, 4.3 and 4.4.
### 4.2 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>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>Checking for lock on USB</td>
<td>Sentinel Drivers not installed.</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>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>Error</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>ERROR: Detected a second instance of <code>&lt; pscad.exe &gt;</code></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.</td>
</tr>
<tr>
<td>ERROR: Invalid semaphore value ERROR: Refused to renew license [No.] for [machine name] for <code>&lt;PSCAD X4 Professional&gt;</code>. License not active.</td>
<td>On a machine with a valid trial license, this error occurs if a second instance of PSCAD was successfully licensed. A trial license permits only one instance to be run and licensed.</td>
<td>Ensure only one instance of PSCAD is running.</td>
</tr>
<tr>
<td>To be determined</td>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>
4.3 Errors within the Lmgrd-log.txt File

To be populated
### 4.4 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>
</table>
| User level: User                             | User does not have administrator rights: Therefore, the user may not install or update a license | 1. Obtain temporary administrator rights, then install the license  
2. Administrator to install the license |
| License Info <localhost>                    | No license database file is installed on this machine, which is hosting the license: Therefore the licensing will not work | Install the license database file as per the “Installing PSCAD” manual on the webpage: https://hvdc.ca/knowledge-library/reference-material |
| Local License Manager: 1.XX [installed]     | The License Manager is installed on a machine that is running a Single-User License: Therefore, the licensing might not work | Uninstall the License Manager:  
a. Stop the License Manager Service (from the Windows Start menu, browse to “Stop License Manager Service”).  
b. Go to ”Add or remove program” in the Windows Control Panel, and remove ”Manitoba HVDC Research Centre Licence Manager” |
<table>
<thead>
<tr>
<th>Message</th>
<th>Possible Impact</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERROR: Unable to read the lock [5]</td>
<td></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>USB driver version 7.150.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;driver NOT detected, or SUB lock not yet inserted&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;driver NOT detected&gt;</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>USB lock is not plugged in on the machine.</td>
<td></td>
</tr>
<tr>
<td>customer ID unknown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cause(s) &lt;Dongle absent, not communicating, 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>USB error: USB Error: Sentinel driver not installed, status = 524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB info: USB Error: Sentinel driver not installed, status = 524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB port: &lt;driver not detected, or USB lock not yet inserted&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Par port: &lt;driver not detected&gt;</td>
<td>USB lock will not be detected</td>
<td>Install the Sentinel Driver</td>
</tr>
<tr>
<td>Par port: &lt;unknown hardware address or disabled &gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Par port: &lt;unknown software address or 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 unresponsive.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Issues when Using PSCAD

5.1 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
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 2
Configure software as follows:

- Uninstall v4.5.1
- Install v4.5.0 (this will install the missing file)
- Re-install v4.5.1.

Solution 3
Update your software to v4.5.2 or later (contact our Sales Desk at sales@pscad.com).
Solution 4

Use the Fortran Medic utility to repair the problem:

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”.

d. 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.
5.2 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:

![Component Wizard](image)

**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 x32 platform.

**Cause**
An issue with Internet Explorer 11.

**Solution**
Uninstall all Internet Explorer versions, then install and use Internet Explorer 9.
5.3 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 through your server.
5.4 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:
- 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 message](image)
  - When prompted, select “OK”.
- The PSCAD Start Page in the PSCAD application should be available for display.
5.5 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. Issues when Running Cases in PSCAD

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

Problem
When running 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 6.5, Problem 2.
6.2 Receiving an “unresolved external symbol” Error Message

Problem
When running 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).
6.3 Receiving a “Fortran compiler...is not detected” Error Message

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

![Error Message]

Cause 1
The Fortran compiler is not installed.

Solution 1
Install the Fortran compiler.

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

Solution 2
Defragment the Windows operating system.
If the Problem Persist

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 snapshot(s) of the message(s).
- Indicate which version 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 snapshots showing your installed programs (from the Windows Start Menu, go to Control Panel | Programs and Features).
- Provide a Snapshot of your MyUpdater utility when logged into this utility (if available):
6.4 Receiving a "Cannot execute command" Error

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

![Error Message]

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:

![](image1.png)

Caused by:
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.
6.5 Receiving a "gfortran.exe: Main.f: Invalid argument" Error

Problem

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.

