

The instructions given here are not comprehensive of all the options for installing OpenFAST. Other options can be found in the OpenFAST documentation:
<https://openfast.readthedocs.io/en/main/source/install/index.html#>

Mac systems

1. OpenFAST can be installed through conda, which requires an Anaconda installation. If Anaconda is already installed on your system, you can skip to step 3. There are several different ways to install Anaconda. One option is directly through the Anaconda website (<https://www.anaconda.com/download>). You can hit “skip registration” if you prefer not to provide your email address.

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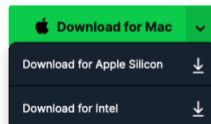
Skip registration

Then, choose the “Mac” download and select either “Download for Apple Silicon” or “Download for Intel”, depending on your processor. Instructions for determining your processor type can be found here: <https://support.xtool.com/article/643>.

Download Now

For installation assistance, refer to [Troubleshooting](#).

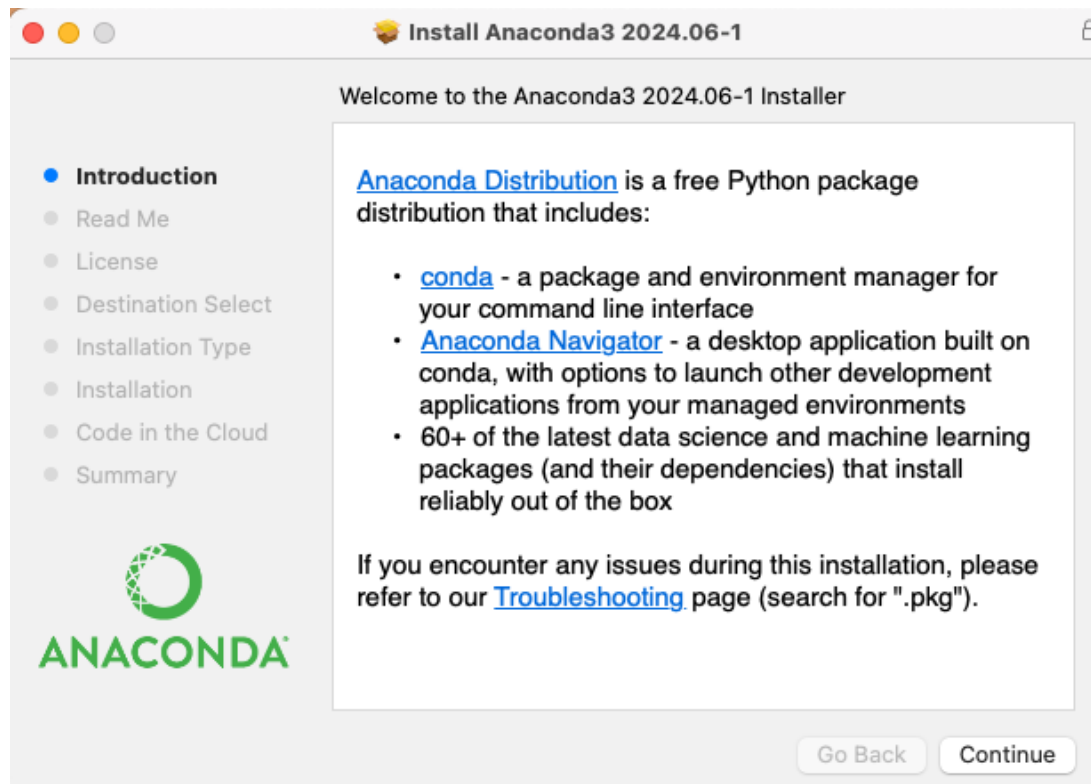
Download Distribution by choosing the proper installer for your machine.



