



Instruction Sheet for solids4foam for OpenFOAM v2412

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Overview

This sheet explains how to install **solids4foam**.

Reference: <https://www.solids4foam.com/installation/installFromSource.html>

Before you begin

- Ensure a stable internet connection; package downloads are large. (Same caution as the original sheet.)

1. Source a supported version of OpenFOAM, then download, build and test soldis4foam

Here we are using OpenFOAMv2412, so we will download soldis4foam-v2.2

a. Download

```
git clone --branch v2.2 https://github.com/solids4foam/solids4foam.git
```

b. Install

```
cd solids4foam  
./Allwmake -j
```

The `-j` flag instructs Allwmake to use all available cores.

If you encounter the error shown in the image below, follow the given steps; otherwise, the installation is complete.



```
karki@Yukesh:~/solids4foam$ ./Allwmake
Unsupported OpenFOAM version sourced!
Unsupported OpenFOAM version sourced!

Checking ThirdParty
Checking eigen
eigen3 found
ThirdParty done

optionalFixes/Allcheck

***** PLEASE FIX THIS *****
You should replace the file '/usr/lib/openfoam/openfoam2412/src/finiteVolume/finiteVolume/ddtSchemes/backwardDdtScheme/backwardDdtScheme.C' with 'optionalFixes/OpenFOAM-v2012/backwardDdtScheme.C' and re-build the library '/usr/lib/openfoam/openfoam2412/src/finiteVolume'.

You can do it by running the following commands:
cp optionalFixes/OpenFOAM-v2012/backwardDdtScheme.C /usr/lib/openfoam/openfoam2412/src/finiteVolume/finiteVolume/ddtSchemes/backwardDdtScheme/
wmake libso /usr/lib/openfoam/openfoam2412/src/finiteVolume
*****

***** PLEASE FIX THIS *****
Please replace the files above
*****

** ERROR with optionalFixes **
Please make the file replacements described above and rebuild OpenFOAM,
or skip these checks by setting 'export S4F_NO_FILE_FIXES=1'.
Read more details on https://www.solids4foam.com/installation/optionalFixes/
```

To fix this:

```
cp optionalFixes/OpenFOAM-v2012/backwardDdtScheme.C /usr/lib/openfoam/
openfoam2412/src/finiteVolume/finiteVolume/ddtSchemes/
backwardDdtScheme/

wmake libso /usr/lib/openfoam/openfoam2412/src/finiteVolume
```

c. Test

```
cd Tutorials
./Alltest
```

2. Supported versions of OpenFOAM

solids4foam requires a working version of OpenFOAM or foam-extend. Currently, the following OpenFOAM versions are supported:



solids4foam version	OpenFOAM/foam version
solids4foam-v1.*	foam-extend-4.0
	foam-extend-4.1
	OpenFOAM-v1812
	OpenFOAM-v1912
	OpenFOAM-7
solids4foam-v2.0	foam-extend-4.1
	OpenFOAM-v2012
	OpenFOAM-9
solids4foam-v2.1	foam-extend-4.1
	OpenFOAM-v2012 ->OpenFOAM-v2312
	OpenFOAM-9
solids4foam-v2.2	foam-extend-4.1
	OpenFOAM-v2012 ->OpenFOAM-v2412
	OpenFOAM-9
development	foam-extend-4.1
	OpenFOAM-v2012 ->OpenFOAM-v2412
	OpenFOAM-9