Resolving PSCAD Automation Library Issues

February 28, 2023
Revision 7
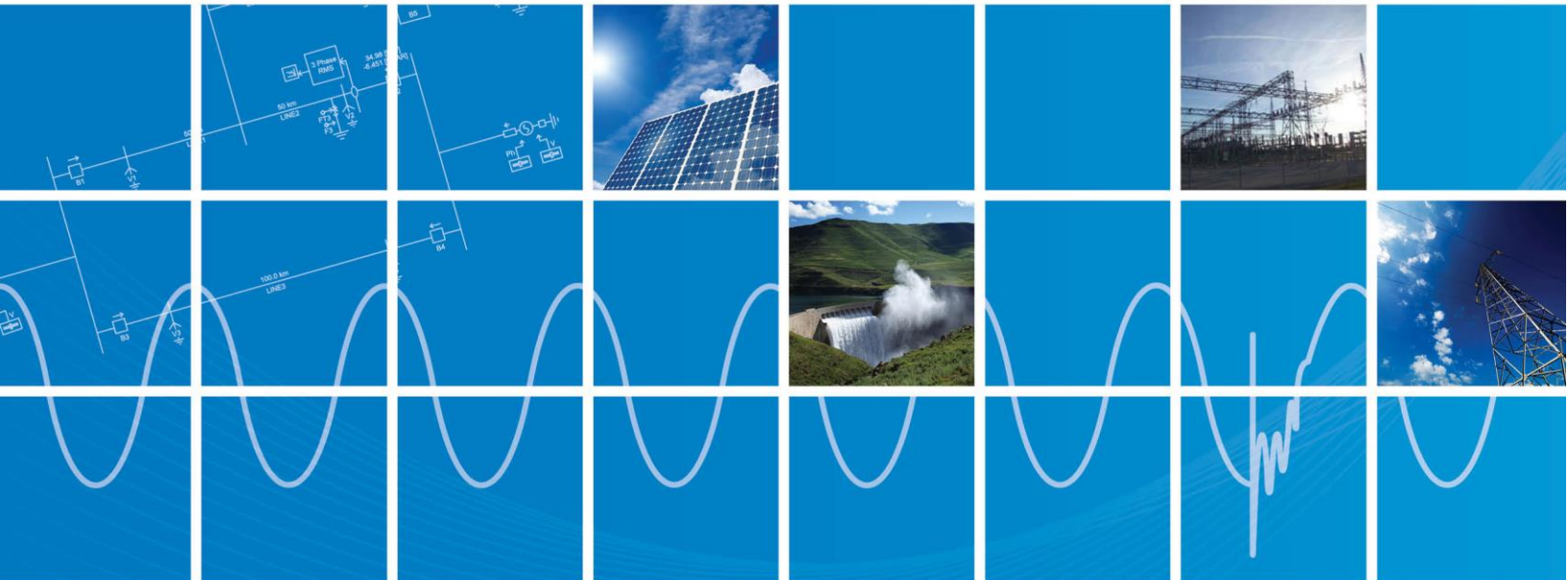
Contents

1. Introduction

1.1 Overview

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

1.2 Contacting our Support Team

If the suggestions in this document do not resolve the issue, please contact our support desk (support@mhi.ca).

Please ensure to provide the following information in your e-mail:

- Your PSCAD license number.
- A description of the issue, including details and screenshots.

2.   Installation Issues

2.1   Receiving a "'py' is not recognized as an internal or external command, operable program or batch file" Error Message

Problem

When executing a script, the Windows Command Prompt displays the following message:

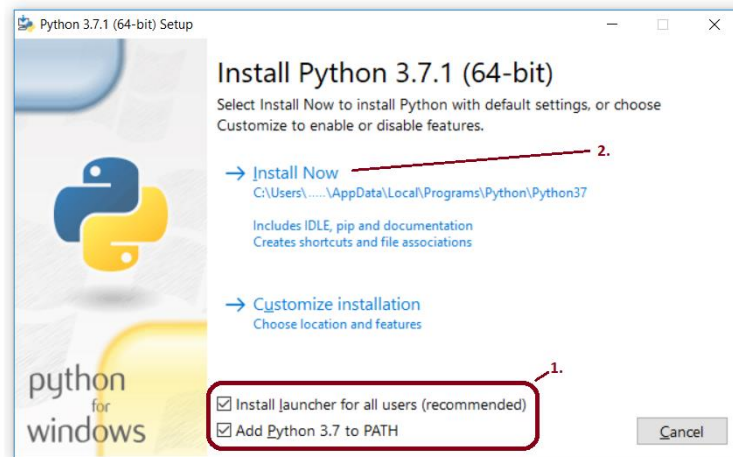'py' is not recognized as an internal or external command, operable program or batch file.

