

## Chapter 14. Known Limitations

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### 14.1. Experimental Features

Some Oracle VM VirtualBox features are labeled as experimental. Such features are provided on an "as-is" basis and are not formally supported. However, feedback and suggestions about such features are welcome. A comprehensive list of experimental features is as follows:

- Hardware 3D acceleration support for Windows, Linux, and Oracle Solaris guests
- Hardware 2D video playback acceleration support for Windows guests
- Mac OS X guests (macOS hosts only)
- ICH9 chipset emulation
- EFI firmware
- Host CD/DVD drive passthrough
- Support of iSCSI using internal networking
- Using Oracle VM VirtualBox and Hyper-V on the same host

### 14.2. Known Issues

The following section describes known problems with this release of Oracle VM VirtualBox. Unless marked otherwise, these issues are planned to be fixed in later releases.

- The macOS installer packages for Oracle VM VirtualBox 7 currently do not include the Internal Networking feature, which is available on all other platforms. This will be addressed with an update of Oracle VM VirtualBox 7. For setups which depend on this functionality it is best to keep using Oracle VM VirtualBox 6.1.
- Poor performance when using Oracle VM VirtualBox and **Hyper-V** on the same host. To fix this, certain Windows features like "Hyper-V Platform", "Virtual Machine Platform" and "Windows Hypervisor Platform" must be turned off, followed by a host reboot.

Additionally, the Microsoft Device Guard and Credential Guard hardware readiness tool might have to be used in order to turn off more features. For example, by running the following command:

```
.\DG_Readiness_Tool_vX.X.ps1 -Disable -AutoReboot
```

#### Note

Disabling Device Guard and Credential Guard features will have an impact on the overall security of the host. Please contact your Administrator beforehand regarding this.

- The following **Guest SMP (multiprocessor) limitations** exist:
  - **Poor performance** with 32-bit guests on AMD CPUs. This affects mainly Windows and Oracle Solaris guests, but possibly also some Linux kernel revisions. Partially solved for 32-bit Windows NT, 2000,

XP, and 2003 guests. Requires the Guest Additions to be installed.

- **Poor performance** with 32-bit guests on certain Intel CPU models that do not include virtual APIC hardware optimization support. This affects mainly Windows and Oracle Solaris guests, but possibly also some Linux kernel revisions. Partially solved for 32-bit Windows NT, 2000, XP, and 2003 guests. Requires the Guest Additions to be installed.

- **NX (no execute, data execution prevention)** only works for guests running on 64-bit hosts and requires that hardware virtualization be enabled.
- **Guest control.** On Windows guests, a process started using the guest control execute support will not be able to display a graphical user interface *unless* the user account under which it is running is currently logged in and has a desktop session.

Also, to use accounts without or with an empty password, the guest's group policy must be changed. To do so, open the group policy editor on the command line by typing **gpedit.msc**, open the key `Computer Configuration\Windows Settings\Security Settings\Local Policies\Security Options` and change the value of `Accounts: Limit local account use of blank passwords to console logon only` to **Disabled**.

- **Compacting virtual disk images is limited to VDI files.** The **VBoxManage modifymedium --compact** command is currently only implemented for VDI files. At the moment the only way to optimize the size of a virtual disk images in other formats, such as VMDK or VHD, is to clone the image and then use the cloned image in the VM configuration.
- **OVF import/export:**
  - OVF localization, with multiple languages in a single OVF file, is not yet supported.
  - Some OVF sections like `StartupSection`, `DeploymentOptionSection`, and `InstallSection` are ignored.
  - OVF environment documents, including their property sections and appliance configuration with ISO images, are not yet supported.
  - Remote files using HTTP or other mechanisms are not yet supported.
- Neither **scale mode** nor **seamless mode** work correctly with guests using OpenGL 3D features, such as with Compiz-enabled window managers.
- The RDP server in the Oracle VM VirtualBox extension pack supports only audio streams in format 22.05kHz stereo 16-bit. If the RDP client requests any other audio format there will be no audio.
- Preserving the aspect ratio in scale mode works only on Windows hosts and on macOS hosts.
- On **macOS hosts**, the following features are not yet implemented:
  - Numlock emulation
  - CPU frequency metric
  - Memory ballooning
- **macOS/ARM64 (Apple silicon) host package**
- **Mac OS X guests:**
  - Mac OS X guests can only run on a certain host hardware. For details about license and host hardware limitations. See [Section 3.1.1, “Mac OS X Guests”](#) and check the Apple software license conditions.

- Oracle VM VirtualBox does not provide Guest Additions for Mac OS X at this time.
- The graphics resolution currently defaults to 1024x768 as Mac OS X falls back to the built-in EFI display support. See [Section 3.14.1, "Video Modes in EFI"](#) for more information on how to change EFI video modes.
- Mac OS X guests only work with one CPU assigned to the VM. Support for SMP will be provided in a future release.
- Depending on your system and version of Mac OS X, you might experience guest hangs after some time. This can be fixed by turning off energy saving. Set the timeout to "Never" in the system preferences.
- By default, the Oracle VM VirtualBox EFI enables debug output of the Mac OS X kernel to help you diagnose boot problems. Note that there is a lot of output and not all errors are fatal. They would also show when using a physical Apple Macintosh computer. You can turn off these messages by using the following command:

```
$ VBoxManage setextradata VM-name "VBoxInternal2/EfiBootArgs" " "
```

To revert to the previous behavior, use the following command:

```
$ VBoxManage setextradata VM-name "VBoxInternal2/EfiBootArgs" ""
```

- It is currently not possible to start a Mac OS X guest in safe mode by specifying the `-x` option in `VBoxInternal2/EfiBootArgs` `extradata`.

#### • Oracle Solaris hosts:

- USB support on Oracle Solaris hosts requires Oracle Solaris 11 version snv\_124 or later. Webcams and other isochronous devices are known to have poor performance.
  - Host Webcam passthrough is restricted to 640x480 frames at 20 frames per second due to limitations in the Oracle Solaris V4L2 API. This may be addressed in a future Oracle Solaris release.
  - No ACPI information, such as battery status or power source, is reported to the guest.
  - No support for using wireless adapters with bridged networking.
  - Crossbow-based bridged networking on Oracle Solaris 11 hosts does not work directly with aggregate links. However, you can use **dladm** to manually create a VNIC over the aggregate link and use that with a VM. This limitation does not exist in Oracle Solaris 11u1 build 17 and later.
- Neither virtio nor Intel PRO/1000 drivers for **Windows XP guests** support segmentation offloading. Therefore Windows XP guests have slower transmission rates comparing to other guest types. Refer to MS Knowledge base article 842264 for additional information.
  - **Guest Additions for OS/2.** Seamless windows and automatic guest resizing will probably never be implemented due to inherent limitations of the OS/2 graphics system.
  - Some guest operating systems predating ATAPI CD-ROMs may exhibit long delays or entirely fail to boot in certain configurations. This is most likely to happen when an IDE/ATAPI CD-ROM exists alone on a primary or secondary IDE channel.

Affected operating systems are MS OS/2 1.21: fails to boot with an error message referencing COUNTRY.SYS and MS OS/2 1.3: long boot delays. To avoid such problems, disable the emulated IDE/ATAPI CD-ROM. The guest OS cannot use this device, anyway.