Anaconda Installers

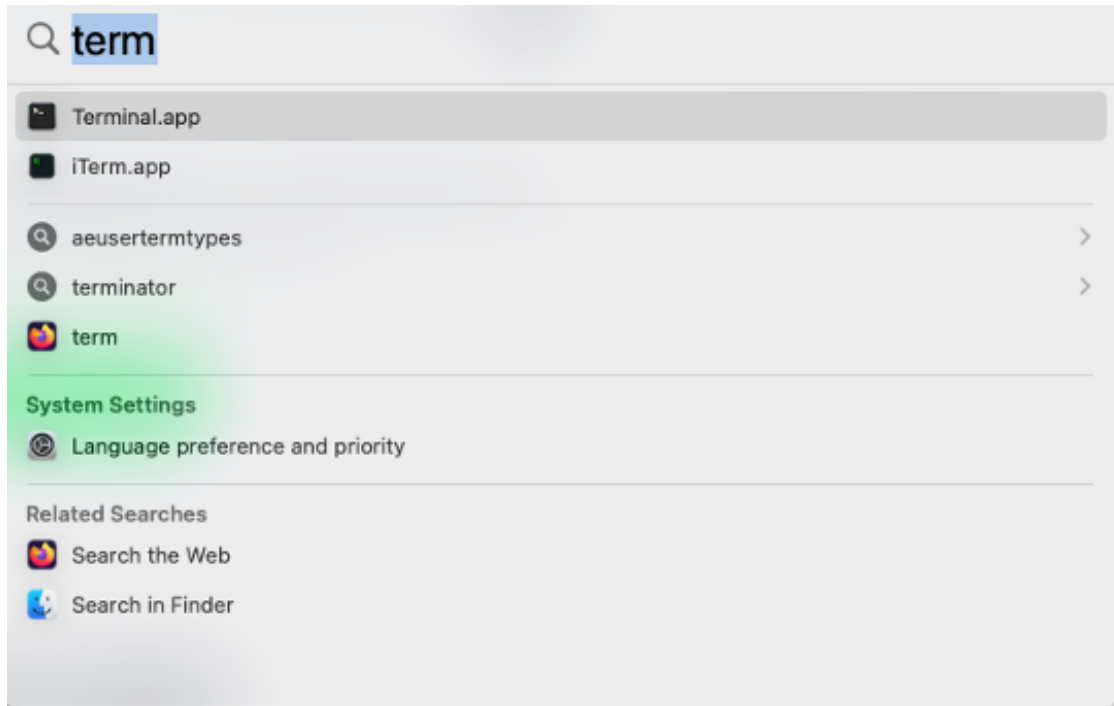
Windows	Mac	Linux
Python 3.12 📄 64-Bit Graphical Installer (912.3M)	Python 3.12 📄 64-Bit (Apple silicon) Graphical Installer (704.7M) 📄 64-Bit (Apple silicon) Command Line Installer (707.3M) 📄 64-Bit (Intel chip) Graphical Installer (734.7M)	Python 3.12 📄 64-Bit (x86) Installer (1007.9M) 📄 64-Bit (AWS Graviton2 / ARM64) Installer (800.6M) 📄 64-bit (Linux on IBM Z & LinuxONE) Installer (425.8M)

Find the installer download in your Downloads folder, and double click on it. Follow the prompts to install Anaconda. Selecting the default install options when relevant should be sufficient.



Another option to install Anaconda is through the Homebrew package manager. Detailed instructions for this method will not be covered here but can be found at the following link: <https://medium.com/ayuth/install-anaconda-on-macos-with-homebrew-c94437d63a37>.

2. Now test that your Anaconda installation is successful. Open a terminal by searching for and opening “Terminal.app” (the default Mac terminal), or your preferred terminal if others are installed.



```
hross — hross@hross-38546s — ~ — -zsh — 80x24
Last login: Tue Jul 23 09:26:32 on ttys002
NOTICE TO USERS:
This is a Federal computer system and is the property of the United States Government. It is for authorized use only. Users (authorized or unauthorized) have no explicit or implicit expectation of privacy.

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LOG OFF IMMEDIATELY if you do not agree to the conditions stated in this warning.
~ > █
```

Type `conda list` into the terminal. This command displays a list of packages installed in your active environment and their versions and will only execute if your Anaconda installation is successful.

```
hross — hross@hross-38546s — ~ — -zsh — 80x24

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LOG OFF IMMEDIATELY if you do not agree to the conditions stated in this warning.
[~ > conda list]
# packages in environment at /opt/homebrew/Caskroom/miniforge/base:
#
# Name                                Version                                Build                                Channel
archspeg                              0.2.2                                pyhd8ed1ab_0                        conda-forge
boltons                               23.1.1                               pyhd8ed1ab_0                        conda-forge
brotli-python                         1.1.0                                py310h1253130_1                    conda-forge
bzip2                                  1.0.8                                h93a5062_5                          conda-forge
c-ares                                1.24.0                               h93a5062_0                          conda-forge
ca-certificates                       2023.11.17                           hf0a4a13_0                          conda-forge
certifi                               2023.11.17                           pyhd8ed1ab_0                        conda-forge
cffi                                  1.16.0                               py310hdc7c05_0                      conda-forge
charset-normalizer                    3.3.2                                pyhd8ed1ab_0                        conda-forge
colorama                              0.4.6                                pyhd8ed1ab_0                        conda-forge
conda                                  23.11.0                              py310hbe9552e_1                    conda-forge
conda-libmamba-solver                 23.12.0                              pyhd8ed1ab_0                        conda-forge
conda-package-handling                2.2.0                                pyh38be061_0                       conda-forge
conda-package-streaming               0.9.0                                pyhd8ed1ab_0                       conda-forge
```

