

Chapter 15. Change Log

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This section summarizes the changes between Oracle VM VirtualBox versions. Note that this change log is not exhaustive and not all changes are listed.

Oracle VM VirtualBox version numbers consist of three numbers separated by dots where the first and second number represent the major version and the third number the minor version. Minor version numbers of official releases are always even. An odd minor version number represents an internal development or test build. In addition, each build contains a revision number.

15.1. Version 7.0.8 (2023-04-18)

This is a maintenance release. The following items were fixed and/or added:

- VMM: Fixed EFLAGS.TF handling for CPUID instructions when Hyper-V is used (bug #17961)
- VMM: Fixed MONITOR/MWAIT crash with Solaris guests when Hyper-V is used on Windows 11
- VMM: Introduced general improvements in nested visualization area
- VMM: Fixed triple fault related guru meditations for UEFI guests starting with macOS Ventura 13.3 (bug #21563)
- GUI: Brought back Restore current snapshot checkbox of Close VM dialog (bugs #21189, #21491)
- GUI: Fixes and validation for VM settings USB filters editor, filter port value is now properly saved/restored
- GUI: Fixes for VM name and OS type embedded editors of Details pane
- GUI: Cloud related wizards should now propose enabled profiles before disabled
- Oracle VM VirtualBox Extension Pack: Fixed shipping the cryptographic support module for full VM encryption
- E1000: Fixed possible guru meditation when changing network attachments (bug #21488)
- virtio-net: Follow up fixes for FreeBSD 12.3 and pfSense 2.6.0 (bug #21201)
- 3D: Fixed various graphics issues with Windows 7 guests (bugs #21129, #21196, #21208, #21521)
- Main/UefiVariableStore: Added API to add signatures to the MOK list (Machine Owner Key)
- VBoxManage: Introduced modifynvram enrollmoks sub-command to enroll Machine Owner Key into NVRAM, so Linux guest kernel can pick it up in order to verify signature of modules signed with this key
- Guest Control/Main: Fixed deleting files via built-in toolbox
- Linux host: Added possibility to bypass kernel modules signature verification once

VBOX_BYPASS_MODULES_SIGNATURE_CHECK="1" is specified in /etc/vbox/vbox.cfg, useful in case if Linux distribution does not provide necessary tools to verify kernel module signature

- Linux Guest Additions and host Installer: Improved detection if system is running systemd as the init process
- Linux Guest Additions and host drivers: Introduce initial support for kernel 6.3
- Linux Guest Additions: Added possibility to bypass kernel modules signature verification once VBOX_BYPASS_MODULES_SIGNATURE_CHECK="1" is specified in /etc/virtualbox-guest-additions.conf, useful in case if Linux distribution does not provide necessary tools to verify kernel module signature
- Linux Guest Additions: Added experimental support for kernel modules and user services reloading in the end of installation process, thus guest system reboot after Guest Additions (7.0.8 and newer) upgrade is no longer required in general case
- Linux Guest Additions: Fixed vboxvideo build issue with RHEL 8.7, 9.1 and 9.2 kernels (bugs #21446 and #21450)

15.2. Version 7.0.6 (2023-01-17)

This is a maintenance release. The following items were fixed and/or added:

- VMM: Fixed guru running the FreeBSD loader on older Intel CPUs without unrestricted guest support (bug #21332)
- GUI: Fixed virtual machines grouping when VM was created or modified in command line (bugs #11500, #20933)
- GUI: Introduced generic changes in settings dialogs
- VirtioNet: Fixed broken network after loading saved state (bug #21172)
- Storage: Added support for increasing the size of the following VMDK image variants: monolithicFlat, monolithicSparse, twoGbMaxExtentSparse, twoGbMaxExtentFlat
- VBoxManage: Added missing --directory switch for guestcontrol mktemp command
- Mouse Integration: Guest was provided with extended host mouse state (bug #21139)
- DnD: Introduced generic improvements
- Guest Control: Fixed handling creation mode for temporary directories (bug #21394)
- Linux Host and Guest: Added initial support for building UEK7 kernel on Oracle Linux 8
- Linux Host and Guest: Added initial support for RHEL 9.1 kernel
- Windows Host: Fixed support for VM autostart (bug#21349)
- Linux Guest Additions: Added initial support for kernel 6.2 for vboxvideo
- Audio: The "--audio" option in VBoxManage is now marked as deprecated; please use "--audio-driver" and "--audio-enabled" instead. This will allow more flexibility when changing the driver and/or controlling the audio functionality

