



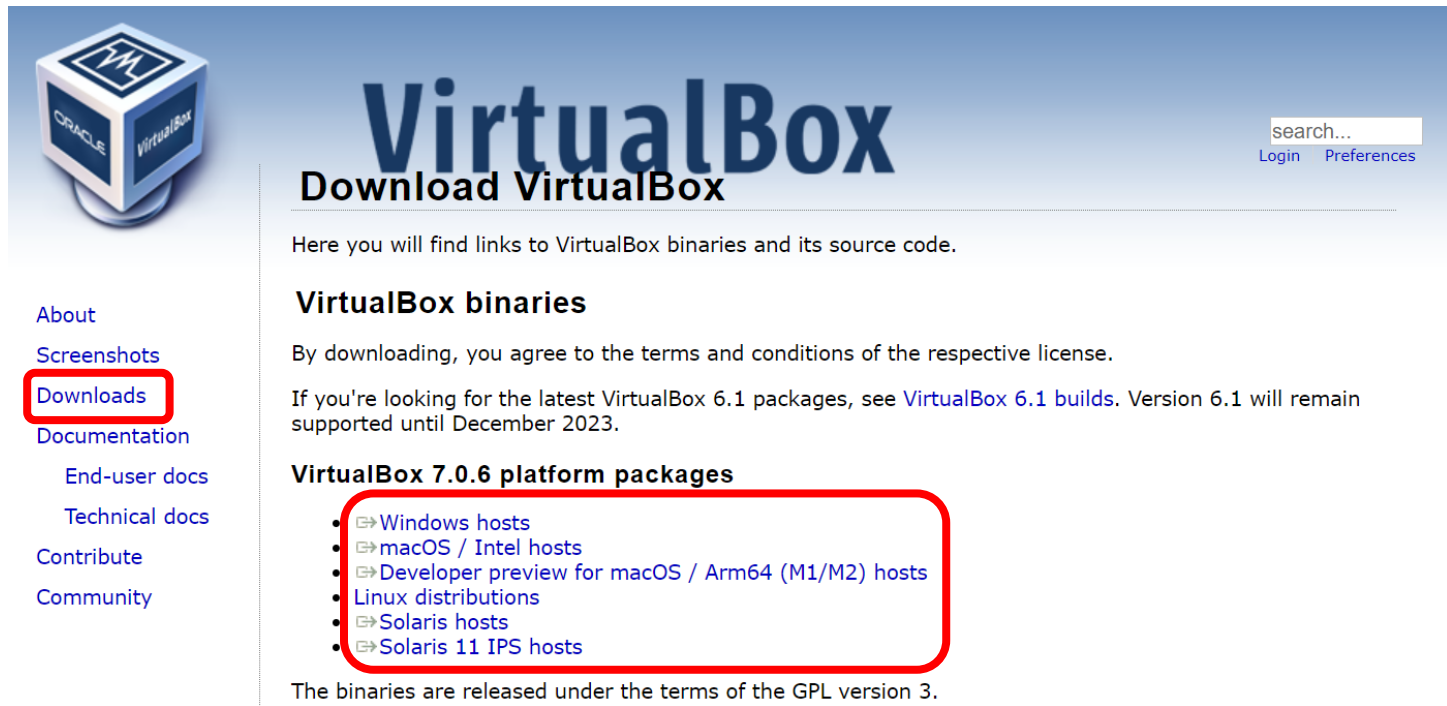
Appendix: Setting up a Virtual Machine

Why?

- We will be using a virtual machine to run today's exercise.
- If you already have a Linux virtual machine set up, you do not have to set up another VM.
 - It might be better to have a separate VM just for this class though.
- We will be setting up a VM that uses Ubuntu, but you can use any distro you want.

Installing VirtualBox (1)

- Go to VirtualBox website
 - <https://www.virtualbox.org/>
- Download installation binary



The screenshot shows the VirtualBox website homepage. On the left is a sidebar with navigation links: About, Screenshots, Downloads (highlighted with a red box), Documentation, End-user docs, Technical docs, Contribute, and Community. The main content area features the VirtualBox logo, a search bar, and links for Login and Preferences. Below the logo is the heading 'Download VirtualBox' and a paragraph stating that links to binaries and source code will be found there. A section titled 'VirtualBox binaries' includes a license agreement notice and a link to 'VirtualBox 6.1 builds'. Another section titled 'VirtualBox 7.0.6 platform packages' contains a list of operating systems: Windows hosts, macOS / Intel hosts, Developer preview for macOS / Arm64 (M1/M2) hosts, Linux distributions, Solaris hosts, and Solaris 11 IPS hosts. This list is enclosed in a red rounded rectangle. At the bottom, a note states that binaries are released under the terms of the GPL version 3.