3. Now, create a new conda environment for OpenFAST: `conda create -n openfast_env`

```
hross — hross@hross-38546s — ~ — -zsh — 106x42
[~ > conda create -n openfast_env

Channels:
 - conda-forge
Platform: osx-arm64
Collecting package metadata (repodata.json): done
Solving environment: done

==> WARNING: A newer version of conda exists. <==
  current version: 23.11.0
  latest version: 24.5.0

Please update conda by running

  $ conda update -n base -c conda-forge conda

## Package Plan ##

  environment location: /opt/homebrew/Caskroom/miniforge/base/envs/openfast_env

Proceed ([y]/n)? y

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#   $ conda activate openfast_env
#
# To deactivate an active environment, use
#
#   $ conda deactivate

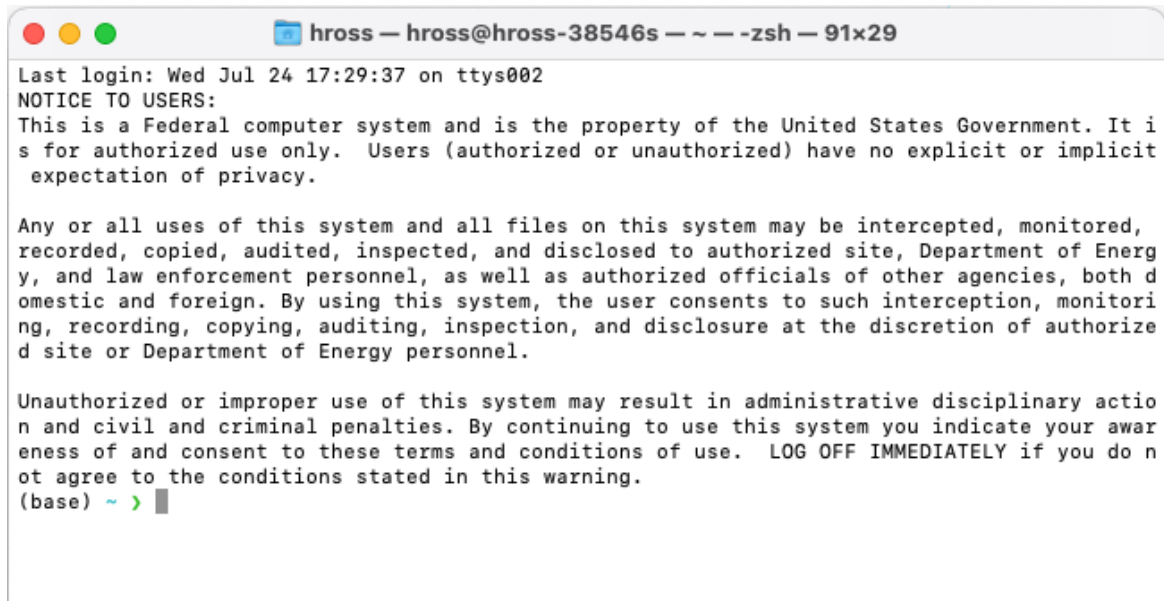
[~ > ]
```

Run `conda init zsh`

```
hross — hross@hross-38546s — -zsh — 106x42
[~ > conda init zsh
no change      /opt/homebrew/Caskroom/miniforge/base/condabin/conda
no change      /opt/homebrew/Caskroom/miniforge/base/bin/conda
no change      /opt/homebrew/Caskroom/miniforge/base/bin/conda-env
no change      /opt/homebrew/Caskroom/miniforge/base/bin/activate
no change      /opt/homebrew/Caskroom/miniforge/base/bin/deactivate
no change      /opt/homebrew/Caskroom/miniforge/base/etc/profile.d/conda.sh
no change      /opt/homebrew/Caskroom/miniforge/base/etc/fish/conf.d/conda.fish
no change      /opt/homebrew/Caskroom/miniforge/base/shell/condabin/Conda.psm1
no change      /opt/homebrew/Caskroom/miniforge/base/shell/condabin/conda-hook.ps1
no change      /opt/homebrew/Caskroom/miniforge/base/lib/python3.10/site-packages/xontrib/conda.xsh
no change      /opt/homebrew/Caskroom/miniforge/base/etc/profile.d/conda.csh
no change      /Users/hross/.zshrc
No action taken.
[~ > ]
```

Note that `zsh` may need to be replaced by your shell name, which should be displayed at the top of your terminal.

