

Windows VirtIO Drivers

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Introduction

VirtIO Drivers are paravirtualized drivers for [kvm/Linux](http://www.linux-kvm.org/page/Virtio) (see <http://www.linux-kvm.org/page/Virtio>). In short, they enable direct (paravirtualized) access to devices and peripherals for virtual machines using them, instead of slower, emulated, ones.

A quite extended explanation about VirtIO drivers can be found here <http://www.ibm.com/developerworks/library/l-virtio>.

At the moment these kind of devices are supported:

- block (disks drives), see [Paravirtualized Block Drivers for Windows](#)
- network (ethernet cards), see [Paravirtualized Network Drivers for Windows](#)
- balloon (dynamic memory management), see [Dynamic Memory Management](#)

You can maximize performances by using VirtIO drivers. The availability and status of the VirtIO drivers depends on the guest OS and platform.

Windows OS Support

Windows does not have native support for VirtIO devices included. But, there is excellent external support through opensource drivers, which are available compiled and signed for Windows:

<https://fedorapeople.org/groups/virt/virtio-win/direct-downloads/archive-virtio/?C=M;O=D>

Note that this repository provides not only the most recent, but also many older versions. Those older versions

can still be useful when a Windows VM shows instability or incompatibility with a newer driver version

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OK

The binary drivers are digitally signed by Red Hat, and will work on 32-bit and 64-bit versions of Windows

Installation

Using the ISO

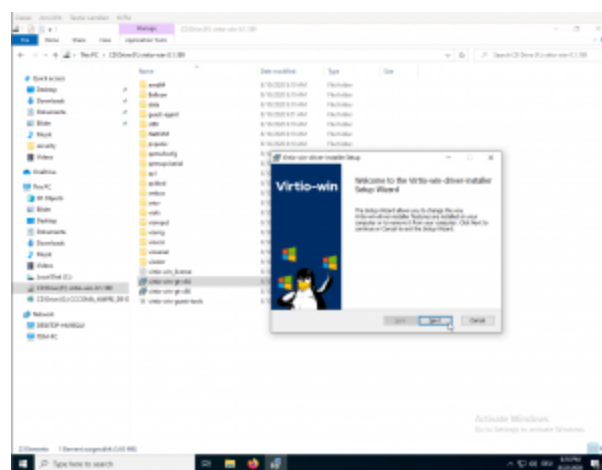
You can download the latest stable (<https://fedorapeople.org/groups/virt/virtio-win/direct-downloads/stable-virtio/virtio-win.iso>) or you can download the most recent (<https://fedorapeople.org/groups/virt/virtio-win/direct-downloads/latest-virtio/virtio-win.iso>) build of the ISO. Normally the drivers are pretty stable, so one should try out the most recent release first.

You can access the ISO in a VM by mounting the ISO with a virtual CD-ROM/DVD drive on that VM.

Wizard Installation

You can use an easy wizard to install all, or a selection, of VirtIO drivers.

1. Open the Windows Explorer and navigate to the CD-ROM drive.
2. Simply execute (double-click on) **virtio-win-gt-x64**
3. Follow its instructions.
4. (Optional) use the **virtio-win-guest-tools** wizard to install the QEMU Guest Agent and the SPICE agent for an improved remote-viewer experience.



Wizard Installation

5. Reboot VM

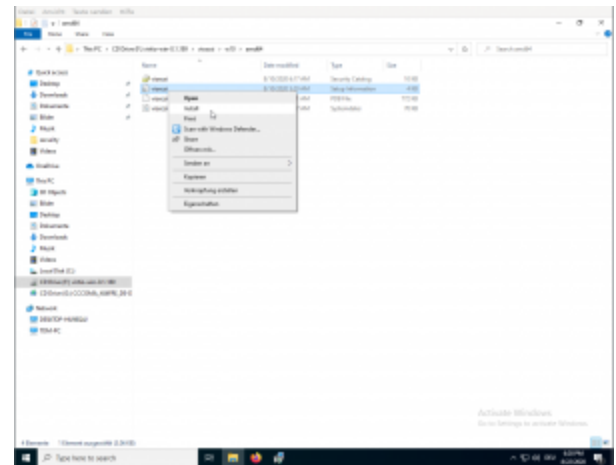
Manual Installation

1. Open the Windows Explorer and navigate to the CD-ROM drive.

There you can see that the ISO consists of several directories, each having sub-directories for supported OS version (for example, 2k19, 2k12R2, w7, w8.1, w10, ...).

- Balloon
- guest-agent
- NetKVM
- qxl
- vioscsi
- ...

2. Navigate to the desired driver directories and respective Windows Version
3. Right-click on the file with type "Setup Information"
4. A context menu opens, select "Install" here.
5. Repeat that process for all desired drivers
6. Reboot VM.



Manual Installation

Downloading the Wizard in the VM

You can also just download the most recent (<https://fedoraproject.org/groups/virt/virtio-win/direct-downloads/latest-virtio/>) virtio-win-gt-x64.msi or virtio-win-gt-x86.msi from inside the VM, if you have already network access.

Then just execute it and follow the installation process.

Troubleshooting

Try an older version of the drivers first, if that does not help ask in one of our support channels: https://pve.proxmox.com/wiki/Get_support

Further Reading

<https://docs.fedoraproject.org/en-US/quick-docs/creating-windows-virtual-machines-using-virtio-drivers/index.html>

<http://www.linux-kvm.org/page/WindowsGuestDrivers>

The source code of those drivers can be found here: <https://github.com/virtio-win/kvm-guest-drivers-windows>

http://www.linux-kvm.org/page/WindowsGuestDrivers/Download_Drivers

See also

- [Paravirtualized Block Drivers for Windows](#)
- [Paravirtualized Network Drivers for Windows](#)
- [Dynamic Memory Management](#)

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