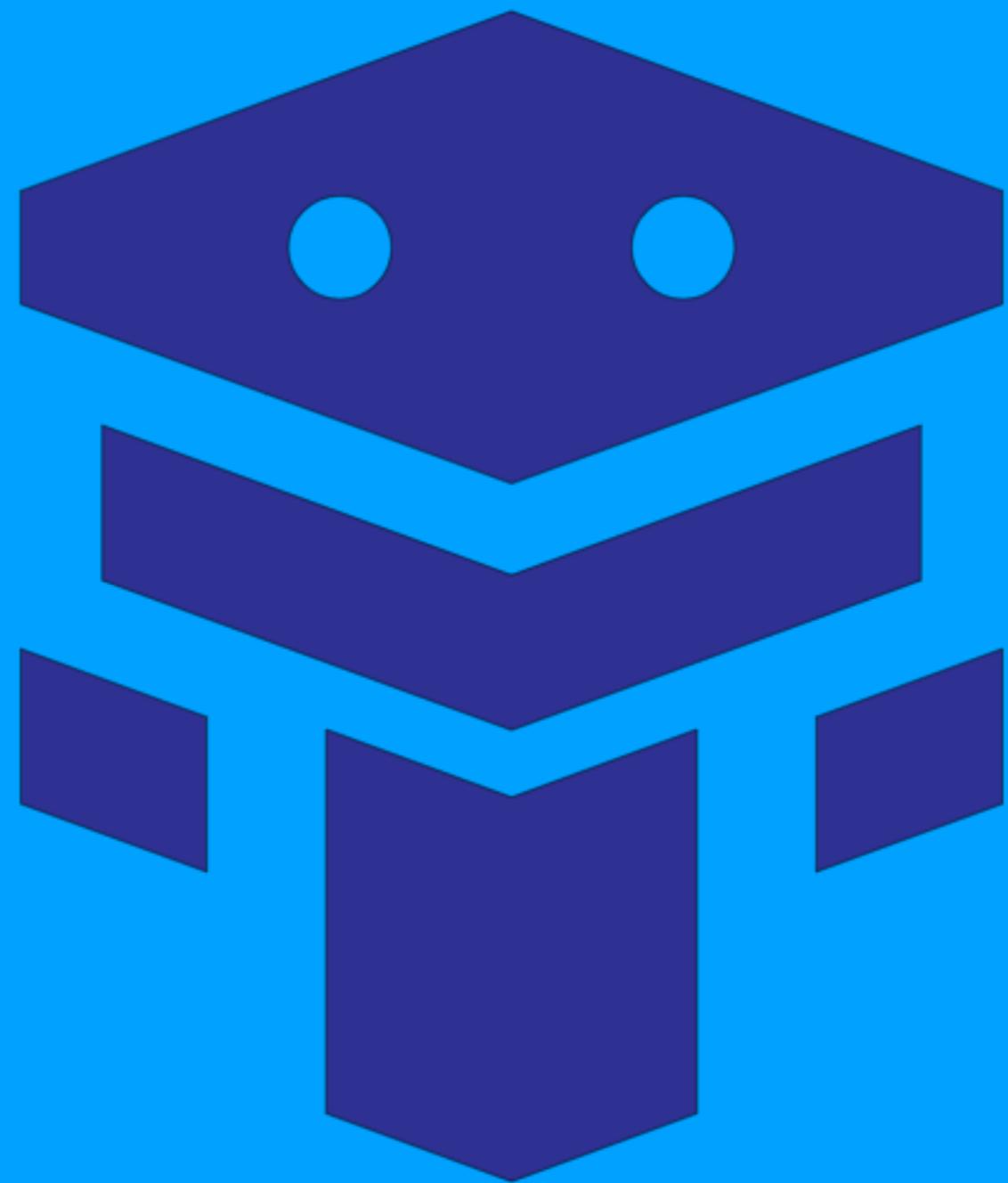


Our Heros



Robótica Medellín

<https://RoboticaMedellin.com>
<https://RoboticaMedellin.slack.com>



Edgard Aguirre
Delivery Manager
Team International



Ana Lopez
Data Scientist
Alcaldía de Medellín

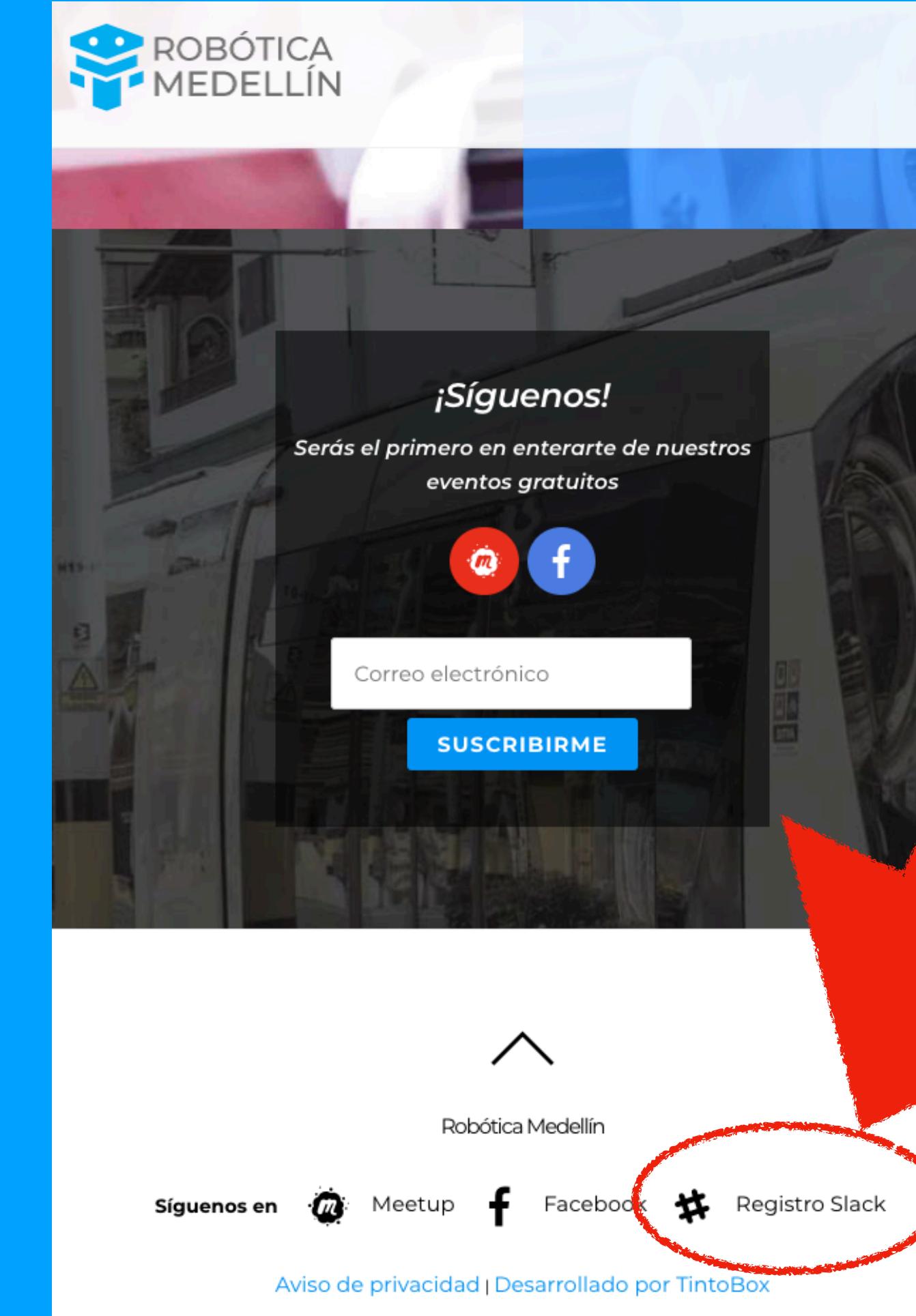