6.6 Receiving an “Error 1 – Multiple definition of ‘...’ - first defined here” Error

Problem

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.
6.7 Receiving an “Error 1 – Syntax error in argument list at (…)” Error

Problem
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.
6.8 Receiving a “Make failed to generate a simulation executable for namespace ‘***’. Binary file was not found” Error

Problem 1
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 before compiling a case.

Solution 1
After installing GFortran 4.2.1 or GFortran 4.6, the user should log out of Windows,
then log back in.
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 2

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

Solution 2

Link the object and library properly in PSCAD as follows:

- Ensure the case files are all saved in the same folder.
- Ensure the library is loaded ahead of the case. For example:

1. Open the CASE’S Project Settings, and delete any links, then select “OK”:

2. Open the LIBRARY’S Project Settings, and delete any links, then click the “Browse” button to browse to the object. Select “OK”.


6.9 Receiving a “make: *** [SomeFile.exe] Error 1” Error

Problem 1

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 (a)

Use GFortran 4.2 to compile this project.

Solution (b)

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:\Users\<user>\DOCUME~1\ tmp\hello\gf46\*.o:*f:(.text+0x59): undefined
  reference to `__fortran_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.
6.10 Receiving an "Error U1052 – file'data.mak' not found " Error

Problem

The following compiling error is displayed:

```
build Will execute: call C:\Program
    Files\Intel\Compiler\11.0\061\fortran\bin\ifortvars.bat  ia32
build Will execute: nmake -f BRK_Test.mak
build Will execute:
    \UKGLASFP02\Edrive$\Projects\PSB\EEG\2010PR~1\269371~1\PSCAD\BRK_Test.bat
build Creating EMTDC executable...
build '\UKGLASFP02\Edrive$\Projects\PSB\EEG\2010 Projects\Some
    folder\PSCAD\BRK_Test.if9'
build UNC paths are not supported. Defaulting to Windows directory.
build C:\WINDOWS>call
    C:\PROGRA~1\Intel\Compiler\11.0\061\fortran\bin\IFORTV~1.BAT  ia32
build Intel(R) Visual Fortran Compiler Professional for applications running on IA-
    32, Version 11.0.061
build Copyright (C) 1985-2008 Intel Corporation. All rights reserved.
build Microsoft (R) Program Maintenance Utility Version 8.00.50727.42
build Copyright (C) Microsoft Corporation. All rights reserved.
build NMAKE : fatal error U1052: file 'BRK_Test.mak' not found
build Stop.
build 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.
6.11 Receiving a "Make File Error" Error

Problem
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:
6.12 Receiving a “Project output storage requirements are xx MB” Warning

Problem
The following warning displays during a project run:

![Warning Message]