Cause

The "py" command cannot be run from a command line because the Python Launcher is not installed, and consequently the Automation Library could not be installed.

Solution

- Re-install Python 3.7.1 or 3.7.8, ensuring to first enable both options in the installer (step 1 below):

3.   Scripting Issues

3.1   Receiving a "File "<fstring>", line 1…(env_date=)" Error Message

Problem

If you have the third party 'mhi' Python package, ("Mail Handler for IMAP"), Version 0.8.1, installed, and attempt to use the PSCAD and Enerplot Python Automation, an error similar to the following will display:

<pre style="color:red">
    Import mhi.pscad
    File "<fstring>", line 1
     (env_date=)
</pre>

Cause

Mail Handler for IMAP Version 0.8.1 was likely installed by mistake, when attempting to install another package, such as mhi.pscad, mhi.enerplot, mhi.psout, and/or mhi.cosim.

The Mail Handler for IMAP, Version 0.8.1, conflicts with PSCAD and Enerplot Python Automation.

Mail Handler for IMAP Version 0.8.1 has a deficiency, which prevents it from functioning in Python 3.7 or earlier. As a result, if installed, it disrupts proper functioning of the MHI Automation Library packages.

If Python 3.8 or later is used for external automation, Mail Handler for IMAP Version 0.8.1 can peacefully co-exist with the MHI Automation Library packages. Otherwise, if Python 3.7 is used for external automation, Mail Handler for IMAP Version 0.8.1 must be uninstalled.

A bug-fix update to Mail Handler for IMAP (Version >0.8.1) allows it to co-exist with the MHI Automation Library.

Solution

There are three possible solutions:

1.   Manually remove Mail Handler for IMAP Version 0.8.1 by executing the following in an elevated Command prompt:
     py -3 -m pip uninstall --quiet --yes mhi

     Then, use the Fortran Medic utility to remove Mail Handler for IMAP Version 0.8.1 as per Appendix A.5 Item 1.

2.   Uninstall Mail Handler for IMAP Version 0.8.1 as per Step 1 above, then install Mail Handler for IMAP Version >0.8.1.

3.   Install and use Python 3.8 or better, as this is not affected by Mail Handler for IMAP Version 0.8.1.

3.2 Receiving Error "PermissionError: [Errno 13] Permission denied: '/.mhirc'"

Problem

When trying to run a Python project, the following error displays:

PermissionError: [Errno 13] Permission denied: '/.mhirc'

Cause

To be determined by our support desk. To help diagnose the cause, please send in some information (support@mhi.ca). There are two ways to generate this information:

- Run the.bat file below in a CMD prompt and send us a screen shot of the messages.
  This .bat file with attempt to install the Automation Lib in V5.

  C:\Users\public\Documents\Manitoba Hydro International\PSCAD\5.0.0\Installers\install-packages.bat

(or)

- Run the batch file from a command prompt so you can see the messages and send us a screenshot:

  ° Open a Windows Browser to the following location:
    C:\Users\public\Documents\Manitoba Hydro International\PSCAD\5.0.0\Installers\
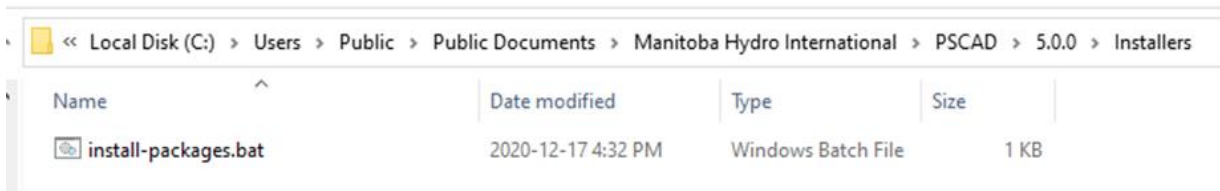
  ° Type cmd in the address bar of the Windows browser, and select the ENTER key.
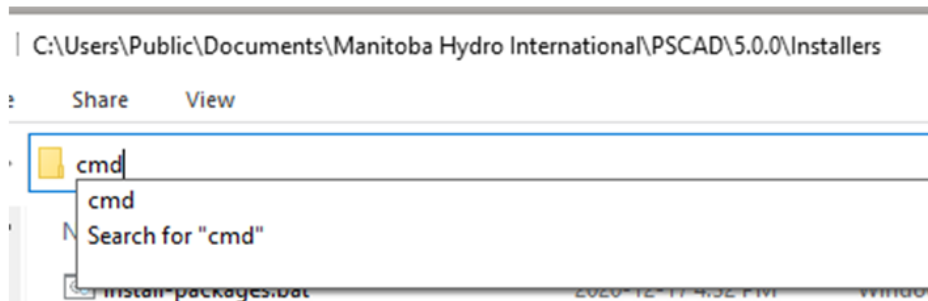
  ° At the Command Prompt, type "install-packages.bat" at the command prompt and select the ENTER key.
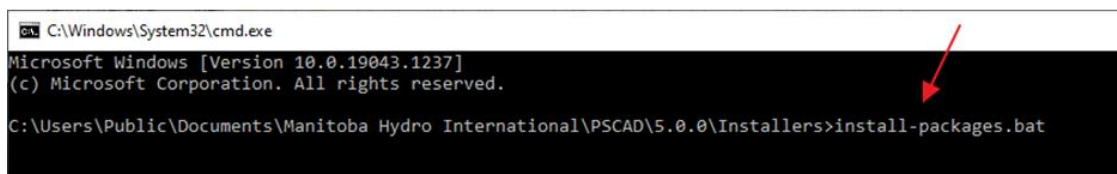
  ° Send in a screenshot showing the displayed text.

4. Running Issues

4.1 Receiving a "ERROR automation.command [...] execute <command name="get-available-certificates" scope="PSCAD" sequence-id="3" /> failed" Error Message

Problem

When executing a script, the following message displays:

'ERROR   automation.command   execute <command name="get-available-certificates" scope="PSCAD" sequence-id="3" /> failed
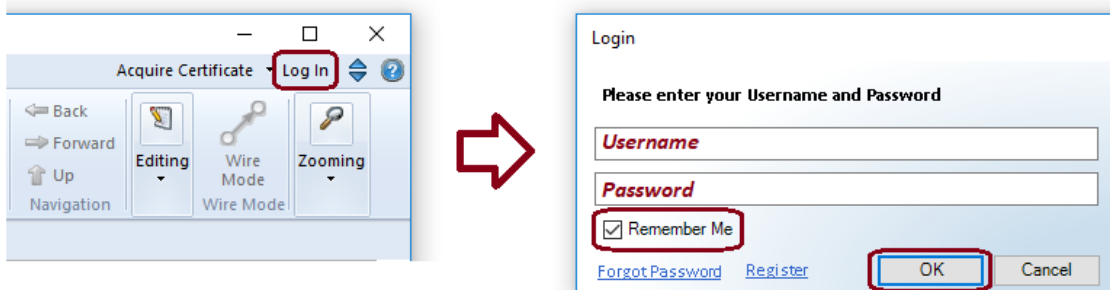ERROR   automation.command   resp <commandresponse elapsed="54" sequence-id="3" success="false" timestamp="2019-09-18-13-47-09-6808013"><error /></commandresponse>

Cause

Certificate licensing is unavailable, because you were not logged in to MyCentre in the PSCAD app.

Solution

- Launch PSCAD manually.

- Log in to PSCAD, ensuring that "Remember me" is selected:

4.2   Unable to detect Desired Compiler when PSCAD is Launched Automatically using Python Scripting

Problem

When an attempt is made to launch PSCAD automatically using Python scripting, the desired Fortran compiler fails to be detected. For example, the following scripting is used:

fortran_versions = controller.get_paramlist_names('fortran')

When PSCAD is launched manually, however, the desired Fortran compiler is recognized.

Cause

For every newly installed product to be detected by the Automation Library, the products list must be updated accordingly. The products to be updated in the product listing are:

- PSCAD
- Fortran compilers

Solution

For every newly installed product, update the products list for the Automation Library as follows:

- Navigate to the folder where the Fortran Medic utility resides. For example, for PSCAD v4.6.3:

    C:\Program Files (x86)\PSCAD\AutomationLibrary\463\Medic

- Double click on the CreateProductsList.bat file.

