



# VirtualBox

## Download VirtualBox for Linux Hosts

### VirtualBox 5.1.6 for Linux

**Note:** The package architecture has to match the Linux kernel architecture, that is, if you are running a 64-bit kernel, install the appropriate AMD64 package (it does not matter if you have an Intel or an AMD CPU). Mixed installations (e.g. Debian/Lenny ships an AMD64 kernel with 32-bit packages) are not supported. To install VirtualBox anyway you need to setup a 64-bit chroot environment.

Please choose the appropriate package for your Linux distribution:

- Ubuntu 16.04 ("Xenial") [i386](#) | [AMD64](#)
- Ubuntu 15.10 ("Wily") [i386](#) | [AMD64](#)
- Ubuntu 14.04 ("Trusty") / 14.10 ("Utopic") / 15.04 ("Vivid") [i386](#) | [AMD64](#)
- Ubuntu 12.04 LTS ("Precise") [i386](#) | [AMD64](#)
- Debian 9 ("Stretch") [i386](#) | [AMD64](#)
- Debian 8 ("Jessie") [i386](#) | [AMD64](#)
- Debian 7 ("Wheezy") [i386](#) | [AMD64](#)
- openSUSE 13.2 ("Harlequin") / Leap 42.1 ("Malachite") [i386](#) | [AMD64](#)
- Fedora 24 [i386](#) | [AMD64](#)
- Fedora 22 / 23 [i386](#) | [AMD64](#)
- Oracle Linux 7 ("OL7") / Red Hat Enterprise Linux 7 ("RHEL7") / CentOS 7 [AMD64](#)
- Oracle Linux 6 ("OL6") / Red Hat Enterprise Linux 6 ("RHEL6") / CentOS 6 [i386](#) | [AMD64](#)
- Oracle Linux 5 ("OL5") / Red Hat Enterprise Linux 5 ("RHEL5") / CentOS 5 [i386](#) | [AMD64](#)
- All distributions (built on EL5 and therefore do not require recent system libraries) [i386](#) | [AMD64](#)

You might want to compare the

- [SHA256](#) checksum or the
- [MD5](#) checksum

to verify the integrity of downloaded packages.

*The SHA256 checksums should be favored as the MD5 algorithm must be treated as insecure!*

### Oracle Linux

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Users of Oracle Linux 5, 6 and 7 can use the public yum [repository](#) and enable the el5\_addons (OEL5), the ol6\_addons (OL6) or the ol7\_addons (OL7). If a public-yum repo file **already exists** in /etc/yum.repos.d, do **not** overwrite it but just enable the addons! After that, do

```
yum install VirtualBox-5.1
```

to the latest maintenance release of VirtualBox 5.0.x.

## Debian-based Linux distributions

Add the following line to your /etc/apt/sources.list:

```
deb http://download.virtualbox.org/virtualbox/debian xenial contrib
```

According to your distribution, replace 'xenial' by 'vivid', 'utopic', 'trusty', 'raring', 'quantal', 'precise', 'lucid', 'jessie', 'wheezy', or 'squeeze'.

*(Up to version 3.2 the packages were located in the non-free section. Starting with version 4.0 they are located in the contrib section.)*

The Oracle public key for apt-secure can be downloaded

- [here](#) for **Debian 8** ("Jessie") / **Ubuntu 16.04** ("Xenial") and later
- [here](#) for older distributions.

You can add these keys with

```
sudo apt-key add oracle_vbox_2016.asc  
sudo apt-key add oracle_vbox.asc
```

or combine downloading and registering:

```
wget -q https://www.virtualbox.org/download/oracle_vbox_2016.asc -O- | sudo apt-key add -  
wget -q https://www.virtualbox.org/download/oracle_vbox.asc -O- | sudo apt-key add -
```

The key fingerprint for oracle\_vbox\_2016.asc is

```
B9F8 D658 297A F3EF C18D 5CDF A2F6 83C5 2980 AECF  
Oracle Corporation (VirtualBox archive signing key) <info@virtualbox.org>
```

The key fingerprint for oracle\_vbox.asc is

```
7B0F AB3A 13B9 0743 5925 D9C9 5442 2A4B 98AB 5139  
Oracle Corporation (VirtualBox archive signing key) <info@virtualbox.org>
```

(As of VirtualBox 3.2, the signing key was changed. The old Sun public key for apt-secure can be downloaded [here](#).)

To install VirtualBox, do

```
sudo apt-get update
sudo apt-get install virtualbox-5.1
```

Replace `virtualbox-5.1` by `virtualbox-4.3` to install VirtualBox 4.3.36 **Note:** Ubuntu/Debian users might want to install the `dkms` package to ensure that the VirtualBox host kernel modules (`vboxdrv`, `vboxnetflt` and `vboxnetadp`) are properly updated if the linux kernel version changes during the next `apt-get upgrade`. For Debian it is available in Lenny backports and in the normal repository for Squeeze and later. The `dkms` package can be installed through the Synaptic Package manager or through the following command:

```
sudo apt-get install dkms
```

What to do when experiencing **The following signatures were invalid: BADSIG ...** when refreshing the packages from the repository?

```
# sudo -s -H
# apt-get clean
# rm /var/lib/apt/lists/*
# rm /var/lib/apt/lists/partial/*
# apt-get clean
# apt-get update
```

## RPM-based Linux distributions

Starting with VirtualBox 3.0.12 we provide a yum-style repository for Oracle Linux/Fedora/RHEL/openSUSE. Note that **3.0.x** .rpm packages are named *VirtualBox-3.0.x* while **3.1.x** .rpm packages are named *VirtualBox-3.1-3.1.x*. This naming scheme allows to use the older 3.0.x packages without changing the repository.

Furthermore, all .rpm packages are signed. The Oracle public key for rpm can be downloaded [here](#). You can add this key (*not necessary for yum users, see below!*) with

```
sudo rpm --import oracle_vbox.asc
```

or combine downloading and registering:

```
wget -q https://www.virtualbox.org/download/oracle_vbox.asc -O- | rpm --import -
```

The key fingerprint is

```
7B0F AB3A 13B9 0743 5925 D9C9 5442 2A4B 98AB 5139
Oracle Corporation (VirtualBox archive signing key) <info@virtualbox.org>
```

After importing the public key, the package signature can be checked with

```
rpm --checksig PACKAGE_NAME
```

*Note that importing the key is not necessary for yum users (Oracle Linux/Fedora/RHEL/CentOS) when using one of the virtualbox.repo files from below as yum downloads and imports the public key automatically!*

The package signature is checked by yum/zypper as well:

- Users of **Oracle Linux** / **RHEL** can add [the Oracle Linux repo file](#) to `/etc/yum.repos.d/`.
- Users of **Fedora** can add [the Fedora repo file](#) to `/etc/yum.repos.d/`.
- Users of **openSUSE** can add the proper repo file for [11.4/12.1/12.2](#), [12.3](#), [13.1](#) or [13.2 / 42.1](#) to `/etc/zypp/repos.d/`.

**Note:** Users of Fedora/Mandriva might want to install the `dkms` package (not available on openSUSE) to ensure that the VirtualBox host kernel modules (`vboxdrv`, `vboxnetflt` and `vboxnetadp`) are properly updated if the linux kernel version changes during the next kernel update.



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