4. Close and reopen your terminal

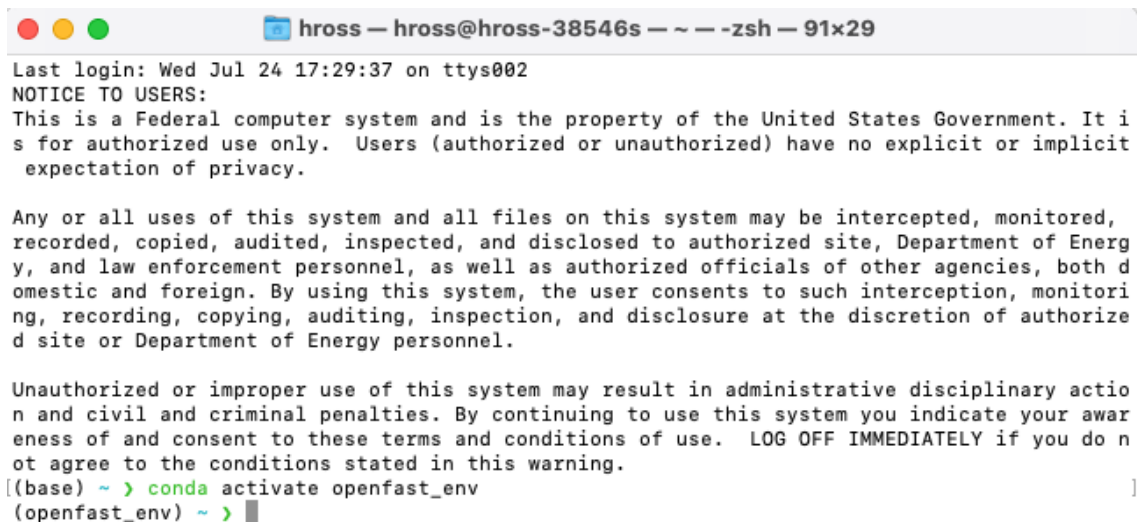


```
hross — hross@hross-38546s — ~ — zsh — 91x29
Last login: Wed Jul 24 17:29:37 on ttys002
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(base) ~ >
```

5. Activate the environment: `conda activate openfast_env`



```
hross — hross@hross-38546s — ~ — zsh — 91x29
Last login: Wed Jul 24 17:29:37 on ttys002
NOTICE TO USERS:
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(base) ~ > conda activate openfast_env
(openfast_env) ~ >
```

6. Install OpenFAST: `conda install -c conda-forge openfast`. This will install the most recent version of OpenFAST.

```

hross — hross@hross-38546s — ~ — -zsh — 91x29
[(openfast_env) ~ > conda install -c conda-forge openfast
Channels:
- conda-forge
Platform: osx-arm64
Collecting package metadata (repodata.json): done
Solving environment: done

==> WARNING: A newer version of conda exists. <==
current version: 23.11.0
latest version: 24.5.0

Please update conda by running

$ conda update -n base -c conda-forge conda

## Package Plan ##

environment location: /opt/homebrew/Caskroom/miniforge/base/envs/openfast_env

added / updated specs:
- openfast

```

7. Test that OpenFAST was installed correctly: `which openfast`. This will display the installation location.

```

hross — hross@hross-38546s — ~ — -zsh — 91x29

The following packages will be downloaded:

package | build | size | channel
-----|-----|-----|-----
libcxx-18.1.8 | h167917d_0 | 1.2 MB | conda-forge
Total: 1.2 MB

The following NEW packages will be INSTALLED:

libcxx      conda-forge/osx-arm64::libcxx-18.1.8-h167917d_0
libgfortran conda-forge/osx-arm64::libgfortran-5.0.0-13_2_0-hd922786_3
libgfortran5 conda-forge/osx-arm64::libgfortran5-13.2.0-hf226fd6_3
llvm-openmp conda-forge/osx-arm64::llvm-openmp-18.1.8-hde57baf_0
openfast    conda-forge/osx-arm64::openfast-3.5.3-hbd8d116_0

Proceed ([y]/n)? y

Downloading and Extracting Packages:

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
[(openfast_env) ~ > which openfast
/opt/homebrew/Caskroom/miniforge/base/envs/openfast_env/bin/openfast
(openfast_env) ~ >

