Leibniz-Rechenzentrum
der Bayerischen Akademie der Wissenschaften

Leibniz-Rechenzentrum

Installation recommendations for the C++ for Beginners Course

Disclamer

We take no liability on the recommended software and websites. It is completely up to you to install the software or open/use the links we recommend in these slides. You can also follow the course only by watching it.

General Information about the course

1. We, teachers, will use the **jupyter lab** for teaching purposes.
   - Instead of a C++ compiler it comes with a C++ interpreter.
   - Typically, you will use only C++ compiler in real life!
   - We will provide the notebook as pdf, and optionally as a **jupyter lab** source.
   - Using a **jupyter lab** is up to you. We don't require it.
   - You can certainly use your favourite C++ IDE or a simple editor. This is preferable!
2. We will explain compilation with Linux and MacOS. Windows users could install cygwin, msys2, or a Linux Virtual Machine, and it works the same. We can't give you support on these options though. You can also use online compilers (next slide).

Online compilers

A quick solution for a Windows user, is to use online C++ compilers. There are many available:

- https://wandbox.org
- https://www.onlinegdb.com/online_c++_compiler
- https://www.programiz.com/cpp-programming/online-compiler/
- https://cpp.sh/
- https://www.w3schools.com/cpp/cpp_compiler.asp
- https://replit.com

Installation of a C++ compiler

- It is depending on your Linux distribution:

```
apt install build-essential
yum install gcc-c++
zypper install gcc-c++
pacman -S gcc
dnf install gcc-c++
```

- MacOS:

```
xcode-select --install
```

These commands require root or sudo rights.

Jupyter lab

- If you decide to install the jupyter lab check this slide and the next one :

Install miniforge:

- Linux/MacOS/Windows: https://github.com/conda-forge/miniforge

Getting started with conda:

- https://conda.io/projects/conda/en/latest/user-guide/getting-started.html

Note: we won’t have time to give support for it, if it doesn’t work properly in your computer.

The C++ plugin for the jupyter lab is only available for Linux and MacOS.

Installing Jupyter lab:

```
conda create -n cling
conda activate cling
conda install xeus-cling -c conda-forge
conda install jupyterlab -c conda-forge
cd /path/to/store/notebook
jupyter-lab
```

To use later:

```
cd /path/to/store/notebook
conda activate cling
jupyter-lab
```