Join to Slack



Robótica Medellín

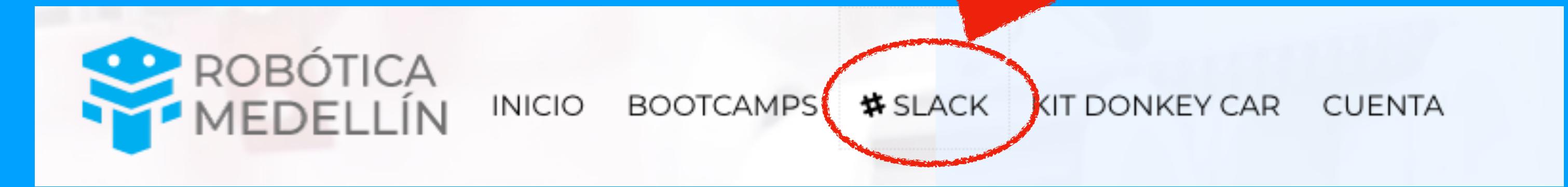
<https://RoboticaMedellin.com>

<https://RoboticaMedellin.slack.com>



<https://RoboticaMedellin.com>

Access to Slack



<https://RoboticaMedellin.com>

Robótica Medellín

<https://RoboticaMedellin.com>

<https://RoboticaMedellin.slack.com>



Introduction to Linux

Raspberry pi & Python

Slack -> #linux-workshop

Robótica Medellín

<https://RoboticaMedellin.com>

<https://RoboticaMedellin.slack.com>

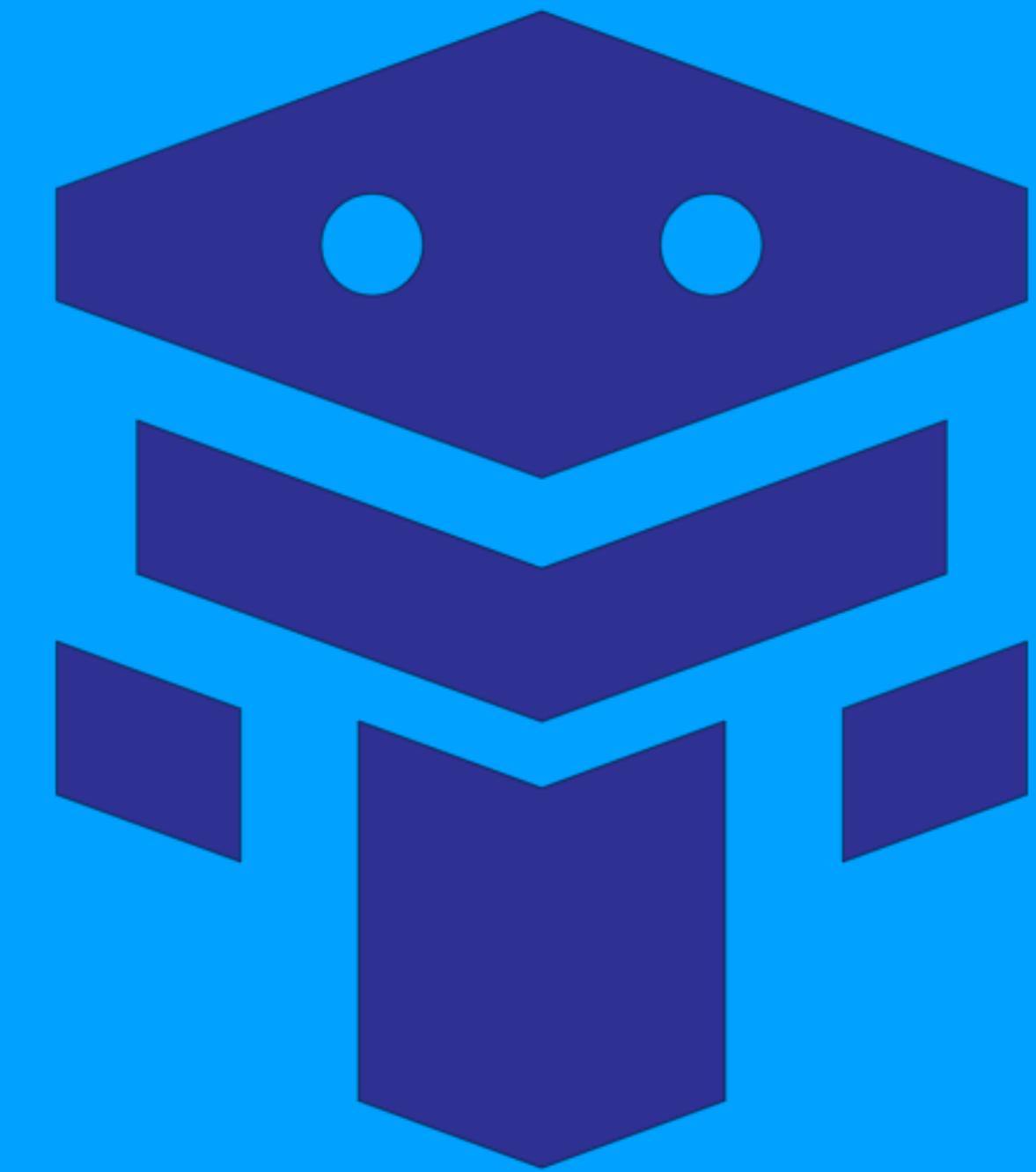
Alejandro Gómez
@aldajo92

Introduction to Linux

Thanks to:

