OCTA 8.4 for Windows Installation Manual

May 28, 2021

This document describes how to install OCTA 8.4 for Windows. The installer will install the following applications and tools:

OCTA simulation engines
GOURMET
AITool
ImageLoader

Some Python extension packages are required in order to use AI tools, and this installer will install all of the necessary packages. The installer includes the following extension libraries for Python. (Dependent libraries installed together with these packages are not listed here.)

python 3.7.9, numpy 1.18.5, pandas 1.0.5, pillow 8.1.0, scipy 1.6.1,
scikit-learn 0.22.1, h5py 2.10.0, opencv 4.5.1.48, tensorflow 1.15.5,
pyside2 5.15.2, matplotlib 3.3.4

Currently available hardware is

Computers with x86_64 series CPU of Intel corp. or compatible CPU of them.

We confirmed that OCTA works on the following OS

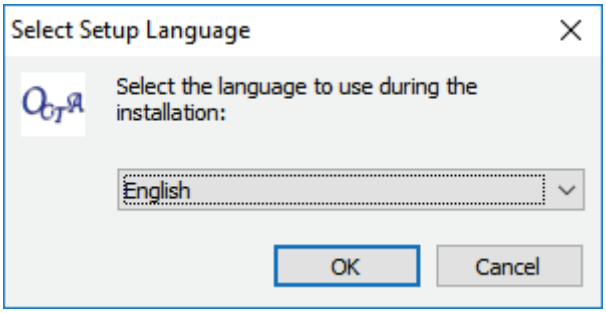
Windows 8.1 (64bit)
Windows 10 (64bit).

You can install OCTA with the following steps:

(1) Launch the installer

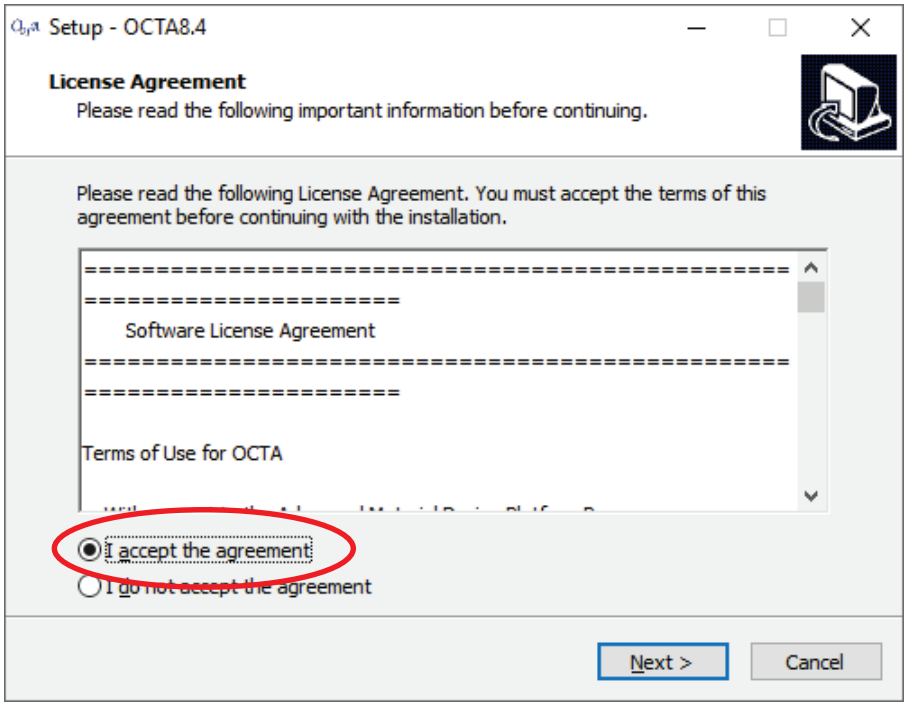
Double-click OCTA84_WIN64.exe, or execute OCTA84_WIN64.exe from “Run” in the “Start” menu.

(2) Select the language for the installer to use in instructions



(3) Accept the End User License Agreement

Click the “Accept” button, and then click the “Next” button.

