

Virtual Machine Description

How to Download and Install VMware Workstation Pro (Free)

1. Download the Latest Version: (THIS REQUIRES YOU TO CREATE AN ACCOUNT!)

To download VMware Workstation Pro,

1. Login to the Broadcom Support Portal - <https://support.broadcom.com>
2. After successful login, access the VMware Workstation Pro downloads using the link, [Download VMware Workstation Pro. \(select latest of version 17 for your platform\)](#)

NOTE: You will need to accept the terms and conditions, and enter your address to complete your account before downloading.

2. System Requirements (Quick Check):

- **MAC USERS:** You have to figure this out on your own. Nobody in my world uses Mac, so I can't try this installation on that platform. It has worked for students in the past, but you generally need more resources (especially more RAM) to run it happily on the Mac platform.
- **Host OS:** Windows 10/11 (64-bit) or Linux (e.g., Ubuntu 20.04+).
- **Hardware:** 64-bit CPU with virtualization enabled (VT-x/AMD-V in BIOS), at least 2 GB RAM (4 GB+ recommended), and 1.2 GB free disk space.
- No internet needed post-download, but enable hardware virtualization in your BIOS/UEFI if VMs won't start.

3. Installation Steps (Windows Example; Linux is Similar via Bundle):

- Run the downloaded .exe (e.g., VMware-workstation-full-17.6.3-24583884.exe).
- Follow the wizard: Accept the EULA, choose the install path (default is fine), and select components (include "Enhanced Keyboard Driver" for better VM input).
- When prompted for a license key, select "**Finish**" or skip—it's free, so no key is needed.
- Restart your computer if prompted.
- Launch from the Start Menu (search for "VMware Workstation Pro").

4. Post-Install Setup:

- Create a new VM: File > New Virtual Machine > Select your ISO (e.g., Ubuntu, Windows) > Follow the wizard to allocate CPU/RAM/disk.
- Import existing Player VMs: They should open seamlessly since it's the same hypervisor.
- Updates: Check Help > Software Updates for patches (e.g., security fixes in 17.6.3).

Alternatives FOR MAC and/or If You Prefer Something Lighter

If you want a true "Player-like" free tool without Pro's extras:

- **Oracle VirtualBox:** Fully free, open-source. Download from [virtualbox.org](https://www.virtualbox.org). Installs similarly and supports most VM formats.
- **Older VMware Player Archives:** Version 17.6.2 is still floating around on sites like TechSpot or FileHorse for legacy setups, but stick to official sources for security.

If you run into issues (e.g., download errors), VMware's KB has troubleshooting: [Common Setup Issues](#).

Description:

This is a **Ubuntu XFCE 64-bit** virtual machine with **Mint 20x Desktop**. It includes **Python3, Ruby 3, and Java 11** languages. The OS language is English by default. It is configured with a **Spanish keyboard** by default, with the option of a **US English keyboard** (click the flag icon, bottom right to temporarily switch, or right click and change the default).

Installed are a wide range of bioinformatics tools (**blast, clustalw, fasta3**, and others). The **Lighttpd** Web server is installed and running. **Docker** is installed and running. **Jupyter Labs** is installed. **Blazegraph** is available in a subfolder of your home folder. **Git** is installed. The coding environment is **Visual Studio Code**

ACCESS TO “R”: I have created a Docker image that provides access to R 4.0.0 and the libraries that are required for my lectures, and other lectures in the course. To start this interface, double click on the “start R” icon on the desktop. To stop it, double-click on the “stop R” icon. There is a folder (R-shared) in your home directory that is mounted inside of this docker image, providing a bridge between your host operating environment and the Docker container.

It requires (at a minimum) 4Gig of free memory to run the course assignments,

therefore, your laptop must have at least 8 Gig of RAM to run this machine, and do the course assignments (probably more if you’re on a MacOS!)

If your laptop does not meet this requirement, **you will likely not be able to complete the courses. Instructors will not spend additional time helping you solve problems related to lack of memory.**

You must be sure that the VM is working before you attend the first classes! If you have problems, email mark.wilkinson@upm.es to ask for help. The course is very busy, so I cannot take class time to troubleshoot installation problems.

Using the VM

Windows and Linux:

- 1) Download (see instructions above)
 - a) **MOVE IT OUT OF THE DOWNLOADS FOLDER BEFORE YOU TRY TO RUN THE INSTALLER!**
- 2) Download the VM (the .zip file [in this folder \(https://tinyurl.com/UPM-CombBio-VM2020-v2\)](https://tinyurl.com/UPM-CombBio-VM2020-v2)) and unzip it
- 3) Open VMWare Player and select the .vmx file
- 4) If you are asked, select the option “I moved it”
- 5) Once it has opened, you will probably get a message about VMWare Tools - say “yes” to installing the latest ones.

If you have problems related to visual c++, download the latest version from here: <https://docs.microsoft.com/en-US/cpp/windows/latest-supported-vc-redist?view=msvc-170> and then install it to repair your existing installation.

MacOS:

- 1) Download [VirtualBox for MacOS](https://www.virtualbox.org/wiki/Downloads) (<https://www.virtualbox.org/wiki/Downloads>) (or see the alternatives mentioned above)
- 2) Download the VM (the .zip file [in this folder](https://tinyurl.com/UPM-CombBio-VM2020-v2)(<https://tinyurl.com/UPM-CombBio-VM2020-v2>)) and unzip it
- 3) Follow instructions here: <https://techathlon.com/how-to-run-a-vmdk-file-in-oracle-virtualbox/>

For all versions, the following is the username/password

Default Username: **osboxes**

Default Password: **osboxes.org**

Important Note:

It is important to let the VM fully shut down before you switch off or hibernate your host computer. Not doing so may leave it in a locked state that is non-recoverable. **All of your work will be lost!** So... at the end of every session, select the VM's "hibernate" or "shut down" option, and then watch the application icon until you see that the shut-down has completed (this can take as much as 1 minute!). *The fact that you cannot see the window on your screen does not mean that the VM has finished shutting down! Watch the icon until it shows that the process is complete.*

For Mac users, local install of iRuby (to run jupyter notebooks outside of the VM) are here: <https://mac.install.guide/ruby/12.html>