team
international

TeamInternational.com



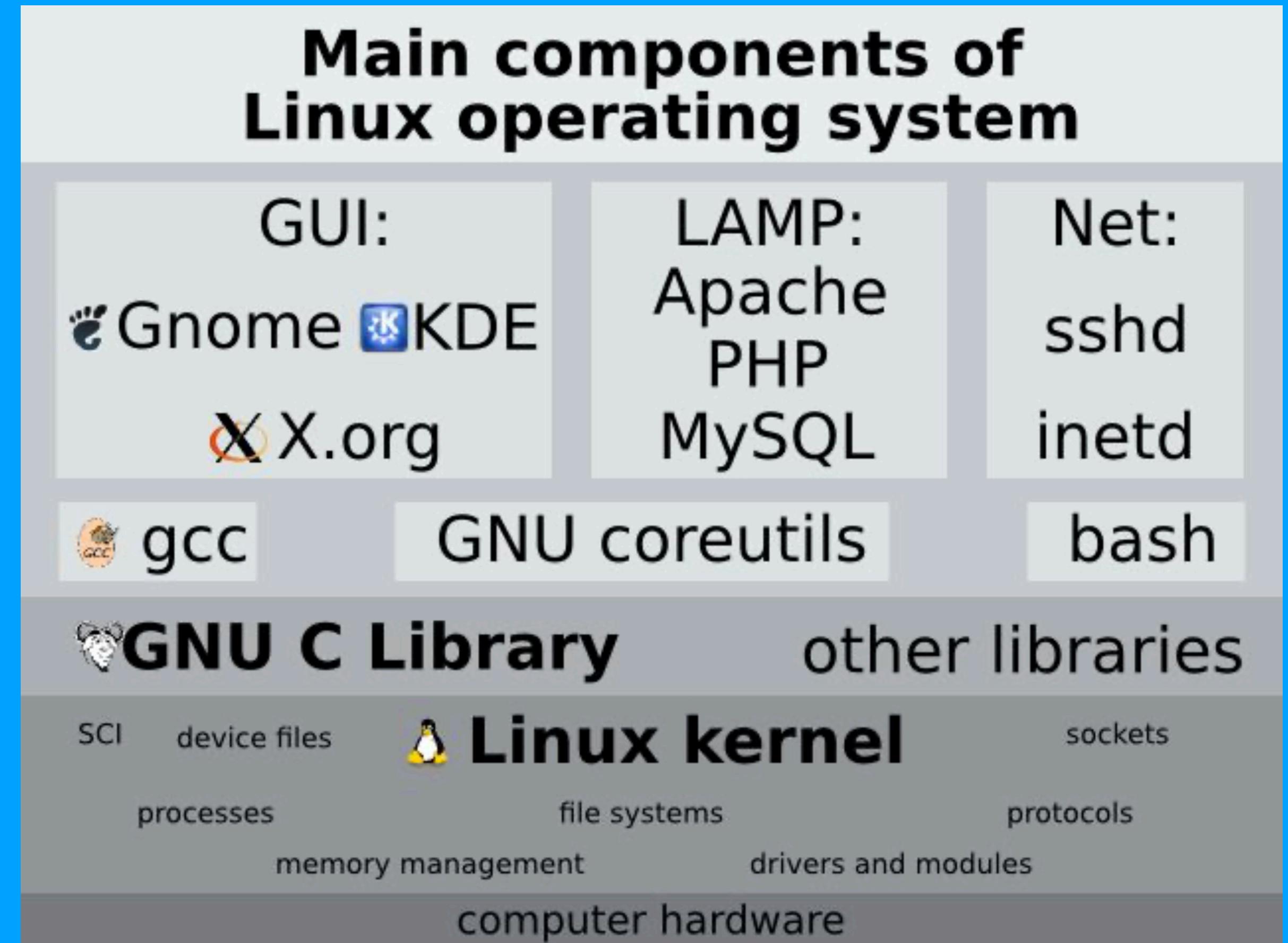
Robótica Medellín

What is Linux?

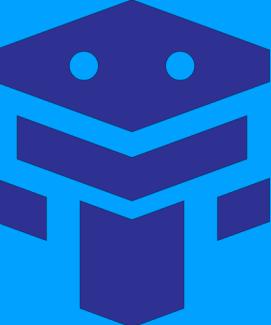


Linux is just the kernel.

- Component that connects hardware and software
- Created by Linus Torvalds, based on Unix project (1991)
- Open Source
- Supported by Linux Foundation since 2007
-

