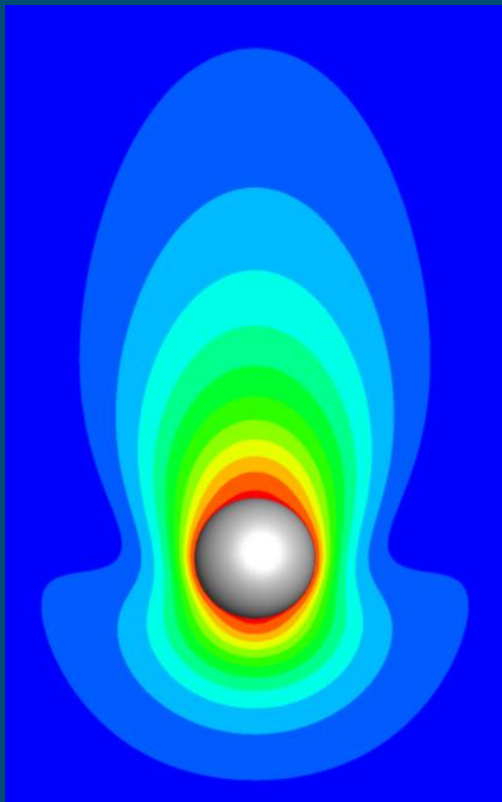


*CFD Research Group Guide Series*

# OpenFOAM USB Stick Starter Guide

Author: Gerald Gallagher



Rev. 3

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This guide contains everything you need to copy the OpenFOAM USB Stick image to your USB stick and start using it. **PLEASE READ IT IN FULL BEFORE STARTING THE PROCESS!**

First you will need a USB stick that is 32 GB or larger. A USB stick with fast read/write capabilities is recommended.

You will also need to download "ubuntu\_xx.xx\_openfoam\_x\_10GB\_vx.x.bin" to your computer and know it's location (the 'x' letters in the file name will be replaced with version numbers e.g. ubuntu\_20.04\_openfoam\_9\_10GB\_v1.0). The file is quite large (approximately 16 GB) as it includes persistent storage of 10 GB. If you want to know more about this, please research "Ubuntu with Persistent Storage". You will also need ImageUSB available at <https://www.osforensics.com/tools/write-usb-images.html>.

The reason for requiring a USB stick larger than 16 GB (e.g. 32 GB) is two USB sticks that have the "same" storage capacity may not have exactly the same storage capacity in reality. They may even just be different by a number of bytes. The size of the image that was made is based off one particular brand of 16 GB USB stick, and this may not fit on another brand of 16 GB USB stick.

Also, please note that you will lose storage capacity due to the setup of the image and that this is normal. The image was kept to 16 GB to allow running on lower storage capacity USB sticks and to reduce download time and bandwidth issues.

Complete the following steps if you have your USB stick and have downloaded the required file:

1. Insert your USB stick into your computer.
2. Run "imageUSB.exe" in the imageusb folder (after unzipping imageusb.zip).
3. In "Step 1", select your USB stick. **MAKE SURE YOU SELECT THE CORRECT ONE! THIS TOOL WILL WIPE THE SELECTED DRIVE!**
4. In "Step 2", make sure that "Write image to USB drive" is selected. Also make sure that the "Post Image Verification" setting is ticked. The other options should be unticked with "Format Option: NTFS" selected and greyed out.
5. In "Step 3", select "ubuntu\_xx.xx\_openfoam\_x\_10GB\_vx.x.bin" in the location that it is saved on your computer.
6. In "Step 4", select "Write". When the process is complete, you USB stick will be ready and have Ubuntu xx.xx and OpenFOAM installed and ready to use.

7. Leave the USB stick inserted and REBOOT your computer. It is very important the you REBOOT rather than SHUT DOWN to enforce a clean boot. For your particular computer, there will be a button to select a temporary startup device. You will need to look online or on the manufacturer's website to determine this and find out how to boot to a temporary startup device for your particular computer model. Usually this key is F12 or Enter. You will need to tap this button repeatedly upon restarting your computer to allow selection of a temporary startup device, or your USB stick.
8. Once you are able to boot, the installation should boot automatically without any further input. One you see the Ubuntu desktop, open the "OPEN\_ME\_FIRST" folder on the desktop and double-click on the "DOUBLE\_CLICK\_ME\_FIRST.txt" file within. Follow the instructions for testing the OpenFOAM installation.
9. When you shut down Ubuntu, wait until your computer asks you to remove the installation media before removing the USB stick. This will prevent some read/write issues.

**Good luck and happy OpenFOAMing!**