VirtualBox
Download VirtualBox

Here you will find links to VirtualBox binaries and its source code.

VirtualBox binaries

By downloading, you agree to the terms and conditions of the respective license.

If you're looking for the latest VirtualBox 6.1 packages, see [VirtualBox 6.1 builds](#). Version 6.1 will remain supported until December 2023.

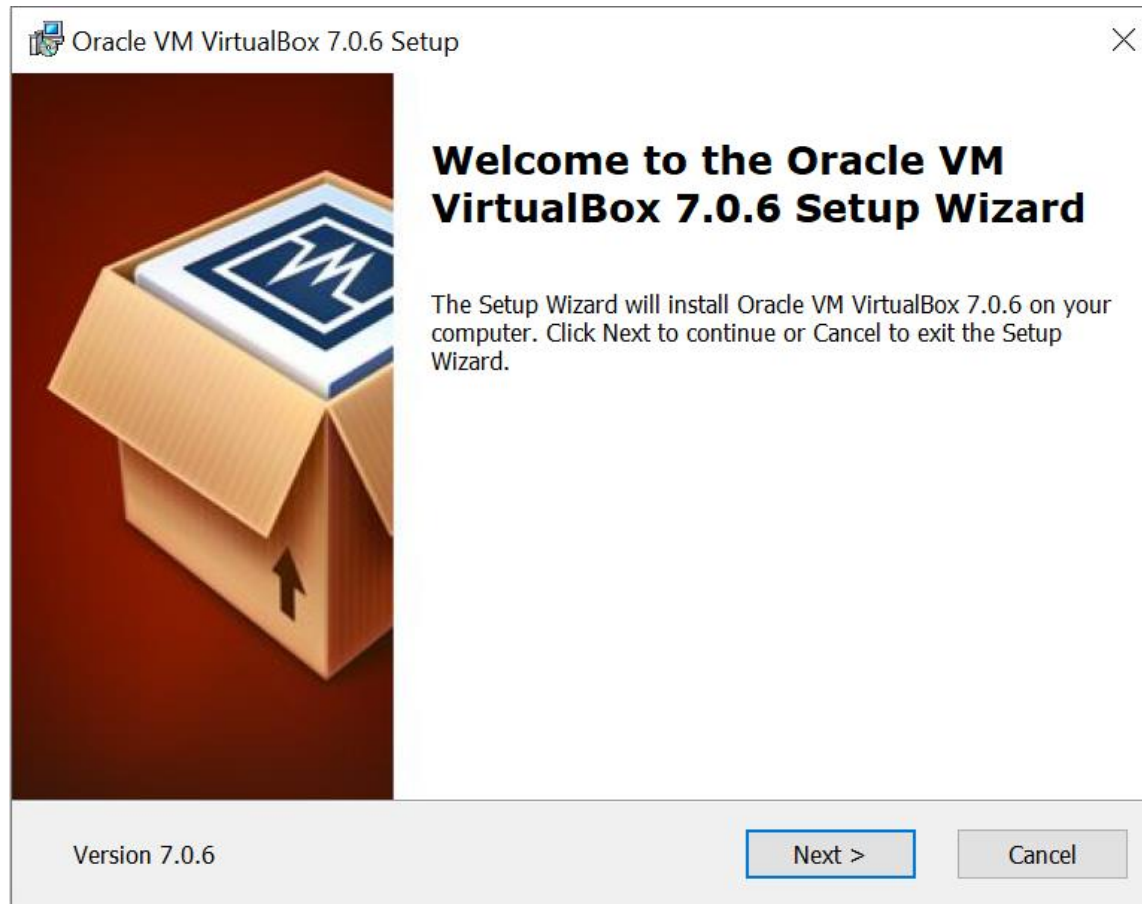
VirtualBox 7.0.6 platform packages

- [Windows hosts](#)
- [macOS / Intel hosts](#)
- [Developer preview for macOS / Arm64 \(M1/M2\) hosts](#)
- [Linux distributions](#)
- [Solaris hosts](#)
- [Solaris 11 IPS hosts](#)