```

You can also run `openfast -v`, which will display version information. Successful running of these commands indicates that OpenFAST was installed.

```
hross — hross@hross-38546s — ~ — zsh — 91x31
(openfast_env) ~ > openfast -v

*****
*****
OpenFAST

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This program is licensed under Apache License Version 2.0 and comes with ABSOLUTELY NO WAR
RANTY.
See the "LICENSE" file distributed with this software for details.
*****
*****

OpenFAST-v3.5.3-dirty
Compile Info:
- Compiler: GCC version 12.3.0
- Architecture: 64 bit
- Precision: single
- OpenMP: Yes, number of threads: 10/10
- Date: Apr 26 2024
- Time: 16:41:09
Execution Info:
- Date: 07/24/2024
- Time: 17:44:56-0600

OpenFAST terminated normally.

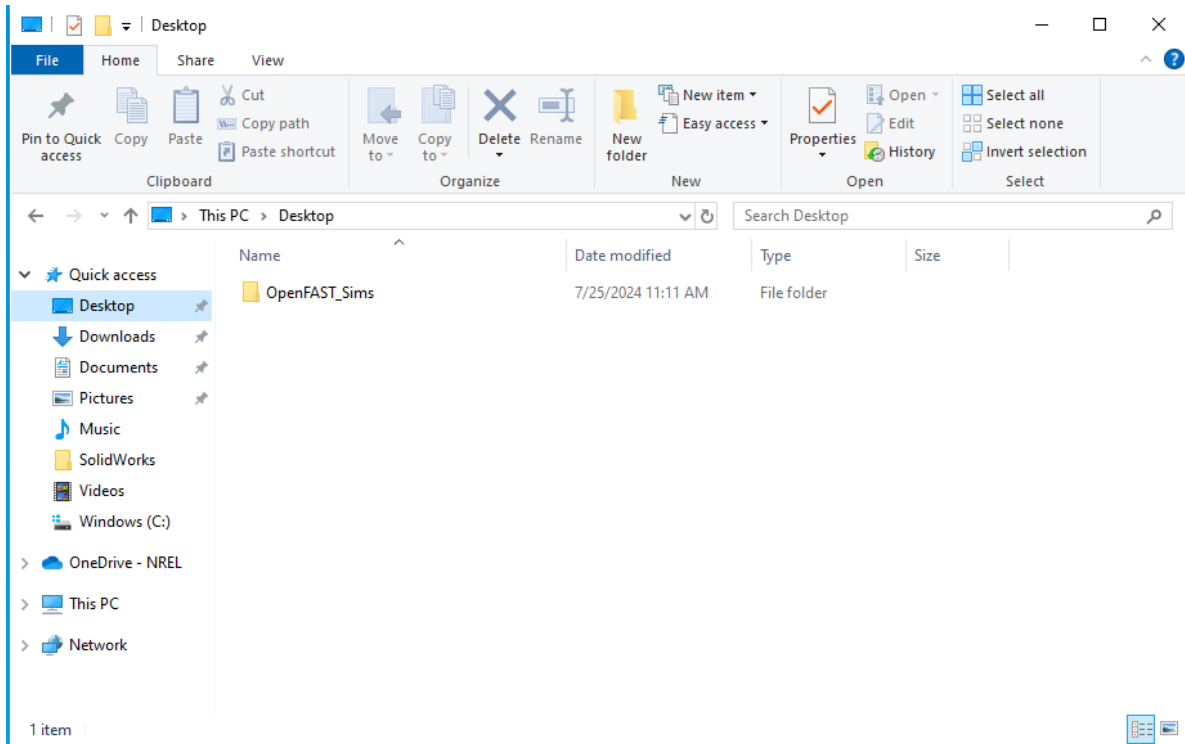
(openfast_env) ~ > █
```

