

Linux, day 1



Lab prep

What will you need?

- A semi-recent (5 years) laptop, or PC.
 - Intel i5/i7, AMD Zen2, Apple ARM
 - At least 8GB RAM
 - At least 60GB of storage space

Apple ARM systems

- Apple ARM users need UTM or Parallels.
 - UTM lets you run x86_64 Linux.
 - Parallels will only run ARM Linux.

See: <https://mac.getutm.app>

Instructions before class

- My e-mail asked you to download:
 - VirtualBox installer (.exe or .dmg)
 - Fedora Workstation 32 (.iso)
 - Ubuntu Server 20.04 LTS (.iso)
- Apple ARM users need UTM, instead of VBox.

If you didn't get them

- In our “Files” on Teams / Office365,
 - VirtualBox is under “Virtualization”.
- Do not download the ISOs at school.
 - Ask me for the USB stick with ISOs.

What will we do today?

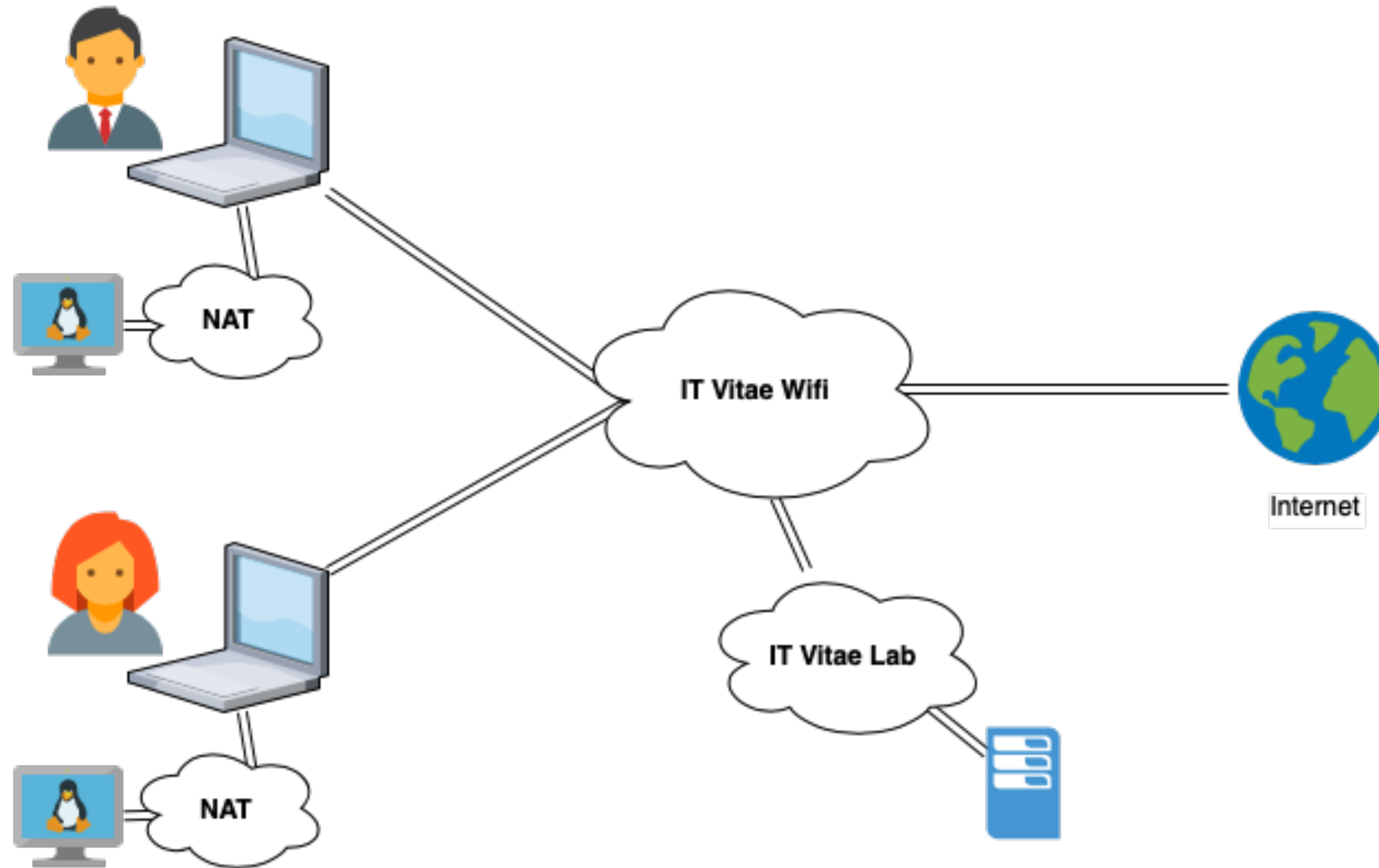
- ~~Introductions~~
- ~~Lab prep~~
- Why even learn Linux?!
- Guided exercise: installation
- Guided exercise: meeting Linux
- Closing: homework and Q&A