- The Fortran Medic utility will launch, and start detecting relevant software.

- When above task has been completed, the utility may be closed.

- Now, if PSCAD is launched automatically, the desired product should be detected.

4.3   Receiving a "ConnectionRefusedError: [WinError 10061] No connection could be made because the target machine actively refused it" Error Message

Problem

When executing a script, the following message displays:

<div style="color:red">

Command Prompt - py

ConnectionRefusedError: [WinError 10061] No connection could be made because the target machine actively refused it

>>> mhi.enerplot.launch(host='localhost', port=32000
</div>

Cause

The customer's firewall is blocking Enerplot communication. Specifically, the customer is trying to use port 32000, and this is being blocked.

Solution

Whitelist port 32000, or switch to using a port that is not blocked.

Appendix A   Using the Fortran Medic Utility

A.1   Overview

The Fortran Medic utility is our standard mechanism for gathering and displaying information about a user's machine that is relevant to installing, launching, licensing, and running PSCAD (see Appendix A.2).

This utility does not perform any reporting back to us, other than allowing a user to generate a text log file and forward it to our Support Desk to assist with troubleshooting (see Appendix A.3).

This utility does not modify anything on a machine without a user's explicit permission, which is obtained by clicking on the green or red arrows and confirming the recommended action (see Appendix A.4).

Many of the issues that may be detected by the utility are related to software installation and compatiblity, integration of Intel Fortran compilers with Microsoft Visual Studio, and protection software preventing PSCAD usage (see Appendix A.5 for some of the more common issues).

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.   Unzip the downloaded file, save it to a local drive, and run the unzipped "FortranMedic.exe" file.

To run the Medic <u>without</u> Windows Administrator privileges, select "No" when prompted by the Windows User Account Control. (The Medic <u>will not</u> be able to be used to make any changes to your machine)

To run the Medic <u>with</u> Windows Administrator privileges, select "Yes" when prompted by the Windows User Account Control. (The Medic <u>will</u> be able to be used to make changes to your machine)

c.   When the Medic opens, 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@mhi.ca, 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@mhi.ca.

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:

	Error	Solution
1.	**Python Versions** … name: mhi Version: 0.8.1 Summary: MH for IMAP Home-page: http://github.com/pjz/mhi Author: Paul Jimenez Author-email: pj@place.org License: UNKNOWN Location: c:\program files\python37\lib\site-packages Requires: configobj Required-by: … Conflicts ▶ Installed 3rd party "mhi" ("Mail Handler for IMAP") package conflicts with PSCAD and Enerplot Python Automation	Refer to Section 3.1 for more information on this error. When the Fortran Medic utility is launched with Windows Administrator privileges as per Appendix A.2, the error in the left side will display, and right-clicking on the error will display the following message: **Confirm uninstall** ✕ Installed 3rd party 'mhi' ('Mail Handler for IMAP') package appears to be installed and conflicts with PSCAD and Enerplot Python Automation Currently, to resolve this issue, you need to -Uninstall the 'mhi' Python package Select OK to remove the package Select Cancel to ignore this issue [OK] [Cancel] To remove the 'mhi' Python package, select OK. The folowing message will display, select OK. **Uninstall succeeded** ✕ Successfully uninstalled the 'mhi' Python package [OK]

DOCUMENT TRACKING

Rev.	Description	Date
0	Initial	24/Sept/2019
1	Added Section 3.1	25/Feb/2020
2	Fixed tracking date	09/Oct/22021
3	New Sections 3.2, 3.3, 3.4; New Appendix A, A.1, A.2, A.3, A.4, A.5 New Item 1 added to Appendix A.5	21/Dec/2022
4	Update to Section 3.4	22/Dec/2022
5	Update to Section 3.4	23/Dec/2022
6	Update to Section 3.4; Update to Appendix A.1	23/Dec/2022
7	Renamed Section 3 to "Scripting Issues" Added Section 4 "Running Issues" Renumbered Section 2.2 to 4.1 Renumbered Section 3.1 to 4.2 Renumbered Section 3.3 to 4.3 Renumbered Section 3.4 to 3.1; Update to Section 3.1;	28/Feb/2023