

◆ AI Overview



The "VirtualBox can't operate in VMX root mode" error, along with the "VERR_VMX_IN_VMX_ROOT_MODE" message, indicates a conflict between VirtualBox and the KVM kernel module on your system. KVM and VirtualBox both utilize hardware virtualization features (VT-x on Intel or AMD-V on AMD) and cannot run concurrently. To resolve this, you need to disable KVM before running VirtualBox. [🔗](#)

Here's a breakdown of the problem and solutions:

Understanding the Problem:

VMX Root Mode:

This is a special processor mode that allows a hypervisor (like KVM or VirtualBox) to control and manage virtual machines. [🔗](#)

KVM and VirtualBox Conflict:

Both KVM (Kernel-based Virtual Machine) and VirtualBox are hypervisors, and they both want to use VMX root mode. This leads to a conflict when they try to run simultaneously. [🔗](#)

VERR_VMX_IN_VMX_ROOT_MODE :

This specific error code from VirtualBox confirms that KVM is already using the VMX mode, preventing VirtualBox from accessing it. [🔗](#)

Solutions:

1. Disable KVM (Temporarily): [🔗](#)

- **Check if KVM is loaded:** Run `lsmod | grep kvm` to see if the `kvm_intel` (for Intel) or `kvm_amd` (for AMD) modules are loaded. [🔗](#)
- **Unload the module:** If they are loaded, unload them using `sudo modprobe -r kvm_intel` or `sudo modprobe -r kvm_amd`. [🔗](#)
- **Reboot:** Restart your system to ensure the changes take effect. [🔗](#)
- **Note:** This is a temporary fix, as the KVM module will be reloaded on reboot.

2. Disable KVM Permanently (Recommended): [🔗](#)

- **Create a blacklist file:** Create a file named `kvm-blacklist.conf` in `/etc/modprobe.d/`. [🔗](#)
- **Add the blacklist entry:** Add the appropriate line to the file: [🔗](#)
 - For Intel: `blacklist kvm_intel` [🔗](#)
 - For AMD: `blacklist kvm_amd` [🔗](#)
- **Reboot:** Restart your system to apply the changes. [🔗](#)

3. Modify Kernel Parameters:

Aug 23, 2024

Show all

Dive deeper in AI Mode

AI responses may include mistakes. [Learn more](#)



Super User

[https://superuser.com > questions > virtualbox-cant-ope...](https://superuser.com/questions/virtualbox-cant-ope...)

VirtualBox can't operate in VMX mode

Jun 13, 2024 — I tried to use VirtualBox and got this error, **VirtualBox can't operate in VMX root mode**.

Please disable the KVM kernel extension, recompile your kernel and ...

6 answers · Top answer: On the terminal, disable the kernel module responsible for KVM (Kernel-base...

Run both Docker and Virtualbox on Linux? Or ... 1 answer Apr 12, 2023

VirtualBox Kernel driver not installed (rc=1908 ... 9 answers Jul 9, 2021

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VirtualBox forums

[https://forums.virtualbox.org > viewtopic](https://forums.virtualbox.org/viewtopic)

Please disable tge KVM kerriel extension - virtualbox.org

Jul 18, 2012 — (VERR_VMX_IN_VMX_ROOT_MODE) **VirtualBox can't operate in VMX root mode**.

Please disable the KVM kernel extension, recompile your kernel and reboot



Fedora Discussion

[https://discussion.fedoraproject.org > after-upgrading-to...](https://discussion.fedoraproject.org/after-upgrading-to...)

After upgrading to kernel 6.12, VirtualBox fails to start

Dec 17, 2024 — Failed to start the virtual machine Win11. **VirtualBox can't operate in VMX root mode**.

Please disable the KVM kernel extension, recompile your kernel and reboot.

Top answer: You can use grubby as well: # add kernel parameter sudo grubby --update-kernel=ALL --a...



VirtualBox forums

[https://forums.virtualbox.org > viewtopic](https://forums.virtualbox.org/viewtopic)

Trouble starting VB - disable KVM - virtualbox.org

Jan 3, 2025 — When starting VB machine, am getting the message: "**VirtualBox can't operate in VMX**

root mode. Please disable the KVM kernel extension, recompile your kernel ...



itsfoss.community

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Issue with Virtual Box 7.0 on Ubuntu 22.04

Aug 23, 2024 — **VirtualBox can't operate in VMX root mode**. Please disable the KVM kernel extension,

recompile your kernel and reboot ...



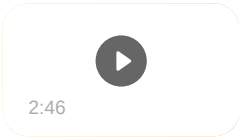
VirtualBox forums

[https://forums.virtualbox.org > viewtopic](https://forums.virtualbox.org/viewtopic)

VirtualBox can't operate in VMX root mode

YouTube · Джонатан Седман
1K+ views · 4 months ago

Virtualbox Error: VirtualBox can't operate in VMX root mode.



disable the KVM kernel extension, recompile your kernel and reboot I was able to solve the problem by disabling the KVM kernel extension. :) ...

Zorin Forum
<https://forum.zorin.com> › virtualbox-error

VirtualBox error - General Help - Zorin Forum

Sep 11, 2024 — **Please disable the KVM kernel extension**, recompile your kernel and reboot (VERR_VMX_IN_VMX_ROOT_MODE). Result Code: NS_ERROR_FAILURE (0x80004005)

randomblog.hu
<https://randomblog.hu> › how-to-fix-virtual-machines-n...

How to Fix Virtual Machines Not Starting in Ubuntu 25.04 ...

Apr 26, 2025 — **Please disable the KVM kernel extension**, recompile your kernel and reboot (VERR_VMX_IN_VMX_ROOT_MODE). Result Code: NS_ERROR_FAILURE (0x80004005)

openSUSE Forums
<https://forums.opensuse.org> › English › Applications

cannot operate in VMX mode, please disable KVM kernel ...

Dec 26, 2024 — **VirtualBox can't operate in VMX root mode**. Please disable the KVM kernel extension, recompile your kernel and reboot (VERR_VMX_IN_VMX_ROOT_MODE).

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- How to install Linux kernel on VirtualBox?
- Can VirtualBox use KVM?
- How to fix VirtualBox not working?

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VMX root mode VirtualBox	🔍	VirtualBox and Docker on same machine Ubuntu	🔍
modprobe: fatal: module kvm_intel is in use.	🔍	Does VirtualBox use KVM	🔍

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