Requirements – The PSCAD Free Edition

1. HARDWARE

Category	Recommendations
Computer	Internet connection

2. USAGE

Category	Requirements
Operating System	Microsoft® Windows 7 SP1 and Windows 10[1] (officially supported) (32-bit and 64-bit)[2] • It may be possible to run on a virtual machine. • The following additional operating systems may also work: Windows 8 and 8.1, and Windows Server 2008 R2 SP1, 2012 R2, 2016 and 2019 • The PSCAD Free Edition is not supported on: Windows XP, Windows Vista, and Windows 7 SP0
Prerequisite Software	Microsoft® Visual C++ 2015 Redistributables, 32-bit[3] Microsoft® .NET Framework 4.0 Full, minimum[4]
Launching and Running	Microsoft® Windows User privileges
User Profile	Mandatory user profiles are not supported
Licensing	See Section 4
GFortran Compiler	Two GFortran compilers are provided for free[5]
Execution Permissions	The application executable files must be whitelisted in all protection software. The normal path is: • C:\Program Files (x86)\PSCADFree\bin\win\PscadFree.exe • C:\Program Files (x86)\PSCADFree\bin\win\tline.exe The executable files created by the application must be permitted in all protection software. See listing in Appendix F of Resolving Issues.
Communication Over TCP/IP	This is required for PSCAD and the executables listed above for the purpose of simulation control and data collection for plots
Folder Permissions	The user must have full permissions for the following folder and sub-folders: • Common Documents folder (e.g. C:\Users\Public\Documents) The following sub-folders will be created, and the user must have full permissions: • C:\Users\\<your username>\AppData\Local\Manitoba HVDC Research Centre • C:\ProgramData\Manitoba HVDC Research Centre
Network Ports	Ports 30,000 to 40,000 must be available to allow PSCAD and EMTDC communication

3.1 INSTALLATION – General

Category	Requirements
Registry Keys Permissions	Permissions on the following 32-bit registry keys are required: • HKCU\Software\Manitoba HVDC Research Centre\Pscad • HKCU\Software\Manitoba HVDC Research Centre Inc\Pscad • HKLM\Software\Manitoba HVDC Research Centre\Pscad • HKLM\Software\Manitoba HVDC Research Centre Inc\Pscad

3.2 INSTALLATION – MyUpdater

Category	Requirements
General Requirements	As listed in Section 3.1
Installing	Microsoft® Windows Administrator privileges Internet connection
Launching (to Install or Update Software)	Microsoft® Windows Administrator privileges Internet connection
Launching (to Uninstall Software)	Microsoft® Windows Administrator privileges
Launching (to Launch Installed Software)	Microsoft® Windows User privileges (unless otherwise specified)
Connection to Publication Server	Add one of the following URLs to all anti-virus/firewall whitelists: • http://publisher.pscad.com:80/ • net.tcp://publisher.pscad.com:443/
Protocols	TLS 1.0

3.3 INSTALLATION – Installer Utility

Category	Requirements
General Requirements	As listed in Section 3.1
Downloading	Internet connection
Running	Microsoft® Windows Administrator privileges

4 CERTIFICATE LICENSING

Category	Requirements
Certificate	MyCentre user account with access to a licensed WorkGroup
Operational Requirements	Supported on a local desktop, or remote desktop, or over virtual private network (VPN). Not guaranteed in a cloud desktop environment, but could be verified using diagnostic tools.
Connection to the License Server	Add both of the following URLs to all anti-virus/firewall whitelists: • http://licensing.pscad.com:80/Licensing • net.tcp://licensing.pscad.com:443/Licensing
Activate/Release/Refresh a Certificate	Microsoft® Windows User Privileges Internet connection

Using Certificates	The following sub-folders will be created for certificates for older versions of the PSCAD Free Edition (v4.5.1…v4.6.3):
	• Path: C:\Users\Public\Documents\Manitoba HVDC Research Centre\Licensing\Licenses
	• Required permissions: FullControl for Everyone
	The following sub-folders will be created for certificates for newer versions of the PSCAD Free Edition (v5 and newer):
	• Path: C:\Users\user_id\AppData\Local\Manitoba Hydro International\Licensing\Licenses
	• Required permissions: FullControl for **<user_id>**
	The following sub-folder should already exist and will be used:
	• Path: C:\ProgramData\Microsoft\Crypto\RSA\MachineKeys
	• Required permissions: Read, Write for Everyone
Protocols	TLS 1.0

5. DIAGNOSTIC TOOLS

Category	Requirements
Running the Get Info tool	Microsoft® Windows User Privileges
	Internet connection is required if downloading the posted (current) version
Running the Fortran Medic Tool	Microsoft® Windows User Privileges
	Internet connection is required if downloading the posted (current) version
Viewing Log Files	Microsoft® Windows User Privileges

Notes

1. For Microsoft® Windows 10 Build 1803 or better, the following is required: Sx32w.dll, version 7.1.0.14.

2. The PSCAD Free Edition is available only as a 32-bit application, and is supported on Windows 32-bit and Windows 64-bit.

3. If this prerequisite software is not already installed, the user will be prompted to install it when PSCAD is installed.

4. This framework comes complete with the *Microsoft® Windows 7* operating system and later. If this prerequisite software is not already installed, the user will be prompted to install it when PSCAD is installed.

5. A FORTRAN compiler is required to build and simulate PSCAD projects. For your convenience, two free compilers are provided as separate downloads, GFortran v4.2.1 and GFortran v4.6.2.

DOCUMENT TRACKING

Rev.	Description	Date
0	Initial	8/May/2019
1	Correction to Section 2	8/May/2019
2	Added Protocols to Charts 3.2 and 4; Updated versions of Windows servers in Chart 2	22/Oct/2020
3	Update to folder permissions in Chart 4	27/Oct/2020