
Notes on getting up and running with the FreeCAD/Openfoam combo on Windows 11

Setting this up has always been a bit of a job. And with my background I just hack away until logical things get me what I want. Which is the approach I've adopted setting everything up on my new Ryzen Threadripper, RTX4000 machine.

1. Openfoam. I steered away from the traditional Openfoam installation because I'm not sure about docker. I know what it is from meetings in my old job. Just not sure I want to get involved with it. So I looked for a non Docker setup and found blueCFD. I've used this for a few years now and it seems great.
2. Freecad. I've used quite a few versions of this and use it for SPH and CFD pre and post processing.
3. Creative Fields mesher. I like this and use it in everything I do with FC/OF.

Problem 1: Mesher I downloaded the latest version of blueCFD (2024). I did this because I thought I'd need it to run on Windows 11. But when I tried to setup the system there was always an error (2 as I remember) when I tried to install the CF mesher. For no particular reason I thought I'd try the version that works on my existing machine. So I installed blueCFD 2020 and this let me install the mesher and the dependency checker seemed fine.

Problem 2: MPI blueCFD needs MPI version 7.1. You get a "tear down the tree" error which goes away if you run it in single processor mode. This points to the wrong MPI version being installed. Lots of other software I run needs different versions. I was concerned that 7.1 might not be compatible with windows 11. I haven't got time to work out/check if it officially is, but it works. So I uninstall/reinstall MPI to suit what I'm running at the time. Its not a problem for me to do that.

And now I've got a working install of FreeCAD1.00 and blueCFD Openfoam. The latest interface has a lot of new CFD goodies which I'll try when I get a chance. But for now I'll be focussed on Hillclimb Car CFD for a while.

