

# Virtual Machine

- Why do we use VM?
  - A physical machine can run multiple VMs (guest OSes)
  - Run Linux guest OS (if your host OS is Windows)
  - Much safer doing network security lab against VM
  - SDN lab-friendly

# Getting VM hypervisor

- VirtualBox (open-source)
  - ❑ <https://www.virtualbox.org/wiki/Downloads>
- VMware (not free)
  - ❑ <https://www.vmware.com/products/workstation-player.html>
- Other VM hypervisors: QEMU, KVM, UML, etc.

# Installing Guest OS

- Ubuntu (18.04 or later)
  - ❑ Ubuntu 20.04.3 LTS: <https://ubuntu.com/download/desktop>
- Create a VirtualBox VM (in Windows) and install Ubuntu on the VM
  - ❑ <https://www.youtube.com/watch?v=x5MhydiJWmc>
  - ❑ <https://www.ktexperts.com/how-to-install-ubuntu-20-04-1-lts-on-windows-using-virtualbox/>
- Install Wireshark on Ubuntu
  - ❑ <https://www.youtube.com/watch?v=wVLcxqXwQPw>
  - ❑ <https://vitux.com/how-to-install-and-use-wireshark-on-ubuntu-20-04-lts/>