DeepLines™ *5.7*

Installation & Release Guide

May 2022

PRINCIPIA

IFP Energies nouvelles

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1 Introduction

Welcome to the installation and release guide for DeepLines™ Version 5.7.

DeepLines™ is part of the marine software solutions developed by Principia and IFP Energies Nouvelles.

DeepLines™ is based on the finite elements method and forms an integrated software solution to perform in-place and installation analyses of a wide range of offshore structures including flexible and steel risers, umbilical risers, pipelines, floating hoses and mooring lines.

The software package combines a powerful finite elements engine featuring advanced modeling capabilities with an intuitive user interface offering optimum productivity through multi-threading.

This guide describes what's new and updated in this release and helps you install and start the latest version of DeepLines.

The latest release of DeepLines is Version 5.7.1. This version is a major update including a range of enhancements and bug fixes over Version 5.6.2

2 Installation instructions

2.1 System requirements

DeepLines may be installed and run on any Intel x86 based PCs and servers under any of the following operating systems:

- Windows 7 (64 bits mode)
- Windows 10 (64 bits mode)
- Windows Server 2012 R2 Standard
- Windows Server 2016 Standard
- Windows Server 2019 Standard

Note that any Windows version prior to the one listed above are not supported.

Warning:

Version 5.7 installer include Microsoft installer for universal C runtime in Windows.

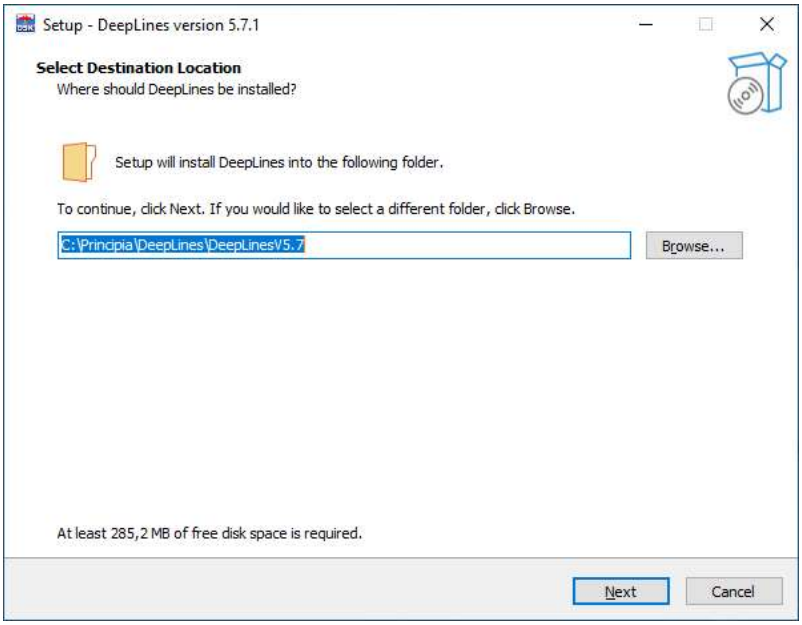
2.2 Getting the setup application

The Setup application may be either distributed on CD-ROMs upon request or made available for download by emailing us at deeplines@principia.fr.

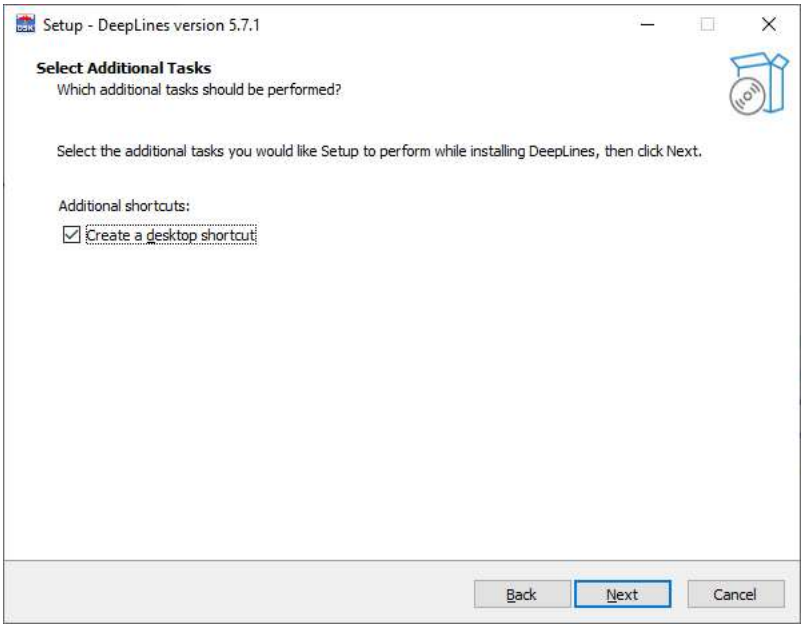
2.3 Running the setup application

DeepLines must then be installed on all end-user machines which require administration rights.