Guided exercise: installation

Objectives

- Install VirtualBox
- Create a VM
- Install Fedora Workstation

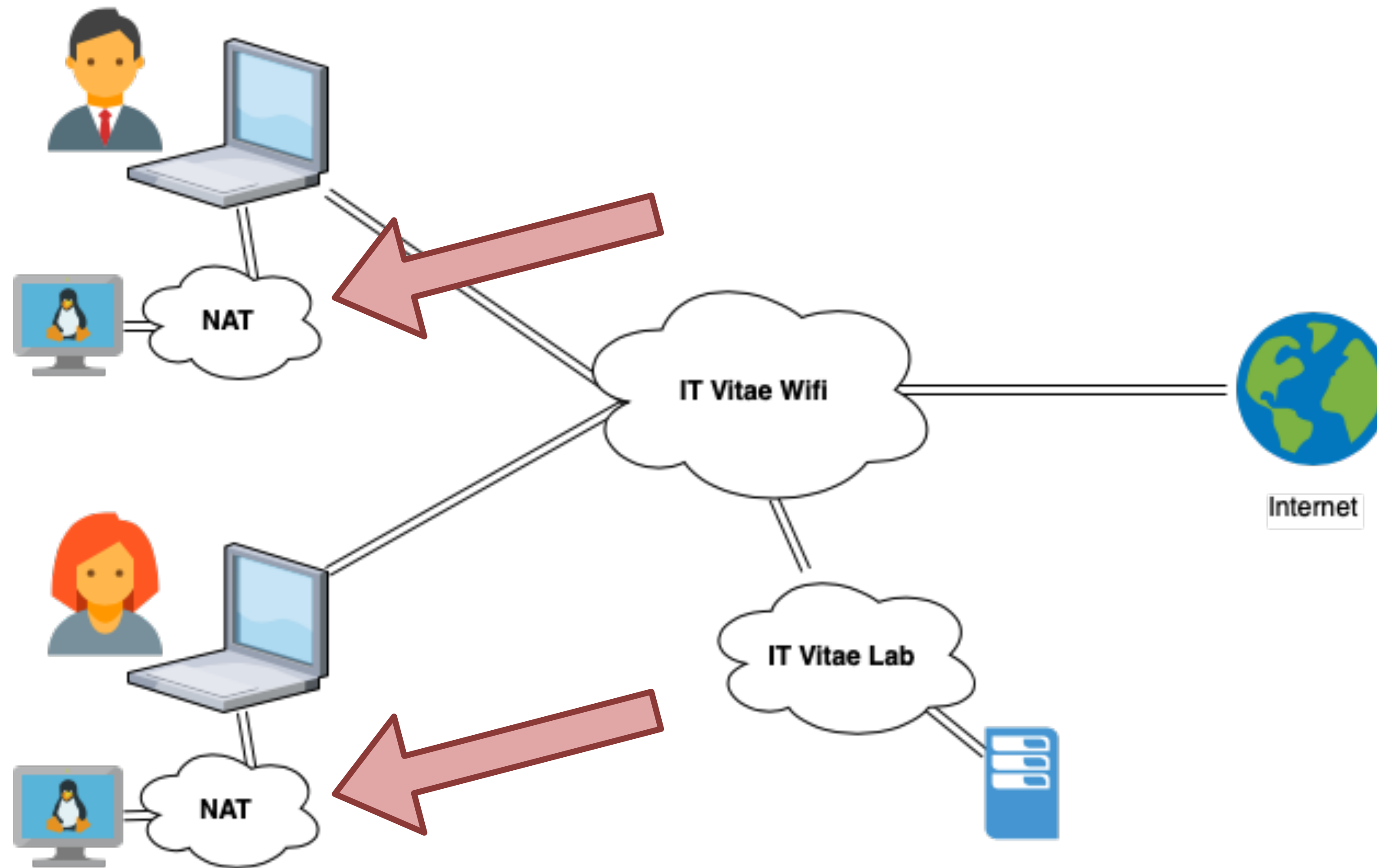
What will we make?