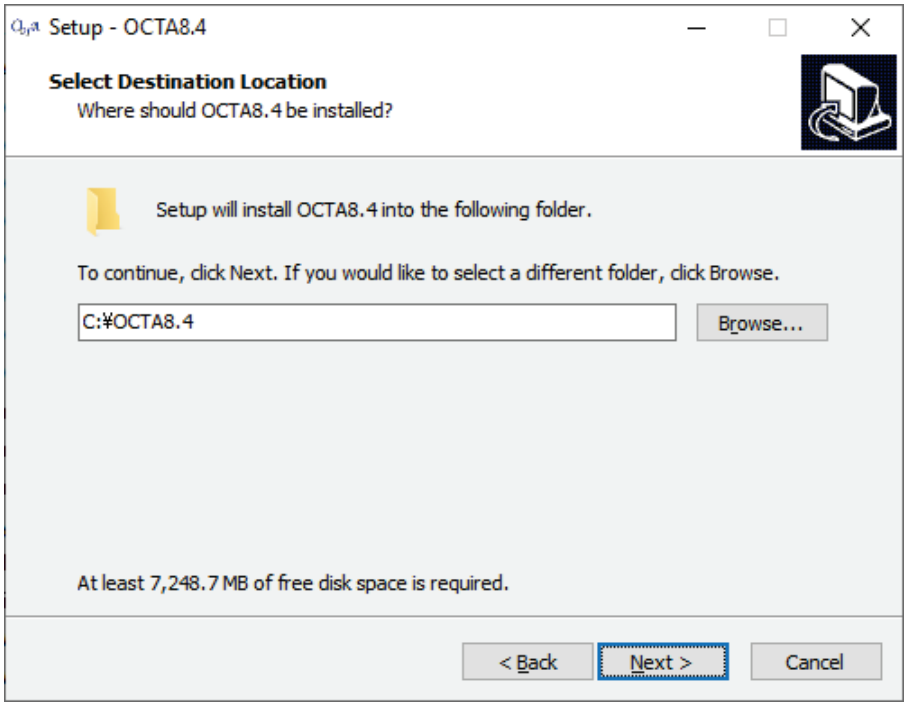


When you want to check the license agreement after installation, see OCTA8.4/ License.txt file. All license document files of Python extended packages included in the installer are located in OCTA8.4/DOCUMENTS/licenses.

(4) Specify the location for installation

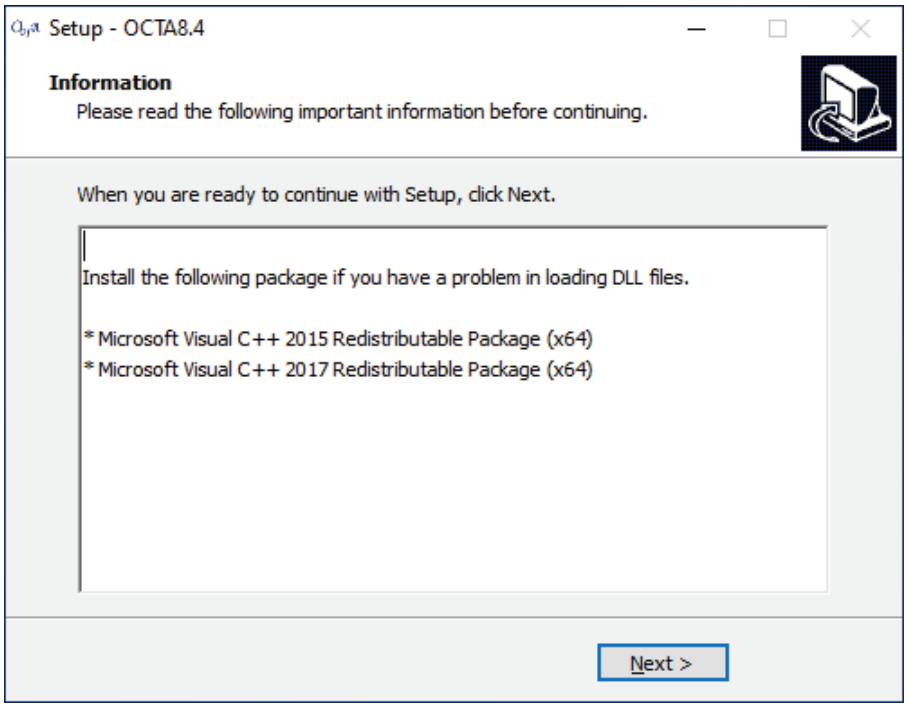
Specify the location for installing OCTA. If you have OCTA of the same version previously installed on your PC, uninstall it. In particular, you will need to uninstall the Python application.