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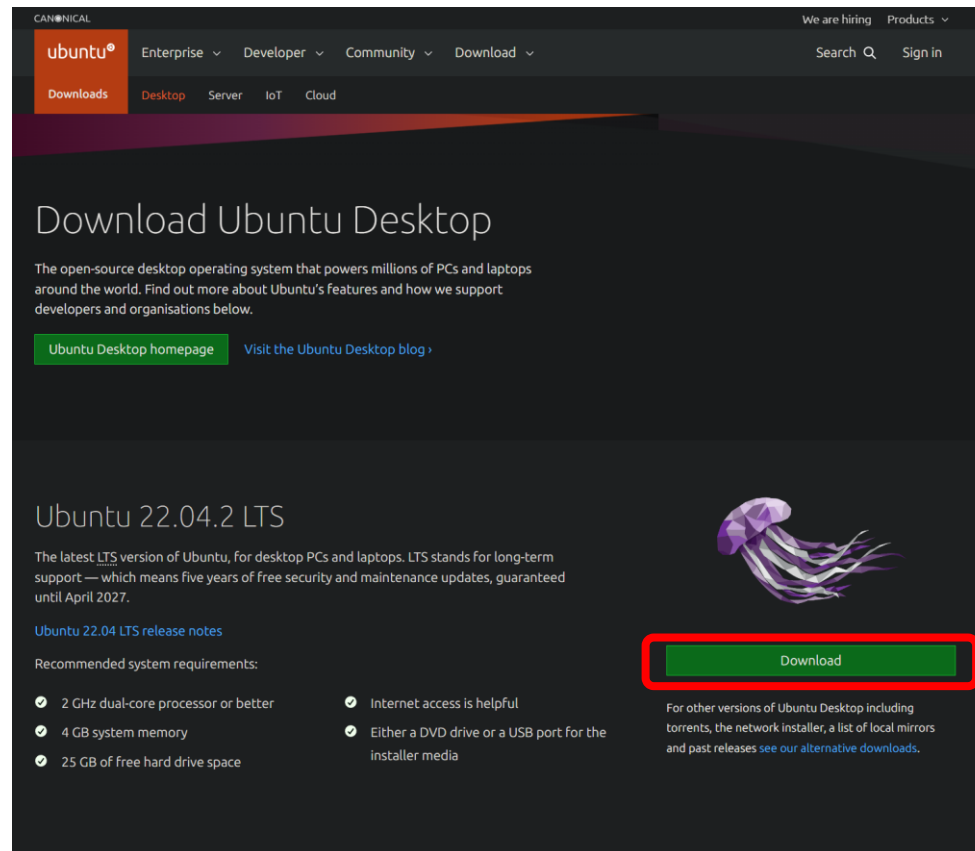
Installing VirtualBox (2)

- Next, Next, Yes, Yes, Install, Finish!