Installing VirtualBox

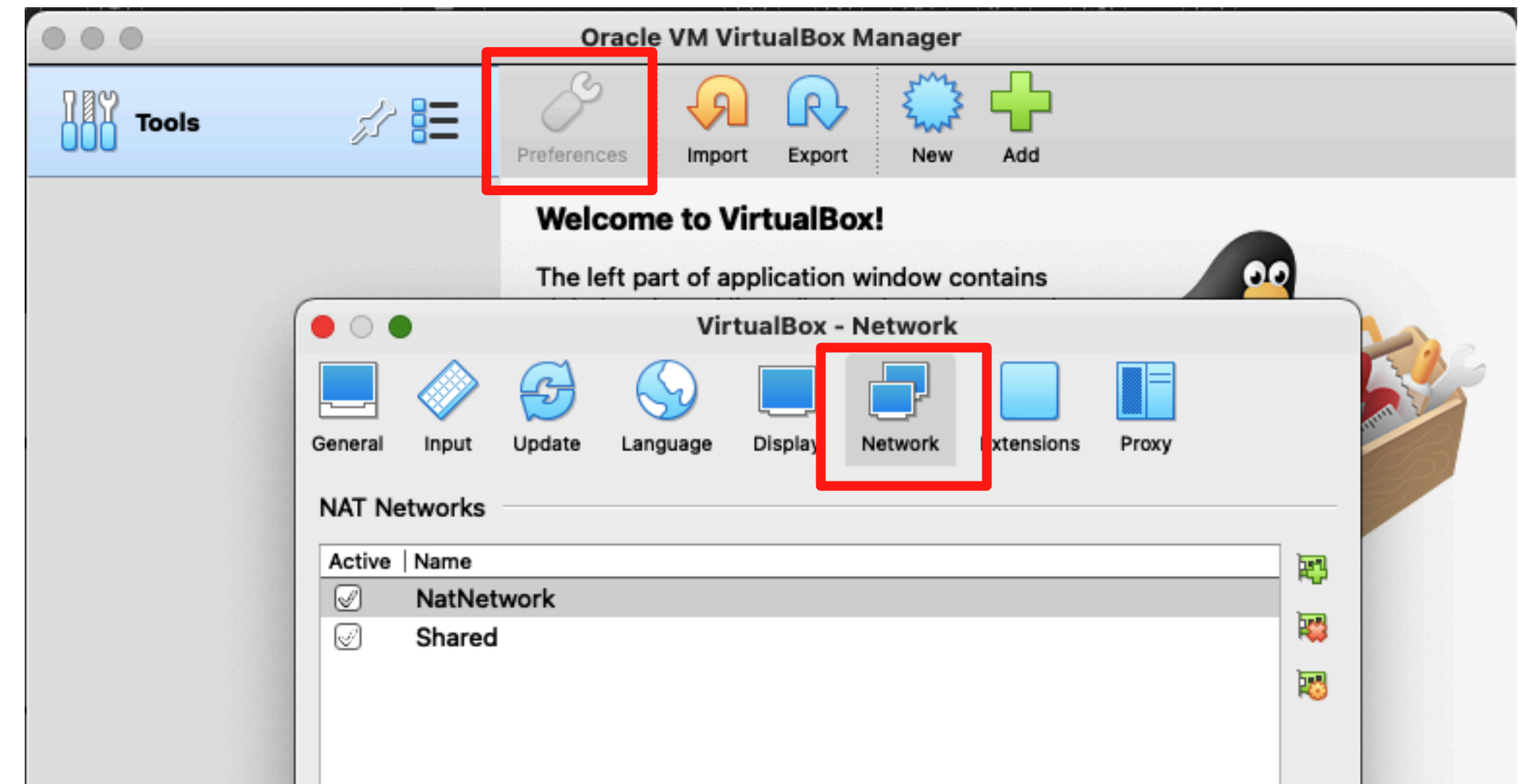
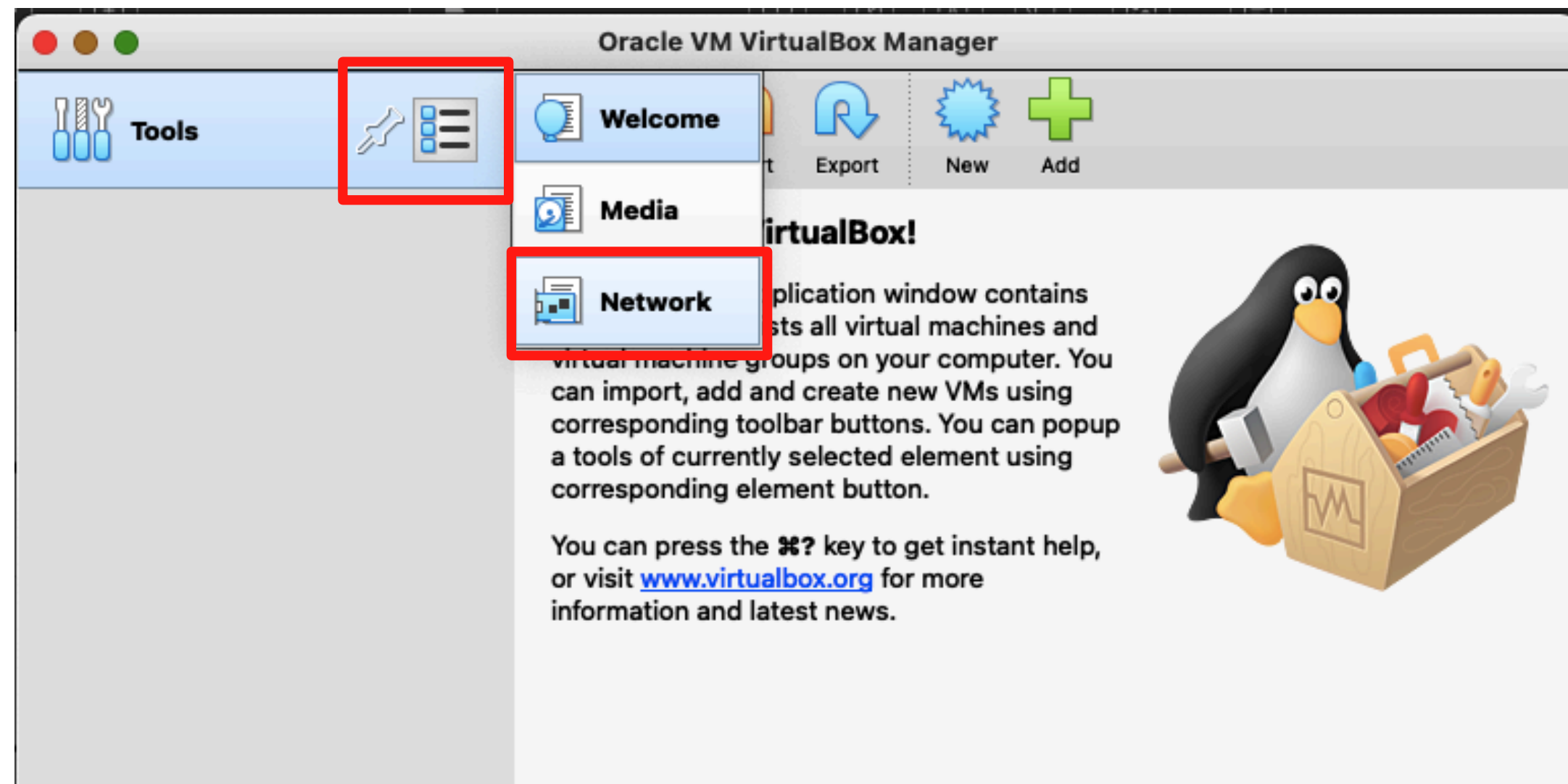
- Windows? Just follow the wizard.
 - MacOS? Ditto!
 - Linux? Download the RPM or DEB and install.
- On MacOS, you need to allow VBox kernel modules.
 - System Preferences -> Gatekeeper -> Allow