Delete all directories within the GOURMET or GOURMET/bin directory. Overwriting previously installed Python libraries without uninstalling may cause OCTA to function abnormally.

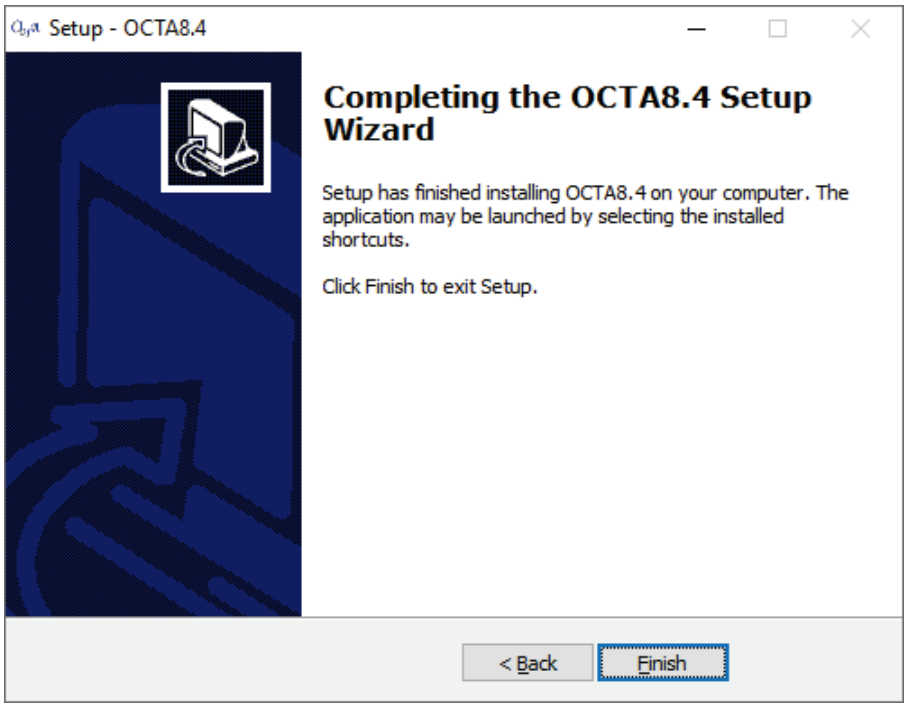


(5) Follow the instructions in the installer, and click the “Next” or “Install” button to complete the installation

Finally, the confirmation screen about Microsoft Visual C++ Redistributable Package appears. As necessary, please download the vcredist file from the Microsoft homepage and install it.

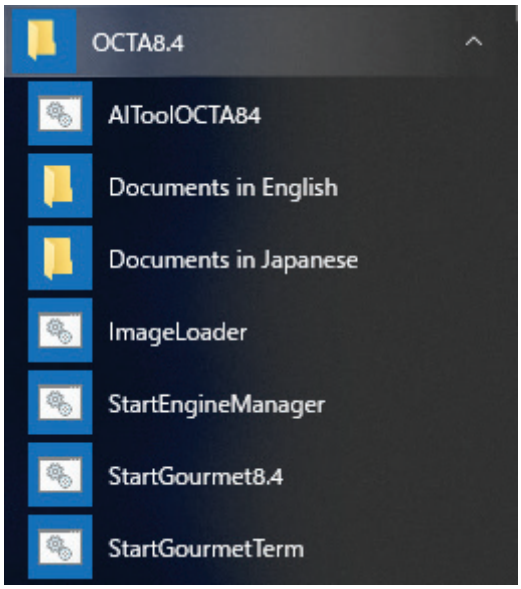


The following screen appears when the installation is finished. Click the "Finish" button to close the installer.