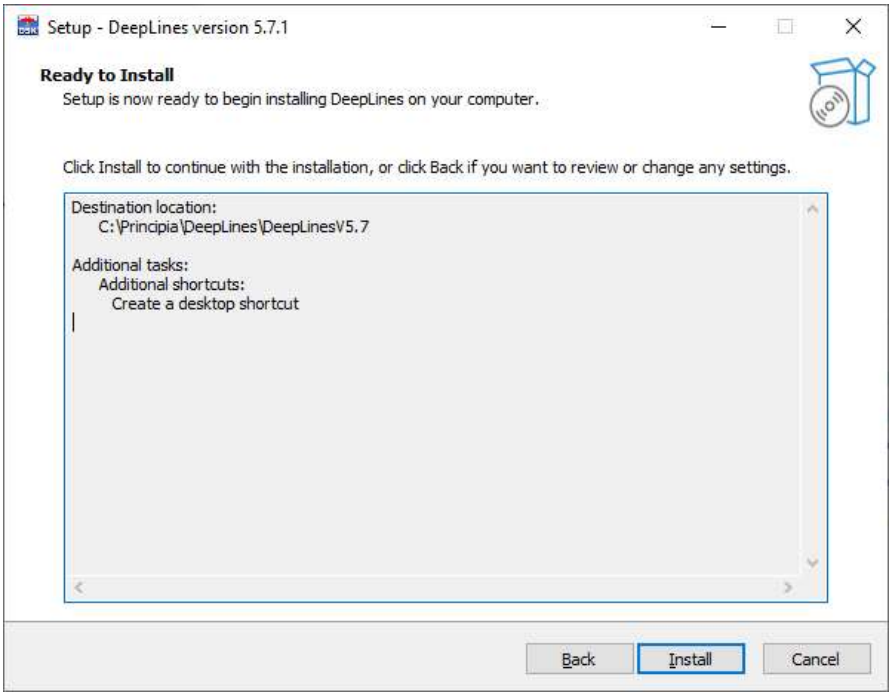
Double clicking the setup application would start the installer. Clicking on **Cancel** would abort the installation process. Click on **Next** to accept the agreement and continue with the installation. This brings in the following window.



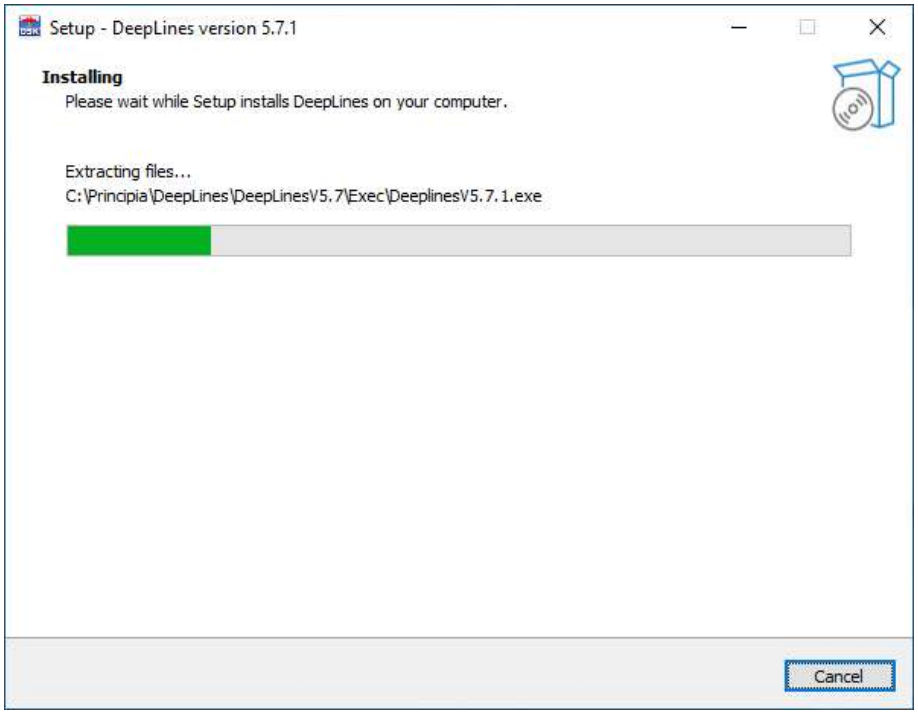
It asks for the installation folder where the DeepLines files are to be copied. You may select **Browse** and further specify a directory. It is actually recommended to use the default destination folder, which is **C:\Principia\DeepLines**, rather than any other. Click then **Next** to continue.

