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Docker tutorial

Step 1: Understand docker

- Read https://docs.docker.com/get-started/docker-overview/ and understand (docker) image, container, daemon, client, hub (registry), pull, push.
- Install docker (Linux Mint as example. Information on other OSes are welcome too.)
  - $ sudo apt install docker.io
  - Add your username to the “docker” group (or by editing /etc/group directly).
    - $ sudo usermod -aG docker your_username
    - Logout & login to make the change of group into effect, or simply reboot your Linux.
- Run a ubuntu container (docker client will automatically pull a ubuntu image and create a local container.). If you get a console with command prompt “root@xxxxxxxxxxxx:/,” it worked.
  - $ docker run -i -t ubuntu /bin/bash
- Exit the container by exit (notice the prompt changed to “#”, showing you are the root)
  - # exit

Step 2 (if you have an NVidia GPU): Install Nvidia GPU support

- Follow https://docs.nvidia.com/datacenter/cloud-native/container-toolkit/latest/install-guide.html

Step 3: Install PyTorch (for development)

- $ docker pull pytorch/pytorch:latest
- $ docker run –rm –gpus all pytorch/pytorch:latest python -c “import torch; print(torch.cuda.is_available())”
- If you see “True”, it worked.

Step 4: Work with PyTorch

- $ docker run -it –gpus all –rm pytorch/pytorch:latest bash
- # nvidia-smi
- If you see the use of your GPU, it worked.

References

- https://github.com/saikhu/Docker-Guide-for-AI-Model-Development-and-Deployment (Chapter 6 is obsolete. See the above Step 2 for the latest information)