What Docker needs

Docker is the program that downloads the toolchain image described in Why a containerized toolchain and runs it as a container. The rest of the course runs inside that container, so none of it works until Docker is installed and running. You'll install it in Lab 02. This page explains what the installer asks of your computer, and why.

Disk, memory and permission

- Roughly 15 GB of free disk space, which covers the image, the PDK and room to work.
- Permission to install Docker Desktop, or Docker Engine on Linux. On a school- or work-managed laptop this may need admin or IT permission.
- On a Mac, Docker Desktop needs at least 4 GB of RAM, which you set under **Settings → Resources**. Apple Silicon Macs (M1/M2/M3) work too, because the IIC-OSIC-TOOLS image is multi-arch, which means it's built for their processors as well as for Intel ones.

Windows: WSL2 and virtualization

WSL2 is a compatibility layer that lets Windows run a lightweight Linux environment behind the scenes. Docker Desktop needs it and uses it by default, and the installer offers to set it up for you. Keep that default by leaving the installer's **Use WSL2 instead of Hyper-V** option checked.

Docker also needs your processor's virtualization support switched on in the BIOS/UEFI setup, the settings screen your computer shows before Windows starts. The setting is usually called Virtualization, Intel VT-x or AMD-V. If it's off, Docker shows a window asking you to enable it, and Lab 02 walks you through turning it on.

Linux: the docker group

On Linux, your user has to be in the `docker` group before it can talk to Docker without `sudo`, and until it is, `docker` commands fail with `permission denied`. Adding yourself to the group doesn't take effect straight away: the change applies only after you log out and back in, and terminals that were already open won't pick it up.

Pulling the image

Pulling an image means downloading it. The first time you start the workbench in Lab 03, the launch script pulls `hpretl/iic-osic-tools:<tag>`, where the tag is currently `2026.08` in the workspace scripts. The image is several GB, so use a stable network connection and expect it to take a few minutes. The IIC-OSIC-TOOLS releases page lists the tags.

The hello-world check

The last step of Lab 02 is `docker run --rm hello-world`, which runs Docker's own test image. When Docker is working, that command prints a message starting with `Hello from Docker!`.

Next: Lab 02: Install Docker.