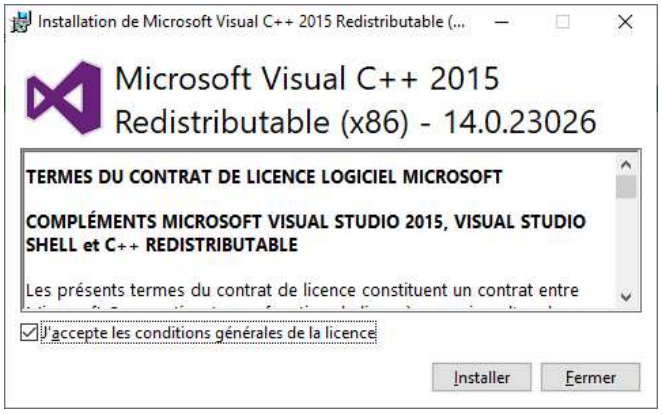


Tick or Unitic the box depending if you want a shortcut on your Destop to be created. Pressing **Next** will bring in the next window which will ask you to confirm installation:



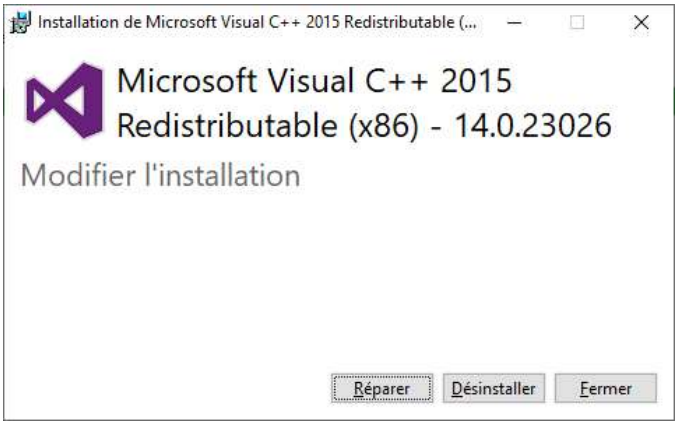
At this point you can still modify the settings by clicking **Back** to display the previous windows again. Once all the settings are appropriate, click **Install** to start the installation process: the green bar indicates the progress of the installation which may take few minutes.





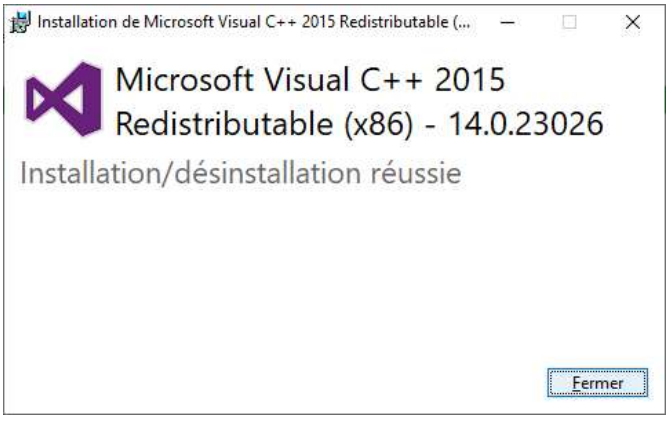
The Microsoft Visual C++ 2015 Redistributable prompt for installation with the above window if not already install. Just click on **Install** button.

Please note that if the Microsoft Visual C++ 2015 Redistributable is already installed, it will launch the setup and you should have the following Window:

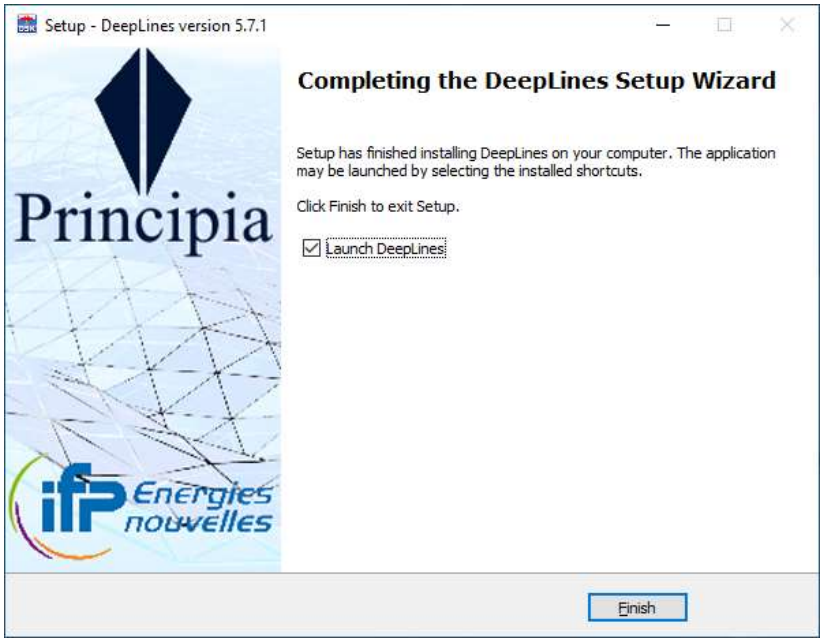


If, so just close the Window without updating anything, it will ask to confirm cancel, say yes, the redistributable is required to use DeepLines.