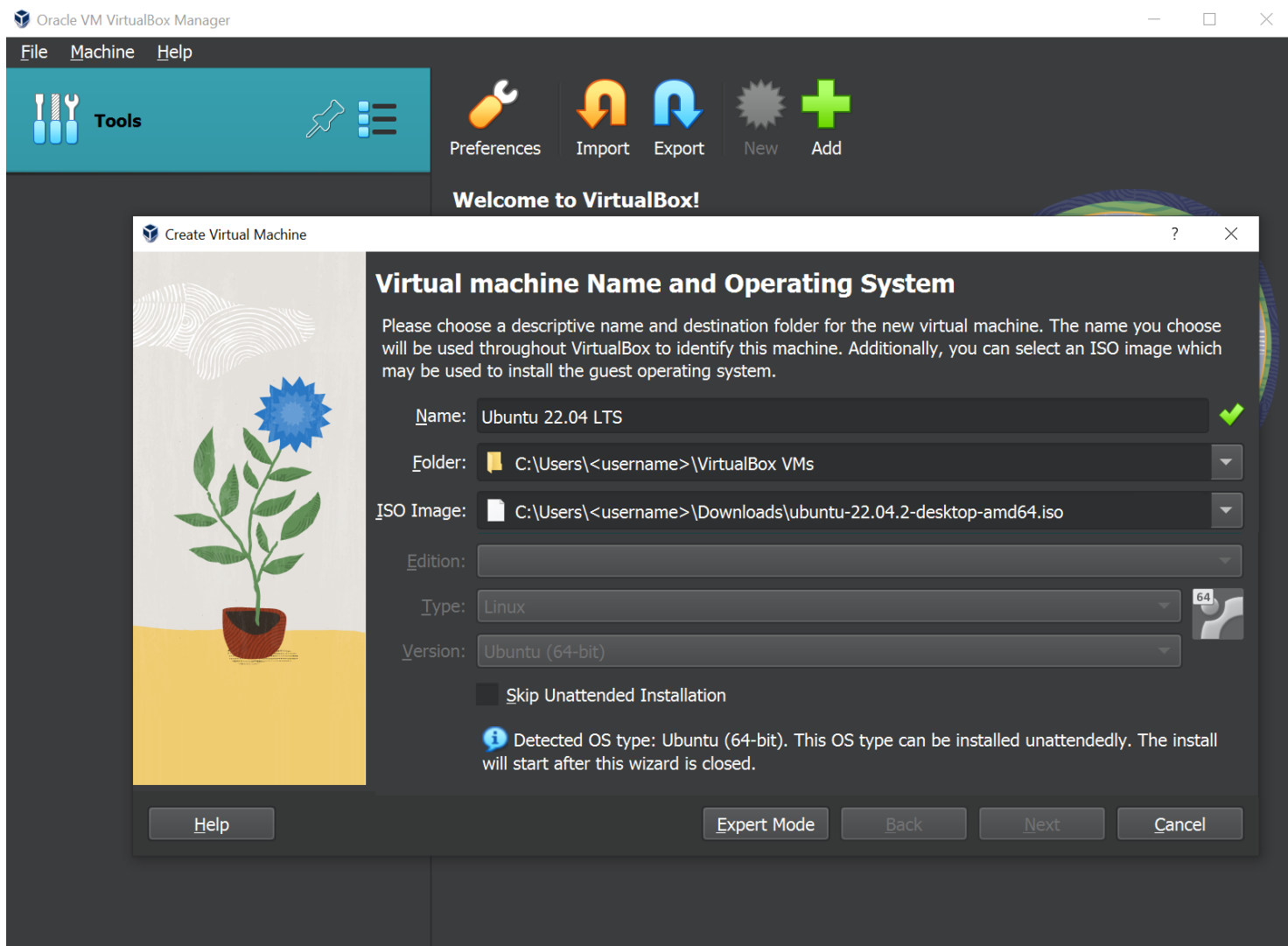


Downloading Ubuntu

- Go to <http://www.ubuntu.com/download/desktop>
- Download a desktop image



Creating a VM (1)



Creating a VM (2)

Create Virtual Machine

? X



Unattended Guest OS Install Setup

You can configure the unattended guest OS install by modifying username, password, and hostname. Additionally you can enable guest additions install. For Microsoft Windows guests it is possible to provide a product key.

Username and Password

Username: spl ✓

Password: [masked] ✓

Repeat Password: [masked] ✓

Additional Options

Product Key: #####-#####-#####-####

Hostname: spl-VirtualBox ✓

Domain Name: spl

☐ Install in Background

☒ Guest Additions

Guest Additions ISO: C:\Program Files\Oracle\VirtualBox\VBBoxGuestAdditions.iso

Help

Back

Next

Cancel

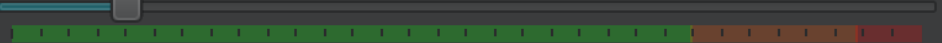
Creating a VM (3)

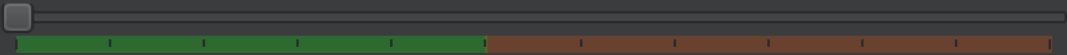
Create Virtual Machine

? X

Hardware

You can modify virtual machine's hardware by changing amount of RAM and virtual CPU count. Enabling EFI is also possible.