8. After working with OpenFAST, you can simply close the terminal.

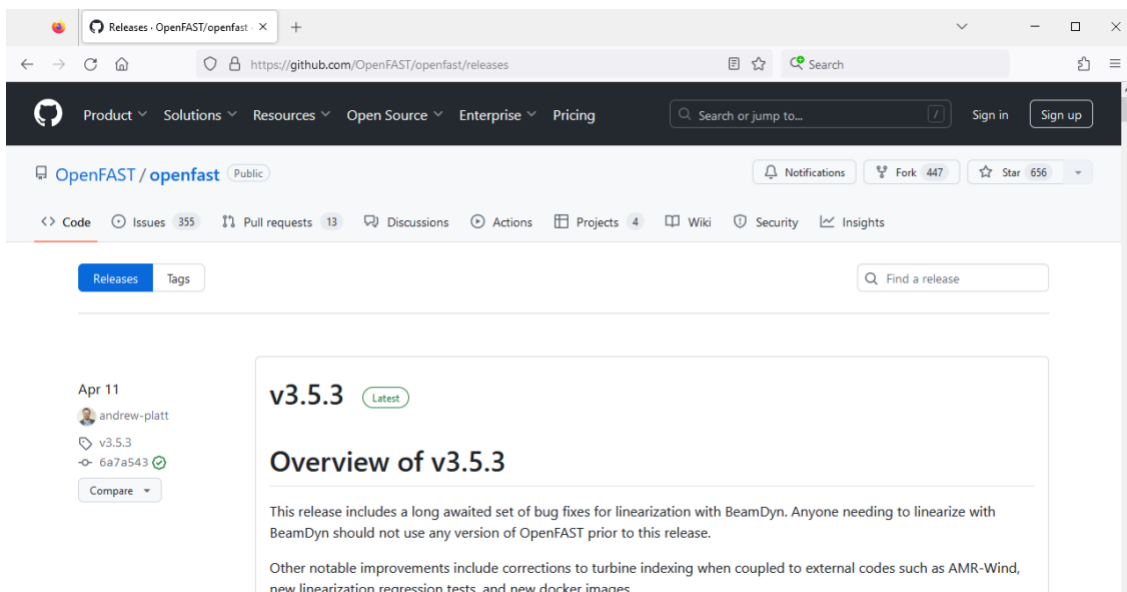
Note that this method will also install module drivers, if available. These allow you to run individual modules (i.e., AeroDyn, HydroDyn) on their own.

Windows systems

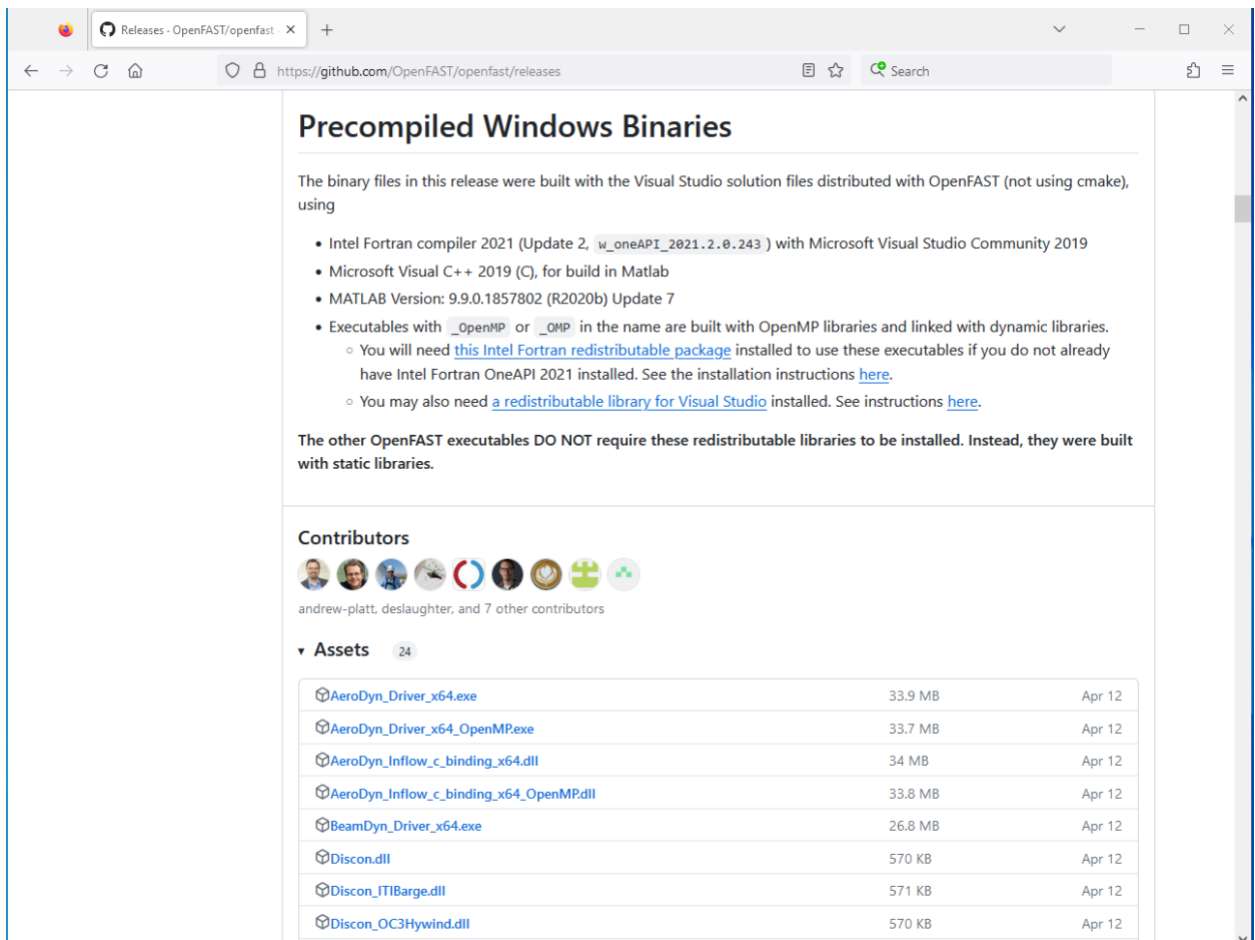
1. Create a new folder for your OpenFAST simulations. I've created a folder on the desktop called "OpenFAST_Sims", but you may want to create the folder in a different location.