15.3. Version 7.0.4 (2022-11-18)

This is a maintenance release. The following items were fixed and/or added:

- VMM: Added nested paging support for nested virtualization (Intel hosts only)
- VMM: Fixed rare guru meditations with certain guests on macOS 10.15 (Catalina) (bug #21237)
- VMM: Fixed possible VM process crash on Windows hosts when Hyper-V is used with certain guests (bug #21174)
- VMM: Fixed Windows XP guest hang or BSOD on AMD CPUs under certain circumstances (bug #21256)
- GUI: Various bugfixes for the Guest Control file manager
- GUI: Added more informative file operations in the Guest Control file manager
- GUI: Added an option to the global settings (the display page) to resize user interface font
- GUI: Fixed a regression in new vm wizard. Selected virtual disks are no longer deleted when the wizard is cancelled (bug #21244)
- GUI: Added a new menu item to the devices menu to optionally upgrade the guest additions.
- VirtioSCSI: Fixed recognition of the virtio SCSI controller by the EFI firmware (bug #21200)
- VirtioSCSI: Fixed hang when shutting down the VM if the virtio SCSI controller is used (bug #21144)
- virtio-net: Workaround a bug in the virtio-net driver included in FreeBSD version up to 12.3 which renders the device non functional (bug #21201)
- Storage: Fixed I/O errors with the VirtioSCSI controller when the host I/O cache is enabled (bug #19717)
- VBoxManage: Fixed regression when 'createmedium disk --variant RawDisk' command resulted in invalid .vmdk file (bug #21125)
- Main: Restored input pointing device behavior in multi-monitor VM configuration (bug #21137)
- Main: Fixed progress indication during automatic Linux Guest Additions installation
- Guest Control: Fixed path handling issues (bug #21095)
- 3D: Fixed VM process crash on macOS with 3D enabled (bug #21232)
- Linux Host and Guest: General improvements in startup scripts
- Linux Guest Additions: Introduced initial support for RHEL 8.7 and 9.2 kernels (bug #21272, #21258)
- Linux Guest Additions: Introduced initial support for SLES 15.4 kernels
- Linux Guest Additions: Fixed kernel modules rebuild behavior on system shutdown

15.4. Version 7.0.2 (2022-10-20)

This is a maintenance release. The following items were fixed and/or added:

- Known issue: VMs having more than one vCPU configured will not work properly on macOS Catalina due to an unknown memory corruption issue. Either lower the number of vCPUs to 1 or upgrade to BigSur or later where the issue does not occur
- Main: Fixed issue when VBoxSVC could become unresponsive if Extension Pack was not installed (bug

#21167)

- macOS hosts: Added workaround for a bug in the Hypervisor framework on Catalina causing VERR_NEM_MAP_PAGES_FAILED errors when starting a VM. (bug #21128)
- macOS hosts: Re-introduced support for internal networking, this is considered a bit experimental still
- macOS hosts: Fixed VM crash when the guest tries to access a microphone or webcam
- Windows host: Shared Clipboard: Fixed issue when only 4Kb of host clipboard buffer was accessible to guest (bug #21149)
- Linux Guest Additions: Introduced initial support for kernel 6.1
- Linux Guest Additions: Fixed issue when VBoxClient seamless service caused a crash of some X11 applications (bug #21132)
- Windows hosts: GUI: Fixed missing Qt libraries for vista style and sql driver (bug #21155)
- GUI: Fixed a glitch in the log viewer which was causing wrong log file to be saved (bug #21156)