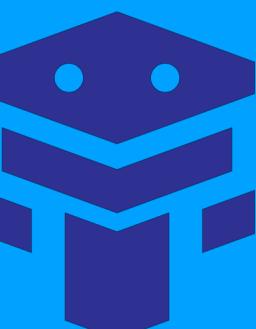
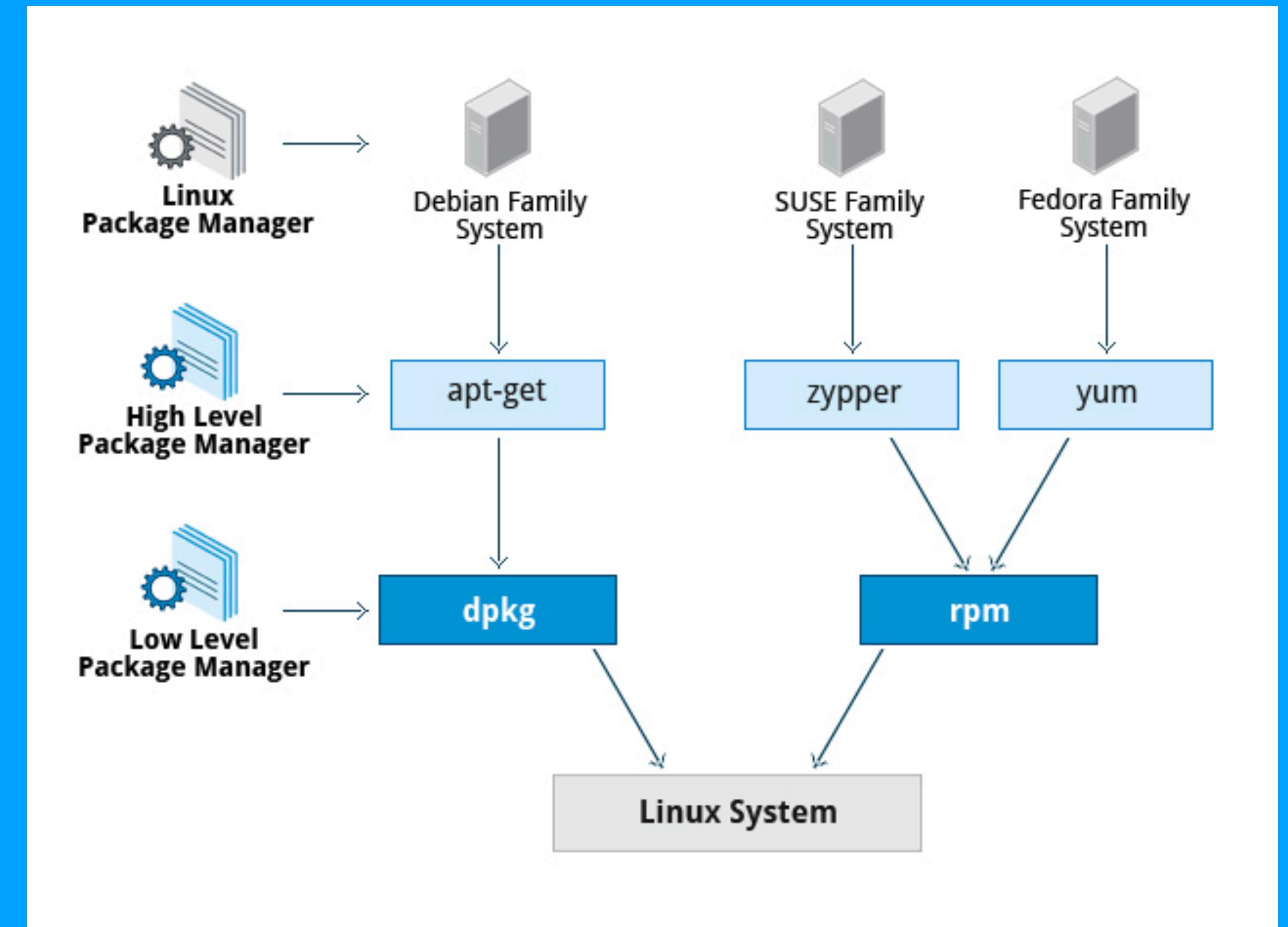


Why Linux?

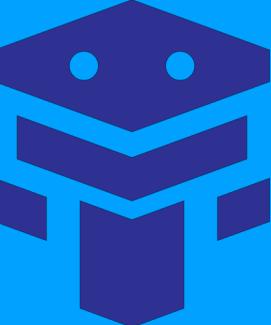


Why Linux?

- *Is Free and Open Source
- Variety of distributions
- Linux has grown to handle dozens of architectures, and systems from small embedded form factors to the vast majority of the world's supercomputers: servers, iot devices, smartphones, computers.
- Package Manager.
- Default Shell ("command line") for linux is BASH (Bourne Again SHeLL).
- Perfect environment for developers.
- Perfect for Robots!!