If not already installed, you can continue the process of installation:



Once installed, you can close the setup Windows.



And then close the main installation process by clicking **Finish**.

2.4 FLEXNET license server

To use the present version of PRINCIPIA's software, the Flex Net Publisher License Manager version 11.12 (or later) must be installed on the license server.

The FLEXNET installation guide may be downloaded from PRINCIPIA's website at:

https://transferts.principia.fr/dl0815213231

The FLEXNET Publisher setup application may be downloaded from PRINCIPIA's website. Select the appropriate version depending on your OS version (32 or 64bits):

- 32-bits server: **https://transferts.principia.fr/dl0245530222**
- 64-bits server: **https://transferts.principia.fr/dl8768804340**

2.5 Linking with the license file

Once the setup is complete, it is necessary to create the link between the application installed on the end user machine and the license file. This link is made through a Windows environment variable named PRLM_LICENSE_FILE.

The PRDLM_LICENSE_FILE environment variable must be defined if not existing on the end user machine or modified as needed. Creating or updating the environment variable requires administration rights on the machine.

Content of the PRDLM_LICENSE_FILE variable must be set as follows depending on whether the license file is stored on a license server or stored on the local machine.

License file location	PRDLM_LICENSE_FILE value	Comment

Server	17501@Servername	Depends on license server name
Local	c:\flexlm\license.dat	Set the actual path to the file

2.6 License file content

DeepLines is protected through license files that may be either installed on the end-user machine or on local networks. Each license file includes a number of protection keys that define which features you are allowed to run within the GUI. The keys are either linked to the GUI or to the FE engine, as detailed in the help documentation: Introduction > Getting Started > License File and Add-on Modules.

License files are distributed by Principia when purchasing the software. Using multiple protection keys allows tailoring your installation depending on your needs. The different modules from the GUI may be accessed provided that the corresponding facilities are enabled through your license file.

It is advised that you check out with your network administrator or IT department which licenses keys are actually available within your installation.

2.7 Enabling multi-processing

Multi-threaded execution of analysis and post-processing tasks is available through the **Batch Processing** form. The number of simultaneous jobs can be chosen on the **Batch processing option** dialog box. See the help documentation: User Interface > Batch Processing > Optional Settings.

This Version enables running up to 32 concurrent tasks using a single license key. This however requires that the FlexNet Publisher license manager installed on the license server is upgraded to version 11.17 (or later).

Version 11.17 of FlexNet Publisher may be downloaded from our website as detailed in section 2.4 of this guide.

2.8 Installation troubleshooting

Once you have successfully installed the software on your machine, there is a recommended check list to review before you actually start working with the latest release.

- **Check the availability of your license file:** When started, the GUI will automatically check that a license file is available either on your hard drive or through your local network. Most of the installations are based on network licensing, which means that the license file is located on a local server. The path to access your license file must be specified through a system variable named PRDLM_LICENSE_FILE. If you were not given administrator privileges, then contact your network administrator to check the content of this variable and modify it when necessary.

- **Reduce the hardware acceleration:** The hardware acceleration is a parameter that controls whether the graphics will display on your screen using the main processor or the graphics driver. Using the latter allows better performances when displaying complex 3D graphics. A few compatibility problems have however been observed with older previous release between particular graphics drivers and several OpenGL subroutines used by the GUI to display the objects in the 3D View window. This bug has now been fixed for most of the graphics drivers available on the market, but could however persist on particular

instances. This bug would cause the GUI to close abruptly without displaying any error message. We therefore recommend that you set the hardware acceleration to zero. This operation is perfectly safe and has no effect at all on the performances of the main processor.

Others recommendations about the compatibilities of the previous versions are detailed on the help documentation: Introduction > Getting Started > Installation and running instructions.

2.9 Help documentation

The help documentation is available from:

- The GUI: **Help** item of the menu bar.
- The Windows menu: Principia > Deeplines > Deeplines*Version* > OnLineHelp.

2.10 Technical support

Our technical support team may help you in troubleshooting your installation or assist with any problem you might have when using the software.

Please contact us by email at deeplines@principia.fr or give us a call at: +33 (0) 4 42 98 11 80 (head office in France).