Recommended environment configuration for Parallel Programming（English）

> This document is used as the homework supplement of Parallel Programming (English) course in CUP. Students can refer to it to configure the local environment.

Start with Linux

The program running process of this course is recommended to run in the environment of **Linux** rather than Microsoft's Windows series operating system, because you will encounter more environmental problems under windows, which will bring you a lot of trouble.

- For more imformation about Linux and its basic Operations， Brief intro of Linux
- By the way， for Linux version installation, we recommend **Ubuntu** series(like Ubuntu20.04), a derivative version based on Debian, rather than **CentOS** and other series.

Dual system , ~~virtual machine~~

- Although the installation of **virtual machine** is simple and the configuration requirements are low, which is enough for you to learn and be familiar with the basic syntax and features of Linux, for our course, we recommend that you install **Dual Systems** to drive Linux,so that you can call GPU to make the program perform better.
- Refer to for specific installation methods ubuntu20.04 /Win10 dual System installtion --- bilibili

Some suggestions

- When you install Linux, it doesn't mean you're done, but a new start. We suggest you simply configure your Linux system settings, such as changing the source to ubuntu|Tsinghua Open Source Mirror, simply configuring VIM, and so on.
- For specific configuration operation methods, refer to the tutorials of Biadu, BiliBili, CSDN, Stackoverflow, etc.As long as you like, you can always find the right reference resources.

Compilation environment configuration

In our course, we will cover the use of OpenMP, openBlas, CUDA and MPI. Here are some suggestions for configuring the version (under Linux) to ensure that you can run the sample code provided by us smoothly.

- **gcc** version >= 9.4.0
- **mpicc** for mpich version >= 3.3.2
- **CUDA** version according to your exact GPU Hardware model
- **OpenBlas** a refer as Linux Openblas intall : libopenblas-dev

Enjoy your parallel programming journey!