2. Go to the OpenFAST releases GitHub page: <https://github.com/OpenFAST/openfast/releases>. The latest release will be shown at the top of the page.



3. Scroll down to the “Assets” header. Note that each version has it own set of Assets, so make sure to select the most recent version, unless you intentionally want to use an older release.



The screenshot shows the GitHub releases page for OpenFAST. The browser address bar indicates the URL is <https://github.com/OpenFAST/openfast/releases>. The page title is "Precompiled Windows Binaries". Below the title, a paragraph states: "The binary files in this release were built with the Visual Studio solution files distributed with OpenFAST (not using cmake), using". This is followed by a bulleted list of dependencies: Intel Fortran compiler 2021 (Update 2, w_oneAPI_2021.2.0.243), Microsoft Visual C++ 2019 (C), for build in Matlab, MATLAB Version: 9.9.0.1857802 (R2020b) Update 7, and Executables with _OpenMP or _OMP in the name are built with OpenMP libraries and linked with dynamic libraries. The last bullet point includes two sub-points: "You will need [this Intel Fortran redistributable package](#) installed to use these executables if you do not already have Intel Fortran OneAPI 2021 installed. See the installation instructions [here](#)." and "You may also need [a redistributable library for Visual Studio](#) installed. See instructions [here](#)." Below this list, a paragraph states: "The other OpenFAST executables DO NOT require these redistributable libraries to be installed. Instead, they were built with static libraries." The "Contributors" section shows avatars of contributors and the text "andrew-platt, deslaught, and 7 other contributors". The "Assets" section is expanded, showing a list of 24 assets. The assets are listed in a table with columns for the asset name, size, and date.

Asset Name	Size	Date
AeroDyn_Driver_x64.exe	33.9 MB	Apr 12
AeroDyn_Driver_x64_OpenMP.exe	33.7 MB	Apr 12
AeroDyn_Inflow_c_binding_x64.dll	34 MB	Apr 12
AeroDyn_Inflow_c_binding_x64_OpenMP.dll	33.8 MB	Apr 12
BeamDyn_Driver_x64.exe	26.8 MB	Apr 12
Discon.dll	570 KB	Apr 12
Discon_ITIBarge.dll	571 KB	Apr 12
Discon_OC3Hywind.dll	570 KB	Apr 12

4. There is a list of executables corresponding to the different ways you can run OpenFAST. Here, we will install only the main OpenFAST program (openfast_x64.exe).