Base Memory:  4096 MB
4 MB 32768 MB

Processors:  1
1 CPU 12 CPUs

☐ Enable EFI (special OSes only)

Help


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Next

Cancel

Creating a VM (4)

Create Virtual Machine



Virtual Hard disk

If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select an existing one. Alternatively you can create a virtual machine without a virtual hard disk.

☒ Create a Virtual Hard Disk Now

Disk Size: 25.00 GB

4.00 MB 2.00 TB

☐ Pre-allocate Full Size

☐ Use an Existing Virtual Hard Disk File

☐ Do Not Add a Virtual Hard Disk

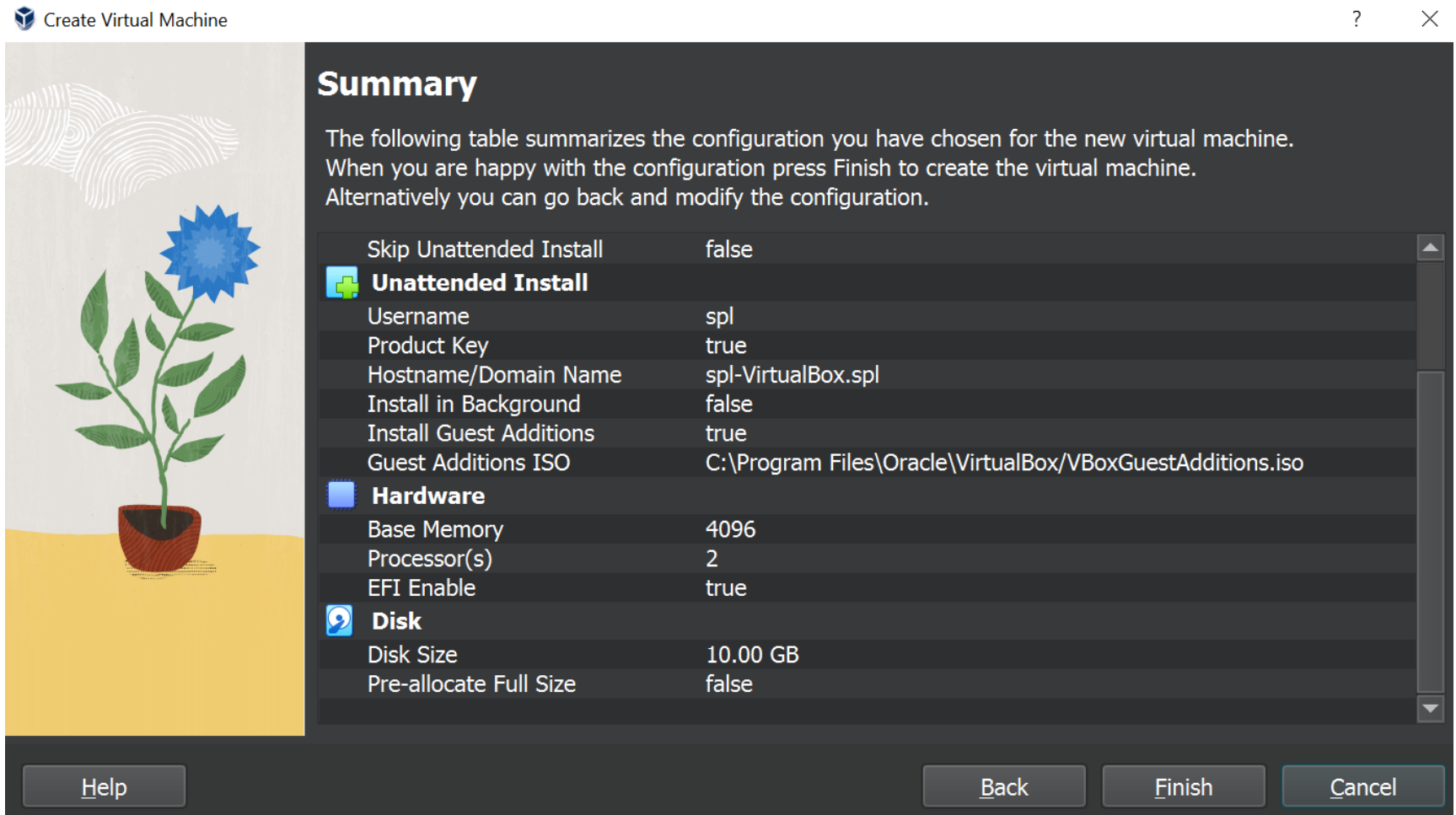
Help

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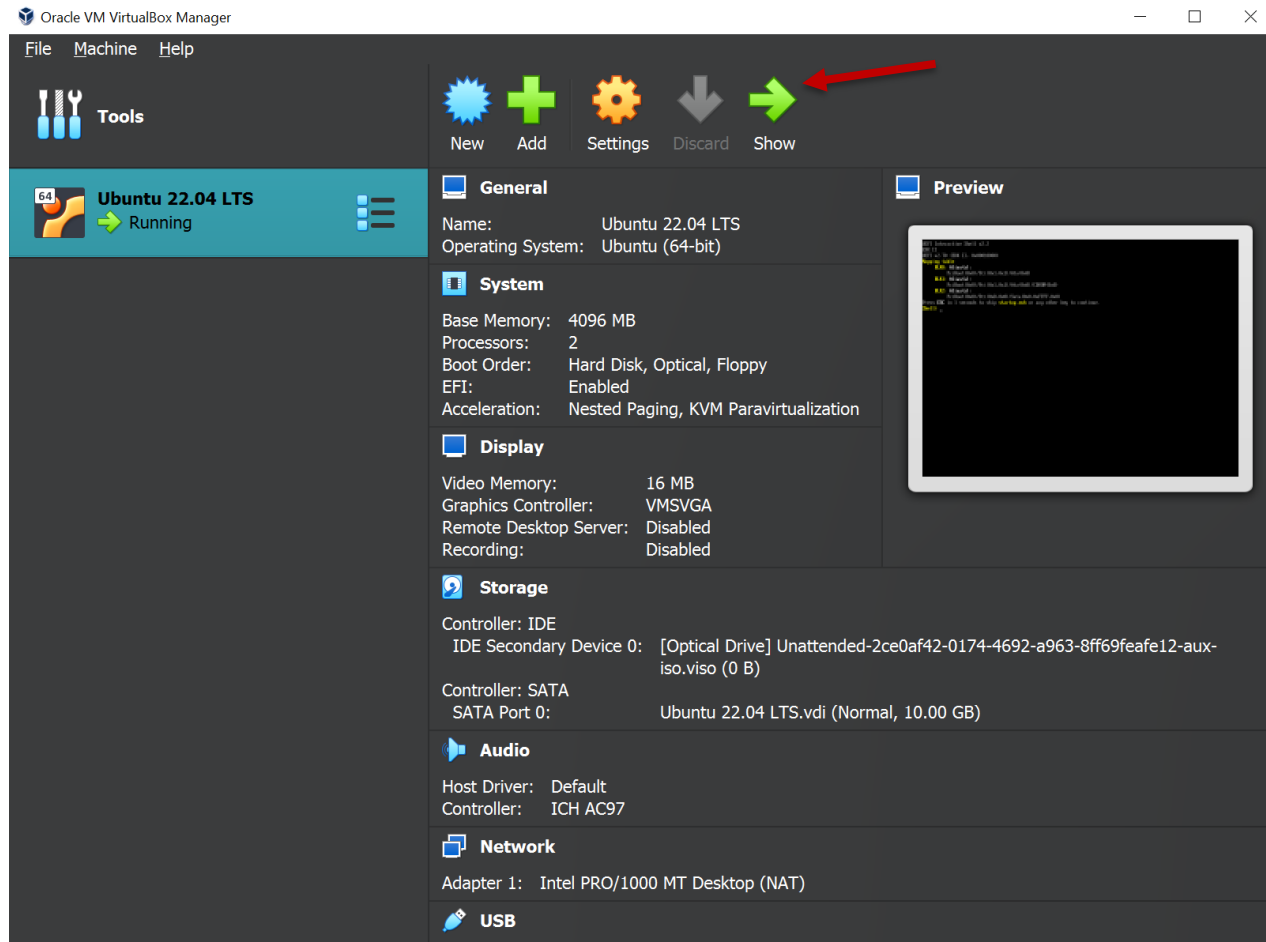
Cancel

Creating a VM (5)