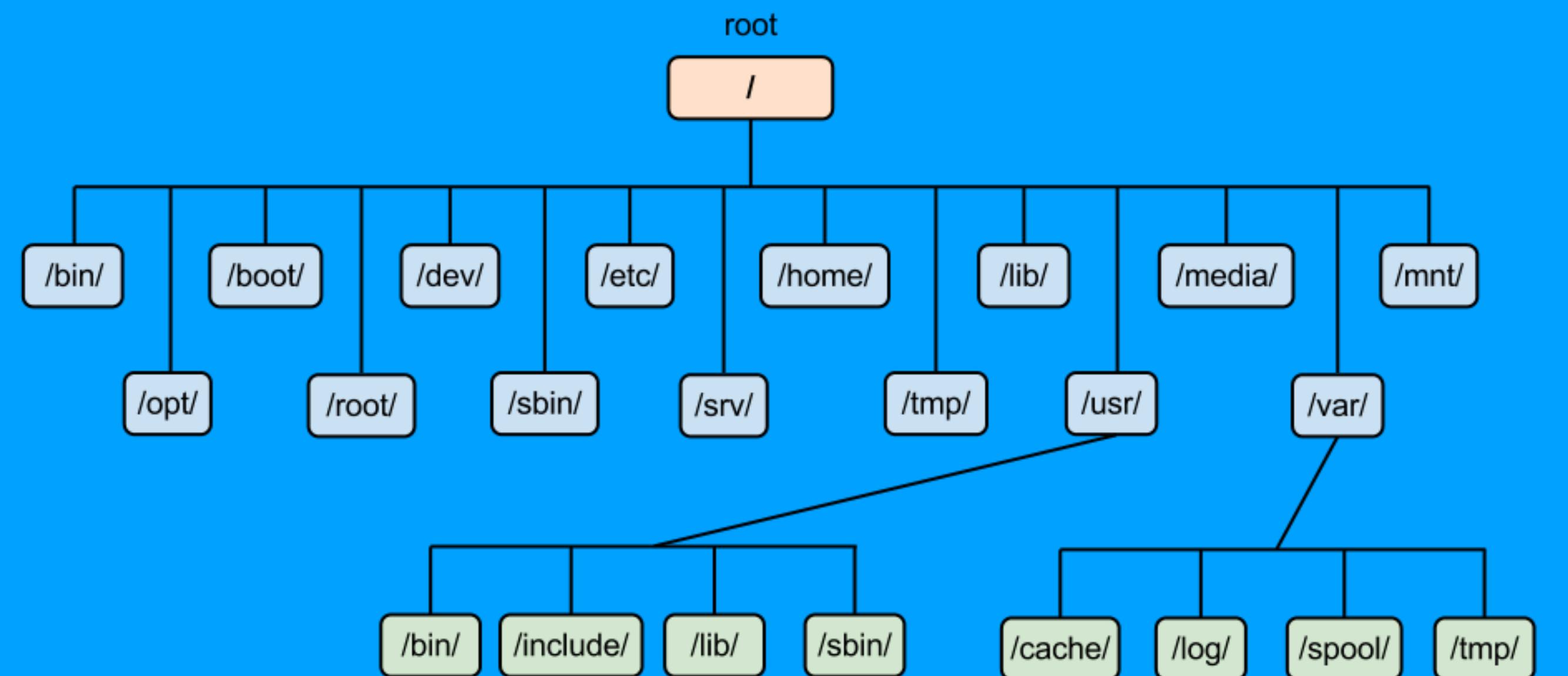


How to use it?



How to use it?

- Choose a remote server (AWS), Virtual Machine (VirtualBox), embedded system.
- Select a distribution:
 - Debian, Suse, Fedora, Ubuntu, etc.
- Use the Command Line



Command Line



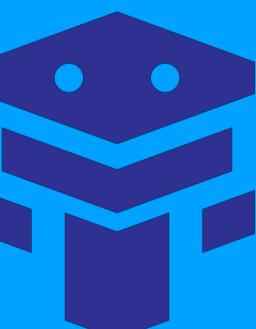
Command Line

```
$ ls  
$ cd  
$ mkdir  
$ rm  
$ rm -rf <file>  
$ pwd  
$ cp  
$ mv  
$ whoami  
$ ifconfig
```

```
aldajo92 — aldajo92@Alejandros-MacBook-Pro — ~ — -zsh — 80x24  
Last login: Fri Aug 21 22:59:59 on ttys000  
→ ~  
  
ros@ros-VirtualBox:~  
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
Try the new cross-platform PowerShell https://aka.ms/pscore6  
  
PS C:\Users\alejandro.gf> ssh  
usage: ssh [-46AaCfGgKkMNqsTtVvXxYy] [-B bind_interface]  
           [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]  
           [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]  
           [-i identity_file] [-J [user@]host[:port]] [-L address]  
           [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]  
           [-Q query_option] [-R address] [-S ctl_path] [-W host:port]  
           [-w local_tun[:remote_tun]] destination [command]  
PS C:\Users\alejandro.gf> ssh 127.0.2.15 -l ros -p 2522  
ssh: connect to host 127.0.2.15 port 2522: Connection refused  
PS C:\Users\alejandro.gf> ssh 127.0.2.15 -l ros -p 2522  
PS C:\Users\alejandro.gf> ssh 127.0.0.1 -l ros -p 2522  
ros@127.0.0.1's password:  
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 5.4.0-42-generic x86_64)  
  
 * Documentation:  https://help.ubuntu.com  
 * Management:    https://landscape.canonical.com  
 * Support:       https://ubuntu.com/advantage  
  
 * Canonical Livepatch is available for installation.  
   - Reduce system reboots and improve kernel security. Activate at:  
     https://ubuntu.com/livepatch  
  
0 packages can be updated.  
0 updates are security updates.  
  
Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings  
Your Hardware Enablement Stack (HWE) is supported until April 2023.  
Last login: Fri Aug 21 22:56:03 2020  
ros@ros-VirtualBox:~$
```

Use the cheat sheet!