Releases · OpenFAST/openfast · x

https://github.com/OpenFAST/openfast/releases

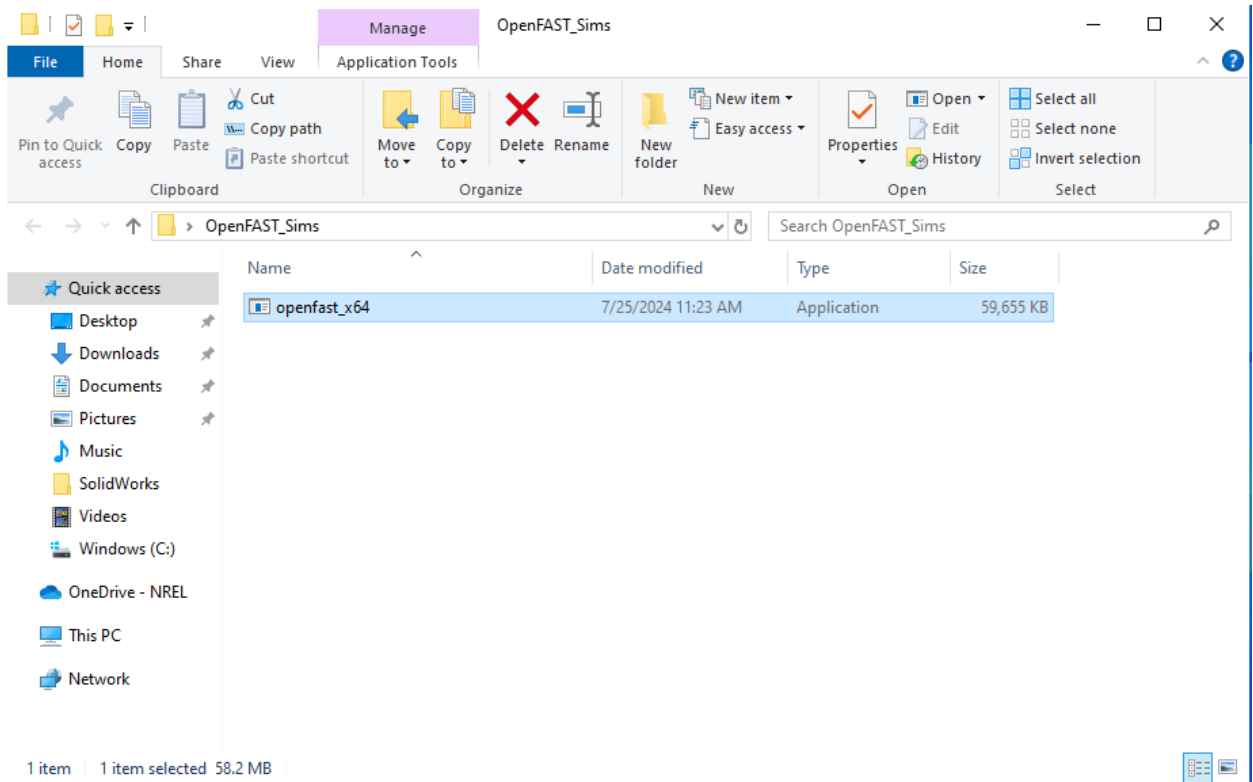
Assets 24

AeroDyn_Driver_x64.exe	33.9 MB	Apr 12
AeroDyn_Driver_x64_OpenMP.exe	33.7 MB	Apr 12
AeroDyn_Inflow_c_binding_x64.dll	34 MB	Apr 12
AeroDyn_Inflow_c_binding_x64_OpenMP.dll	33.8 MB	Apr 12
BeamDyn_Driver_x64.exe	26.8 MB	Apr 12
Discon.dll	570 KB	Apr 12
Discon_ITIBarge.dll	571 KB	Apr 12
Discon_OC3Hywind.dll	570 KB	Apr 12
Discon_SC.dll	570 KB	Apr 12
FAST.Farm_x64.exe	68.9 MB	Apr 12
FAST.Farm_x64_OMP.exe	67.9 MB	Apr 12
FAST_SFunc.mexw64	128 KB	Apr 12
HydroDynDriver_x64.exe	30 MB	Apr 12
HydroDyn_c_binding_x64.dll	30 MB	Apr 12
InflowWind_c_binding_x64.dll	26 MB	Apr 12
InflowWind_driver_x64.exe	26.1 MB	Apr 12
InflowWind_driver_x64_OpenMP.exe	26.1 MB	Apr 12
MoorDynDriver_x64.exe	26.7 MB	Apr 12
MoorDyn_c_binding_x64.dll	26.6 MB	Apr 12
OpenFAST-Simulink_x64.dll	60.1 MB	Apr 12
openfast_x64.exe	58.3 MB	Apr 12
TurbSim_x64.exe	25.3 MB	Jun 18
Source code (zip)		Apr 11
Source code (tar.gz)		Apr 11

1 5 5 people reacted

0 Join discussion

- Click on “openfast_x64.exe” and find the downloaded file (most likely in your Downloads folder). Move this file to the folder you created to host your OpenFAST simulations.



6. This is all that is required to install OpenFAST on Windows.