

Running a MacOS Monterey VM in Proxmox VE

1. Download a MacOS Monterey .iso [Download](#)
2. Download KVM OpenCore bootloader [Download](#)
3. Extract the downloaded KVM OpenCore bootloader .gz file
4. Upload the Monterey and KVM OpenCore .iso files to the Proxmox ISO library
5. Log into the Proxmox web UI
6. Right click the Proxmox node name > Create VM
7. Type MacOS12 in the name field, set the VM ID to 1200 (unless 1200 is in use) > Next
8. On the OS tab, set the Type field to Other and select the KVM OpenCore .iso in the ISO Image field > Next
9. On the System tab, set the Graphic card field to VMware compatible, BIOS field to OVMF (UEFI), Uncheck the Pre-Enroll Keys checkbox, Check the Add EFI Disk checkbox, Machine field to q35 and the SCSI Controller to VirtIO SCSI > Next

10. On the Hard Disk tab, set the Bus/Device field to VirtIO Block, Disk size field to 64, Cache field to Write back (unsafe) > Next
11. On the CPU tab, set Cores field to 4, Type field to Penryn > Next
12. On the Memory tab, set the Memory to 4096 > Next
13. On the Network tab, set the Model field to VMware vmxnet3 > Next
14. Verify the summary and click Finish
15. Click the MacOS12 VM > Select Hardware from the left sub-navigation menu
16. Click Add > CD/DVD Drive
17. Select the MacOS Monterey .iso downloaded earlier > Click Create
18. Select the MacOS12 VM > Options > Boot Order
19. Set the KVM OpenCore disk as the first boot option > Click OK
20. Right click the Proxmox node name > Console
21. Run the following commands in the terminal

```
# edit the VM conf file, change 1200 to the VM ID for the MacOS12 VM
nano /etc/pve/qemu-server/1200.conf
```

22. If running on an Intel CPU, add the following line to the bottom of the .conf file:

```
args: -device isa-applesmc,osk="ourhardworkbythesewordsguardedpleasedontsteal(c)AppleComputerInc" -smbios type=2 -device usb-kbd,bus=ehci.0,port=2 -global nec-usb-xhci.msi=off -cpu host,kvm=on,vendor=GenuineIntel,+kvm_pv_unhalt,+kvm_pv_eoi,+hypervisor,+invirtsc
```

23. If running on an AMD CPU, add the following line to the bottom of the .conf file:

```
args: -device isa-applesmc,osk="ourhardworkbythesewordsguardedpleasedontsteal(c)AppleComputerInc" -smbios type=2 -device usb-kbd,bus=ehci.0,port=2 -global nec-usb-xhci.msi=off -cpu Penryn,kvm=on,vendor=GenuineIntel,+kvm_pv_unhalt,+kvm_pv_eoi,+hypervisor,+invirtsc,+pcid,+ssse3,+sse4.2,+popcnt,+avx,+avx2,+aes,+fma,+fma4,+bmi1,+bmi2,+xsave,+xsaveopt,+check
```

24. Press CTRL+W and search for ,media=cdrom

25. Delete the ,media=cdrom from the two attached .iso files (KVM OpenCore and Monterey) and add cache=unsafe

26. Press CTRL+O, Enter, CTRL+X to write the changes to the conf file

27. Back in the Proxmox web UI, right click the MacOS12 VM in the left navigation pane > Start

28. Click console in the left sub-navigation menu

29. □ At the OpenCore menu, select UEFI Shell > Press Enter

30. □ Type the following in the UEFI shell:

```
# change to the Monterey .iso, the disk number may be different for you
fs0:
# launch the MacOS installer
System/Library/CoreServices/boot.efi
```

31. □ After a long initialization sequence the MAC OS Setup should start

32. □ Select Disk Utility

33. □ Select the VIRTIO Block Media > Click Erase

34. □ Name the drive OS12 > Set the Format to APFS > Click Erase

35. □ Click Done > Close Disk Utility

36. □ Click Install macOS Monterey

37. □ Click Continue > Click Agree > Click Agree again

38. □ Select the OS12 disk > Click Install

39. Wait while Mac OS installs files, the VM will reboot several times
40. Select your Country > Click Continue
41. Confirm your languages and keyboard layout > Click Continue
42. Click Not Now on the Accessibility screen
43. Click Continue on the Data & Privacy screen
44. Select Not Now on the Migration Assistant screen
45. Select Set Up Later and then Skip on the Apple ID screen
46. Click Agree > Agree again
47. Enter a name, user name, password > Click Continue
48. Click Continue > Select Use or Don't Use for Location Services
49. Pick a timezone > Click Continue
50. Uncheck Share Mac Analytics with Apple > Click Continue
51. Click Set Up Later on the Screen Time screen
52. Uncheck the Enable Ask Siri box > Click Continue

53. □ Pick a theme > Click Continue

54. □ Welcome to MacOS 12 Monterey

Configuring Booting Without OpenCore Mounted

1. □ Log into the MacOS12 VM

2. □ Launch a web browser and download the KVM OpenCore EFI folder [Download](#)

3. □ Start LaunchPad from the dock

4. □ Search terminal > Click Terminal to launch it

5. □ Run the following commands in the terminal window

```
git clone https://github.com/corpnewt/MountEFI
cd MountEFI
chmod +x MountEFI.command
./MountEFI.command
```

6. □ Enter the number that corresponds to the OS12 drive created during the installation > Press Enter

7. Open a Finder window
8. Navigate to the mounted EFI location
9. If an existing EFI folder exists, rename the it to EFI.orig
10. Copy the KVM OpenCoreEFI folder downloaded earlier to the mounted EFI partition
11. Once the EFI folder is copied, shutdown the VM
12. Click the MacOS12 VM > Select Hardware from the left sub-navigation menu
13. Click the OpenCore Hard Disk to select it > Click Detach
14. Click the detached OpenCore Hard Disk to select it again > Click Remove
15. Right click the MacOS12 VM in the left navigation pane > Start
16. Click console in the left sub-navigation menu to verify the VM still boots into Monterey without the OpenCore disc image mounted