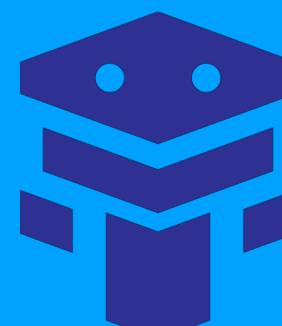
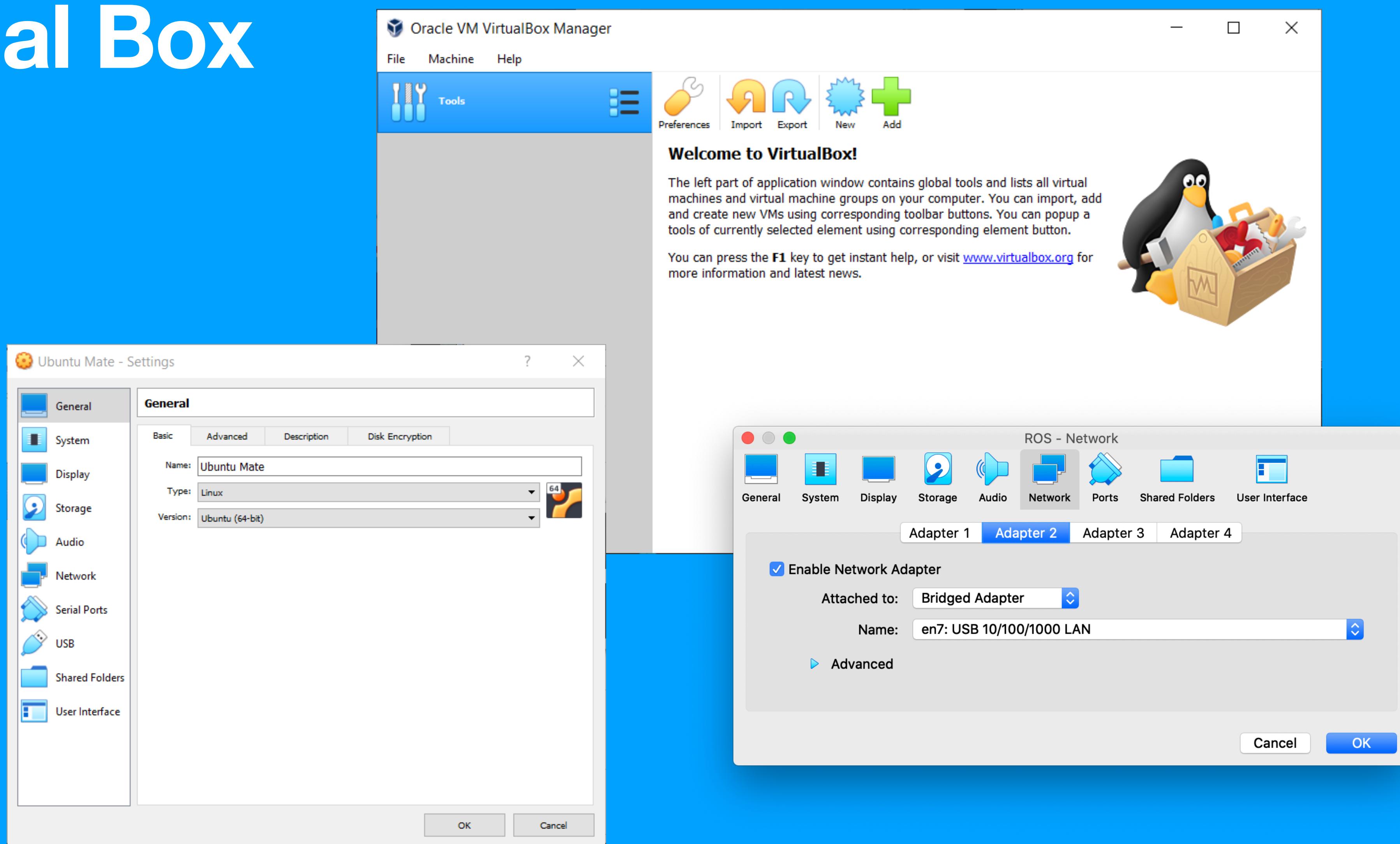
https://github.com/roboticamed/ROS_101/blob/edit/linux-cheatsheet.pdf