(6) Review the installed libraries

If necessary, you can review the installed libraries and their versions. To do so, select “StartGourmetTerm” from the “Start” menu.



In the displayed command window, execute the “python –m pip list” command in order to see the libraries installed in Python and their versions.

You can use “python –m pip install” command in the command window to install additional extension packages. However, this may cause the AITools and other tools to function abnormally due to a change in the versions of Python or the extension packages. Please be careful not to update Python or the extension packages.

The environment variables for executing the OCTA simulation engines (cognac1012, sushi, pasta, …) are set in the GourmetTerm command window.

(7) How to launch each tool

You can select any of the following items for OCTA8.4 from the “Start” menu to launch the corresponding tools shown here:

StartGourmet8.4	: GOURMET
AIToolOCTA84	: AITool
ImageLoader	: ImageLoader

You can also launch GOURMET by double-clicking the StartGourmet8.4 icon on the desktop.

In Windows 10, you can create icons on the desktop for launching any of the other tools. To do so, right-click on AIToolOCTA84 or any other tool that you wish from the menu, and then select “Open file location” from the “More” menu. A list of shortcut icons for the menu group will be displayed. Copy the desired shortcut icon to the desktop.

(8) To uninstall OCTA:

Select “OCTA8.4” in the “Uninstall or change a program” window from the Windows Control Panel to uninstall OCTA.

Even after the uninstallation is finished, some files such as the Python cache file will still be present and will not be removed by the uninstaller. You will need to delete these files manually.

Appendix

How to compile GOURMET software.

1. Microsoft Visual C++ compilation

Open GOURMET/src/winbuild3/shaker/shaker.sln in Visual Studio 2015 or 2017. Change "Solution configurations" to "Release" and "Solution platform" to "x64". (You may need to change the platform toolset in Property Pages dialog box for each project.)

If you need the platform library (UDF file I/O interface library for the simulation engines), select libplatform project in Solution Explorer, and build it. The platform library file is created in GOURMET/lib/win64 directory.

Normally you do not need to compile the dynamic link library for GUI named shaker.dll, which is the built-in library. When you need to build the shaker.dll, you need the following external software.
jdk 1.8 or later.
It requires a development environment kit (JDK), not a runtime environment.

The build method is as follows.
Right-click to open the shortcut menu for shaker project in Solution Explorer, and then choose "Set as StartUp Project".
Next, in Solution Explorer, right-click on shaker project to open the shortcut menu. Choose Properties to open the shaker Property Pages dialog box.
Select the Configuration Properties > VC++ Directories > General > Include Directories.
Set the include and include¥win32 directories in Java environment as in the following examples.
C:¥Program Files¥AdoptOpenJDK¥jdk-8.0.252.09-hotspot¥include
C:¥Program Files¥AdoptOpenJDK¥jdk-8.0.252.09-hotspot¥include¥win32

To build shaker.dll, right-click the project item and select "Build" item from the menu that appears, or select "Build" from the Build menu.

2. gcc/g++ compilation

Using gcc and g++ in Cygwin or Mingw (Cygwin or MSYS2), you can build the UDF file I/O

interface library libplatform.

(1) Building libplatform.a in MinGW (Cygwin or MSYS2)
Execute the following commands.
$ cd OCTA8.4/GOURMET/src
$ ./configure --with-win64 --host=x86_64-w64-mingw32
$ sh touch_config.sh
$ make
$ make install
$ make clean

The library file is created in OCTA8.4/GOURMET/lib/win64 directory.

(2) Building in Cygwin
In the case of MinGW above, the second line is as follows.
$ ./configure

The library file is created in OCTA8.4/GOURMET/lib/cygwin directory.