Create a NAT network



Create a NAT network

- In the VirtualBox preferences / settings:



Create a NAT network

- In the VirtualBox preferences / settings:
 - Find the “Network” settings tab.
 - Create a new NAT network “*NATnetwork*”.

Creating our VM

- Type: Linux, Fedora 32, 64-bit
- 4096 MB RAM
- Create a virtual hard disk
 - “Dynamically allocated”, 60 GB, VDI type
- Network: connect to NAT Network “*NATNetwork*”
- Connect the Fedora ISO / DVD

Install Fedora

- For now, we'll use the default disk layout.
- After the reboot, setup your user account.

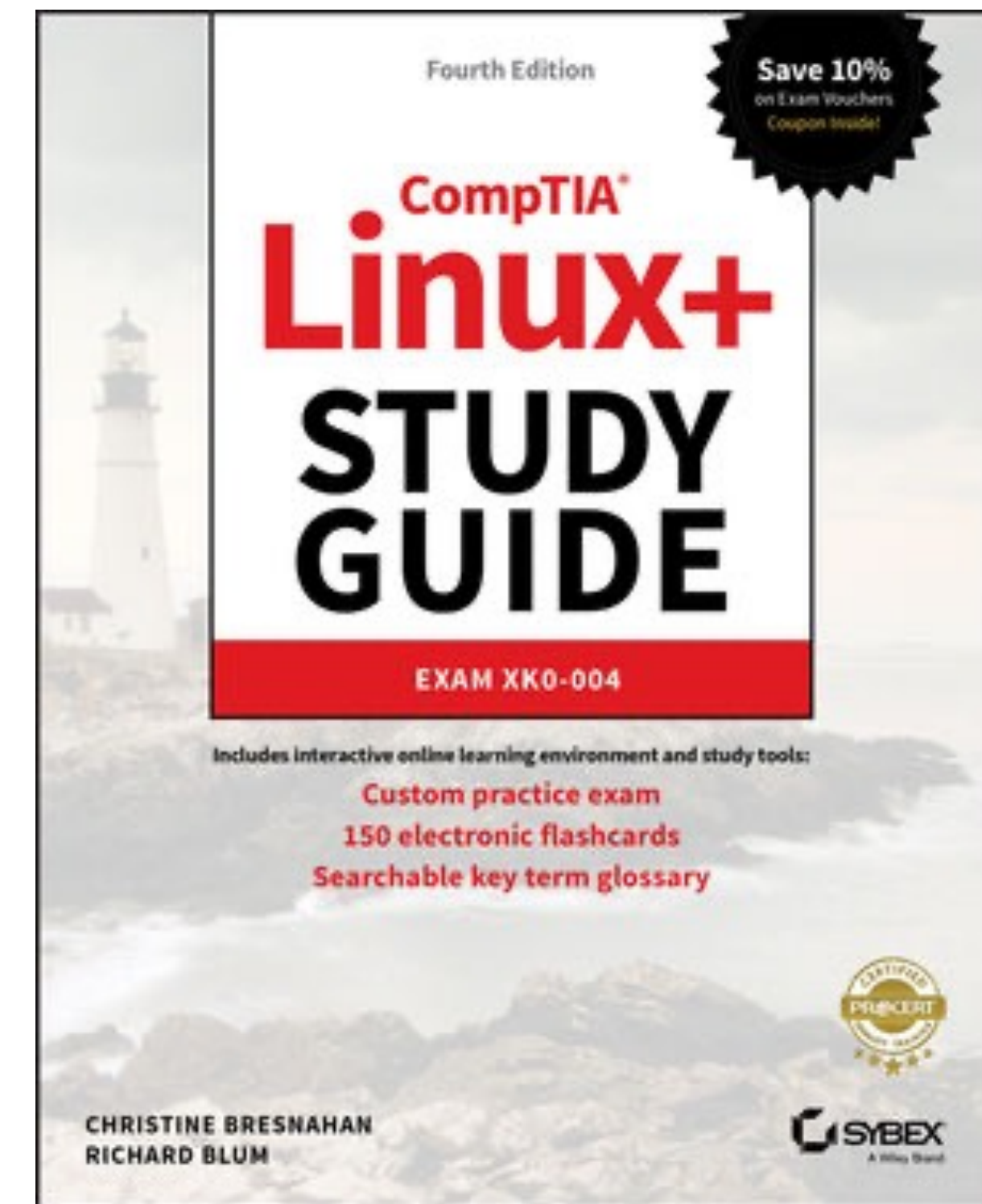
You try!

- Can you double-check:
 - Where does VirtualBox store the disk image?
 - What size is the “disk” set to?
 - What size is the image file really?

Closing

Homework

- Reading:
 - Chapter 1
 - Chapter 8
 - Chapter 10



Homework

- Try installing the Ubuntu server VM.
 - Make sure it's in the same "*NATnetwork*".
 - It needs less RAM. You can give it 1GB.

Homework

- Q1: How do the following Linux “distributions” relate to each other?
 - Red Hat Enterprise Linux
 - Fedora Linux
 - CentOS
 - Oracle Linux

Homework

- Q2: How do the following Linux “distributions” relate to each other?
 - Debian
 - Ubuntu
 - Kali Linux

Homework

- Q3: Is “Linux” a “Unix”? Why?
- Q4: Is “MacOS” a “Linux”? Or a “Unix”?

Reference materials

Resources

- [CompTIA Linux+ exam objectives](#)
- Open source: [Gratis vs Libre](#)
- [History of Unix](#) (Wikipedia)
- [Linux distributions](#) (Wikipedia)
- [Linux rocks!](#)

Resources

- Andrés Aravena - [First steps on UNIX](#)