Virtual Box



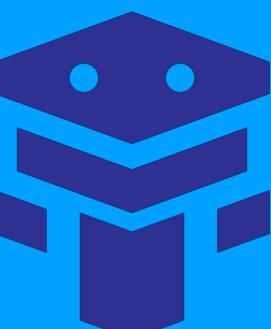
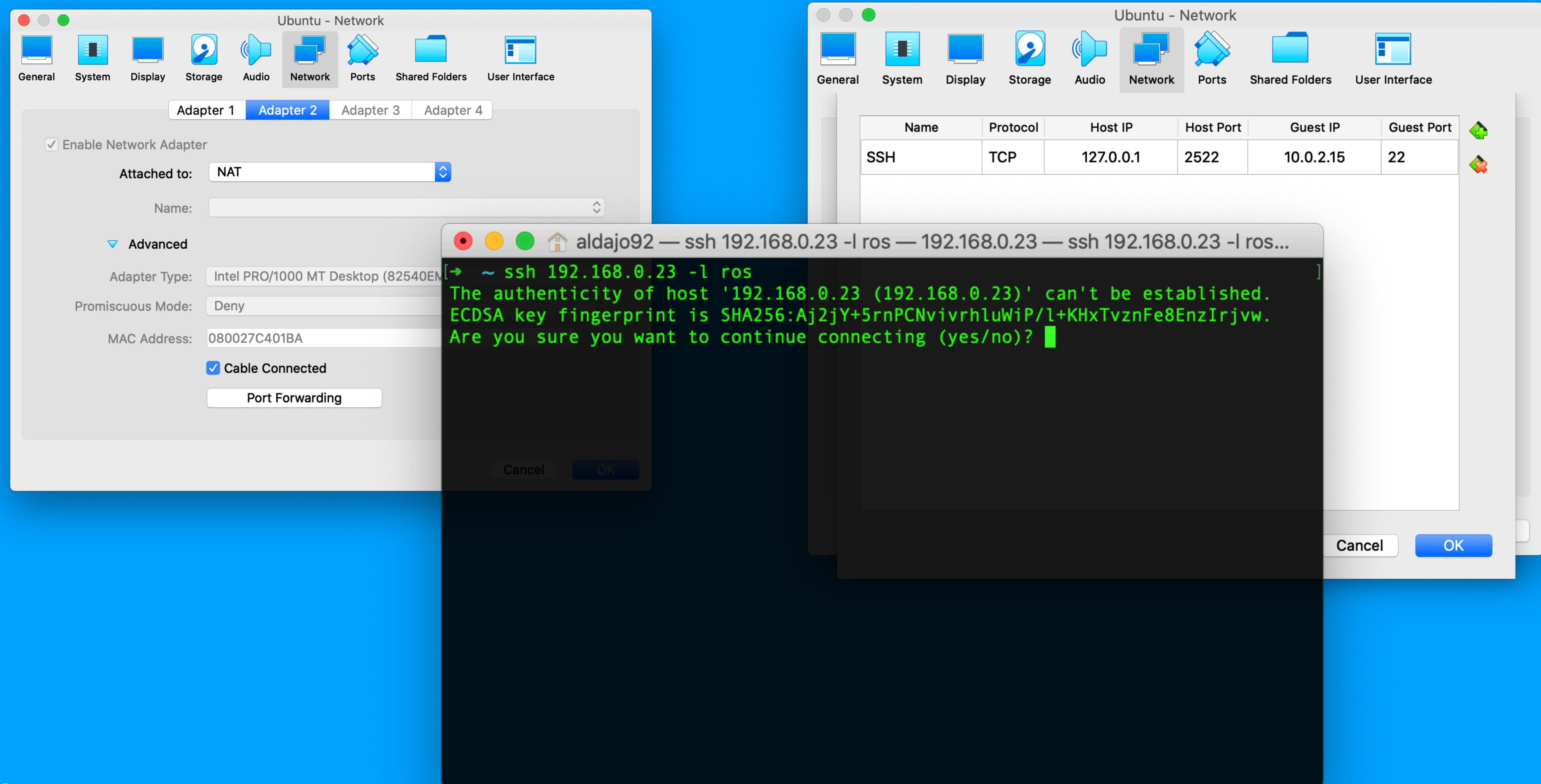
Virtual Box



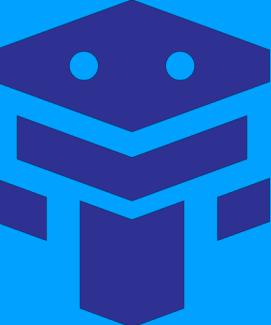
SSH



SSH



Raspberry Pi



Referencias

- How to install and execute Jupyter Notebook:

<https://medium.com/@joaolggross/how-to-install-and-execute-jupyter-notebook-on-ubuntu-18-04-d5b37159bd8e>

- Install Jupiter:

<https://jupyter.org/install>

- Add python3 kernel:

<https://stackoverflow.com/questions/28831854/how-do-i-add-python3-kernel-to-jupyter-ipython>