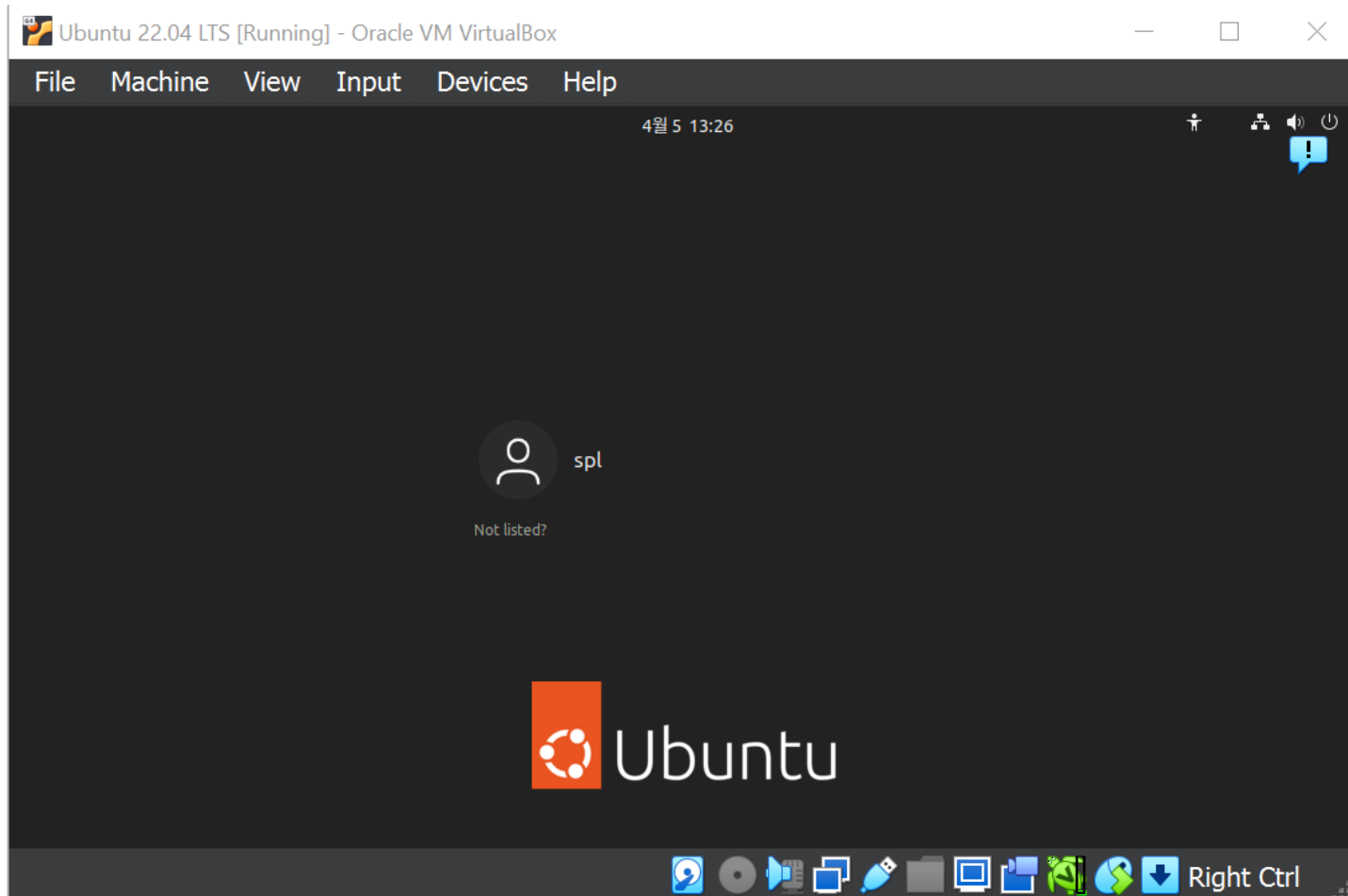
Starting a VM (1)

- Double-click on the VM, or click the “Show” button



Starting a VM (2)

- Wait for it to finish installing and now we're done!



Starting a VM (3)

- Let's test your VM
- Press *Ctrl + Alt + T* to launch a terminal (shell)
- Type the following commands:
 - \$ sudo apt update
 - \$ sudo apt upgrade
 - \$ sudo apt install build-essential