```
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?
```

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.
6.13 Receiving an “Unable to solve line constants” Build Message

Problem
When a case is run, 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.
6.14 Receiving an “EMTDC Runtime Error” Message

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

![EMTDC Runtime Error](image)

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 configure the Windows decimal settings as follows:

- In Windows, go to the “Region and Language” dialog, and select “Additional settings”:
• Change the default “Decimal symbol” from comma’s (,) to decimals(.):

![Decimal symbol change](image1.png)

• Change the default “Digit grouping symbol” from decimals(.) to commas(,):

![Digit grouping symbol change](image2.png)

• Press “OK” to save your settings, and PSCAD should compile fine with GFortran with different language settings.
6.15 Receiving a “‘cl.exe’ is not recognized as an internal or external command” build message

Problem
Receiving the following build messages:

- 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
6.16 Receiving a “The number of projects included in the simulation list must not exceed %d” Error Message

Problem
The following error message displays when a project is run:

![Error Message]

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

Solution
Update software to v4.5.2 or later.
6.17 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 workarounds:

- 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).
7. Issues with Other Software

7.1 Receiving a "This installation package could not be opened" Error Message when Installing Sentinel Drivers

Problem
Installing the Sentinel Drivers results in the following error message:

![Windows Installer Error Message]

Cause
One or more of the following requirements is not being met:

- You require administrator privileges on your machine to perform this installation.
- Any firewall or antivirus programs that may interfere with this installation should be disabled. One example of a software that blocks installations is "AppSense".
- The installation files should be run from a folder in which you have permission.
- The installation files should be run from a local driver (i.e. not a network drive).

Solution
Ensure that you meet all requirements listed above.
Install the Sentinel Drivers as outlined in the manual “Installing PSCAD X4”, located on the following webpage:

[Link to webpage]

https://hvdc.ca/knowledge-library/reference-material
8. Issues with MyCentre

8.1 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:

Solution 1
1. Determine the correct the date and time:
   - Go to the following website: http://www.worldtimeserver.com/current_time_in.UTC.aspx
   - Browse to your region using the "Countries" browser:
     - The time in your region will be displayed.
2. Configure the correct date and time on your computer:
   - From your Windows Start menu, browse to: Control Panel | Clock, Language and Region | Date and Time | Set the time and date | Change date and time. 
   - Using the information from Step (1) above, correct the date and time, then select "OK":

   ![Date and Time Settings]

3. Retry licensing the software.
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:

![Dialog box](image)

**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.
8.2 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.
8.3 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
There is a compatibility issue with Internet Explorer.

Solution
Retry the registration using Google Chrome or FireFox.
8.4 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.
8.5 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
8.6 Receiving a “This application failed to start due to an internal error” message

Problem

When launching MyUpdater, the following error message displays:

![Image](image.png)

This application failed to start due to an internal error.
Contact support@pscad.com for the correct MyUpdater.

Then, when the Fortran Medic utility is run (see Appendix A.2), the utility indicates that firewalls and anti-virus software can prevent MyUpdater from launching:

![Image](image.png)

**Firewalls and anti-virus programs**

Detected:
- System Center Endpoint Protection X.x
- F-Secure X.x
- Malewarebytes Anti-Malware version X.x

Conflicts
- Firewalls and anti-virus software can affect PSCAD
Right-clicking on this error displays the following dialog box:

![Warning dialog box]

**Solution**

Turn off your firewall or anti-virus scanner, then retry launching MyUpdater from the Windows Start menu (go All Programs | PSCAD | MyUpdater).
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.

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

b. 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>
</table>
| **Conflicts**  
Intel MKL Segments  
C:\Program Files (x86)\Intel\...\bin | Under the heading:  
PATH (Machine) Environment Variable | Right-click on the error and select the option to remove it. This environment variable will be removed. |
| **Conflicts**  
Missing expected file  
File: C:\Program Files (x86)\Intel\Ifort.exe  
PSCAD V4 will not recognize this compiler | Under the heading:  
“Intel Fortran (xx.x.xxx)” | Right-click on the error and select the option to update the .exe file. |
| **Workspace file:** C:\...user_profile.xml  
File exists but appears to be empty | Under the heading:  
“Installed PSCAD versions...”  
“PSCAD X4 Release...” | Right-click on the message and select the option to delete this file. |
| **Conflicts**  
PSCAD will not display the latest Start Page. | Under the heading:  
“Installed PSCAD versions...”  
“PSCAD X4 Release...” | Right-click on the message and select the option to restore the start page. |
| **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. |
| **Firewalls and anti-virus software can affect PSCAD** | Under the heading:  
“Firewalls and anti-virus programs” | See Section 8.6 |
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 4.3 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
- 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 USB lock will be displayed.
<table>
<thead>
<tr>
<th>Rev.</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Initial</td>
<td>17/Jul/2014</td>
</tr>
<tr>
<td>1</td>
<td>Added new sections (5.3, 6.1, 6.2, A.5); Updated sections (4.1, 8.1, A.4); Updated the document title</td>
<td>29/Jul/2014</td>
</tr>
<tr>
<td>2</td>
<td>Changed section numbers (Section 4); Added new sections (1.2, 2.1, 2.2, 6.3-6.11, 8.3); Updated sections (1.1, 4.1-4.3, 6.1)</td>
<td>08/Aug/2014</td>
</tr>
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<td>3</td>
<td>Updated sections (3.1, 4.4, 6.1, 6.2, 6.5, 6.8, 6.9, 8.1, 8.2, A.2); Deleted Section 6.4; Renumbered Sections 6.5-6.11 to 6.4-6.10; Added new sections (5.4, 5.5, 6.11-6.17, 8.4-8.6)</td>
<td>17/Oct/2014</td>
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