15.5. Version 7.0.0 (2022-10-10)

This is a major update. The following major new features were added:

- Virtual machines can be fully encrypted now, including the VM config logs and saved states (CLI only for now)
- OCI: Cloud virtual machines can be added to Virtual Machine Manager and controlled as local VMs
- OCI: Cloud networks can now be configured via Network Manager tool same way as it is done for Host-only and NAT networks
- GUI: Added a new utility similar to "top" or "resource monitor" which lists performance statistics (CPU usage, RAM usage, disk I/O rate, etc.) of running guests
- GUI: Reworked the new vm wizard to integrate the unattended guest OS installation and to have a more streamlined work flow
- GUI: Added a new help viewer widget which enables the user manual to be navigated and searched
- GUI: Adding new notification center unifying most of running progresses and error reporting around the GUI
- GUI: Improved theme support on all platforms. Linux and macOS use native engine while for Windows host it is separately implemented.
- GUI: Large icon update.
- Audio recording: Now using Vorbis as the default audio format for WebM containers. Opus is no longer being used.
- Audio: Added "default" host driver type to make it possible to move VMs (appliances) between different platforms without the need of changing the audio driver explicitly. When the "default" driver is selected, the best audio backend option for a platform will be used. This is the default for newly created VMs.
- Guest Control: Implemented initial support for automatic updating of Guest Additions for Linux guests
- Guest Control: Implemented ability to wait for and/or reboot the guest when updating Guest Additions via

VBoxManage

- VBoxManage: Added Guest Control "waitrunlevel" sub-command to make it possible to wait for a guest to reach a certain run level
- Windows hosts: Added experimental support of running autostarted VMs in session 0, to allow running VMS even when a user is not being logged in (disabled by default, please consult the manual)
- macOS host: Dropped all kernel extensions. VirtualBox relies fully on the hypervisor and vmnet frameworks provided by Apple now. At the moment the implementation lacks "Internal Networking" functionality. This will be provided at a later date.
- macOS host: Providing a Developer Preview package for systems with an Apple silicon CPU. This is unsupported work in progress, and is known to have very modest performance.
- Linux Guest Additions: Reworked guest screen re-size functionality, added basic integration with some of guest Desktop Environments
- Devices: Implemented new 3D support based on DirectX 11 (and DXVK on non Windows hosts)
- Devices: Added virtual IOMMU devices (Intel and AMD variant)
- Devices: Added virtual TPM 1.2 and 2.0 devices
- Devices: The EHCI and XHCI USB controller devices are now part of the open source base package
- EFI: Added support for Secure Boot
- Debugging: Added experimental support for guest debugging through GDB and highly experimental support for guest debugging through KD/WinDbg

In addition, the following items were fixed and/or added:

- OCI: Cloud networking functionality is enhanced for local VMs, now local VMs could be connected to cloud networking
- GUI: Improved behavior of the virtual machine list and various VM related tools in case multiple items are selected
- GUI: On available platforms, added a new option to disable the host's screensaver
- GUI: Reworked global preferences, machine settings and the wizards to improve stability and usability
- GUI: Improving mouse handling in multi-monitor case on X11 platform
- GUI: Medium enumeration engine was reworked to improve performance
- GUI: NAT Network stuff was moved from global preferences to global Network Manager tool
- GUI: Extension Pack Manager was moved from global preferences to global tools
- GUI: Improved overall accessibility
- GUI: Migrating to recent Qt versions.

15.6. Change Logs for Legacy Versions

To view the change log for a legacy version of VirtualBox see the documentation for the relevant Oracle VM VirtualBox release.

Change logs are also available at:

<https://www.virtualbox.org/wiki/Changelog>.