

RUNNING "UBUNTU" LINUX INSIDE A VIRTUAL MACHINE INSIDE "WINDOWS.." OR "macOS"

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SUMMARY

To learn how to use Ubuntu Linux or any other distribution of Linux, you can run it inside a "virtual machine program" inside your existing beloved "Windows.." or "macOS" computer. However, you need to be beware of the limitations of the various "virtual machine program" and "host computer" configurations.

TOPICS

- "Ubuntu" Linux In Various Configuration Options
- Four Criteria for Evaluating "Ubuntu" Linux In Various Configuration Options
- Configuration "Option 1" (= "Ubuntu" in "VMware Fusion" in macOS) Met All Four Of Our Criteria:
- All Four Configuration Options Succeeded with Criteria 1 (= print with USB printer)
- The Other Three Configurations All Failed with Criteria 2, 3, and 4

"UBUNTU" LINUX IN VARIOUS CONFIGURATION OPTIONS

- ❑ CONFIGURATION OPTION 1 = "Ubuntu" Linux running inside "VMware Workstation Player" (inside a "Windows 10" computer)
- ❑ CONFIGURATION OPTION 2 = "Ubuntu" Linux running inside "VMware Fusion" (inside a "macOS" computer)
- ❑ CONFIGURATION OPTION 3 = "Ubuntu" Linux running inside "VirtualBox" (inside a "Windows 10" or "macOS" computer)
- ❑ CONFIGURATION OPTION 4 = "Ubuntu" Linux running inside "Parallels Desktop" (inside a "macOS" computer)

"CONFIGURATION OPTION 1 (= Linux inside virtual machine inside "VMware.." inside "Windows..")

Real computer (= "host computer") runs 64-bit version of "Windows.."

**"VMware Workstation Player"
= "virtual machine program"**

**"Virtual machine" runs
"Ubuntu Desktop" Linux as a
"guest operating system"**

Install "VMware Tools" (drivers)

"CONFIGURATION OPTION 2 (= Linux inside virtual machine inside "VMware.." inside "macOS..")

**Real computer (= "host computer")
runs "macOS"**

"VMware Fusion"

= "virtual machine program"

**"Virtual machine" runs
"Ubuntu Desktop" Linux as a
"guest operating system"**

Install "VMware Tools" (drivers)

"CONFIGURATION OPTION 3 (= Linux inside virtual machine inside "VirtualBox" inside "Windows..")

**Real computer (= "host computer")
runs 64-bit version of "Windows.."**

**"Oracle VM VirtualBox"
= "virtual machine program"**

**"Virtual machine" runs
"Ubuntu Desktop" Linux as a
"guest operating system"**

Install "Guest Additions" (drivers)

"CONFIGURATION OPTION 4 (= Linux inside virtual machine inside "Parallels Desktop" inside "macOS")

**Real computer (= "host computer")
runs "macOS"**

**"Parallels Desktop"
= "virtual machine program"**

**"Virtual machine" runs
"Ubuntu Desktop" Linux as a
"guest operating system"**

Install "Parallels Tools" (drivers)

CRITERIA FOR A "VIRTUAL MACHINE PROGRAM"/HOST CONFIGURATION

- 1. Can print to a USB-attached printer?
- 2. Can make a wireless Wi-Fi connection to a router using a USB Wi-Fi adapter?
- 3. Can scan paper documents and photos with the "Xsane" app or "VueScan" app using a USB-attached scanner?
- 4. Can send and receive faxes using the "efax-gtk" app connected to a USB data/fax modem?

OUR TEST RESULTS

- "Criteria 1" (= USB printer) succeeded for all four "configuration options"

OUR TEST RESULTS (continued)

- Criteria 2, 3, and 4 succeeded for Configuration Options 1 and 3
- Criteria 2, 3, and 4 failed for Configuration Options 2 and 4

ALL FOUR CONFIGURATIONS MET "CRITERIA 1"..

- ..All four configuration options were able to print to a USB-attached printer

THE OTHER THREE CONFIGURATIONS OPTIONS ALL FAILED FOR CRITERIA 2, 3, AND 4

- ❑ "Ubuntu" Linux as a guest virtual machine in "Oracle VM VirtualBox" in "Windows..", in "VMware Workstation Player" (in "Windows.."), and in "Oracle VM Virtualbox" (in "Windows..") ALL FAILED FOR CRITERIAL 2, 3, AND 4

APPENDIX 1: "UBUNTU" LINUX VIRTUAL MACHINE INSIDE "..VIRTUALBOX" INSIDE macos

- "..VirtualBox" is the only free "virtual machine app" for "macOS" since "VMware Fusion" and "Parallels Desktop" are both not free
- However it has "VirtualBox" has two unsurmountable problems:

APPENDIX 1: "UBUNTU" LINUX VIRTUAL MACHINE INSIDE "..VIRTUALBOX" INSIDE macos (continued)

- UNSURMOUNTABLE PROBLEM 1:
When "Ubuntu" is installed into a "..VirtualBox" virtual machine inside "macOS" and the virtual machine is connected to the Internet via a USB Wi-Fi adapter, Internet download and upload speeds slow down to less than 20 percent of the actual speeds of the Internet provider's connection

APPENDIX 1: "UBUNTU" LINUX VIRTUAL MACHINE INSIDE "..VIRTUALBOX" INSIDE macos (continued)

- UNSURMOUNTABLE PROBLEM 2:
When "Ubuntu" is installed into a "..VirtualBox" virtual machine inside "macOS", clicking on "Devices" from the pull-down menu of the virtual machine and then clicking on "Insert Guest Additions CD Image" causes the "Ubuntu" operating system to freeze and then fail to boot up again, requiring a re-installation of the "Ubuntu" operating system.

