

Ask Ubuntu is a question and answer site for Ubuntu users and developers. It only takes a minute to sign up.

Sign up to join this community

Anybody can ask a question



Anybody can answer

The best answers are voted up and rise to the top

## How do I install Guest Additions in a VirtualBox VM?

Asked 11 years ago   Active 1 year, 9 months ago   Viewed 2.2m times



I've recently installed Ubuntu on Oracle's Virtualbox. Now I want to install the guest additions.

532



I started up my Ubuntu guest OS, clicked "Devices" and chose "Install Guest Additions". Nothing happened, and I don't see the CD icon on my desktop.



255

How can I make this work?



virtualbox

guest-additions

Share   Improve this question

Follow

edited Apr 24 2014 at 11:13



LiveWireBT

27.5k

24

102

212

asked Jan 22 2011 at 12:19



snakile

5,753

4

15

12

4   After installing, [see here for how to check that it worked](#). – Evgeni Sergeev Jan 5 2017 at 5:20

13 Answers

Active

Oldest

Score



590



If you have trouble installing Ubuntu in a VirtualBox VM, because the installer window does not fit the low resolution screen size, you can move the window with

**Alt** + **F7**.

## Installing Guest additions from the repositories



In case we have installed the **OSE edition** of Virtual Box from the repositories we can add the [guest additions from the repositories](#) in the **guest**. This will install guest additions matching the Virtual Box version as obtained from the repositories. It is **not recommended** to install these in newer releases of Virtual Box as obtained from the Oracle repository (see below).

Alternatively we can install the package **virtualbox-guest-additions-iso** in the **host** Ubuntu.

```
sudo apt-get install virtualbox-guest-additions-iso
```

The .iso file with an image of the OSE edition of the guest additions CD will install in the host directory `/usr/share/virtualbox/VBoxGuestAdditions.iso`. Mount this .iso file as a CD in your virtual machine's settings. In the guest you will then have access to a CD-ROM with the installer.

## Installing Guest Additions from Virtual Box Manager

In case the Guest Additions fail to build we may have to install the Linux kernel headers (see [How do I install kernel header files?](#)) or [build-essential](#)  tools in addition. It is also recommended to have [dkms](#)  installed (see below - Note 4). You can run this command in a terminal to install both:

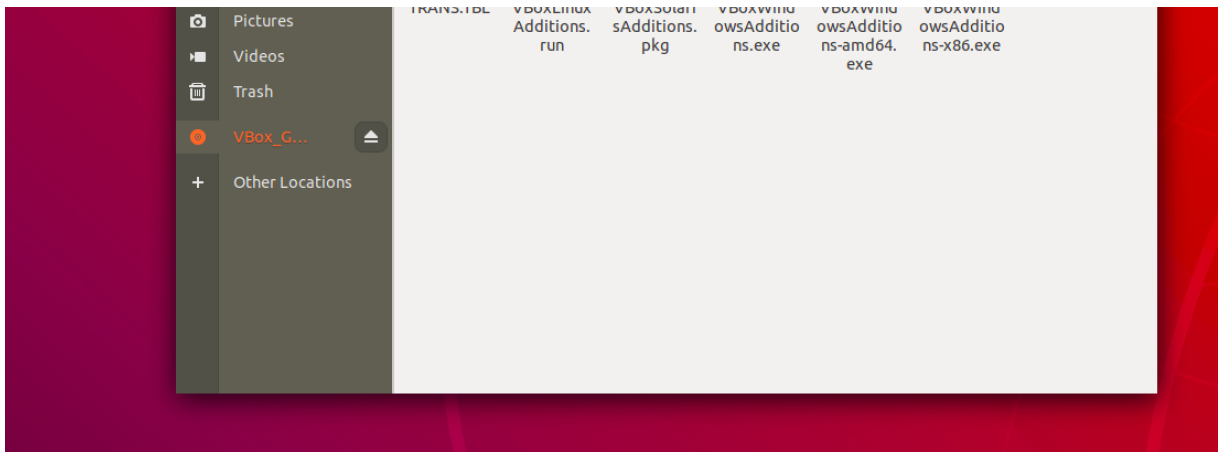
```
sudo apt install build-essential dkms
```

Selecting *Devices* -> *Install Guest Additions* (or press **Host** + **D** from the Virtual Box Manager) the Guest Additions CD .iso will be loaded but **not installed** in your guest OS. To install we need to run the installer script `VBoxLinuxAdditions.run` as root or from the Autorun Prompt (see below).

## GNOME Shell

To install the Guest Additions we will have a CD icon on our desktop as soon as the virtual drive is mounted:

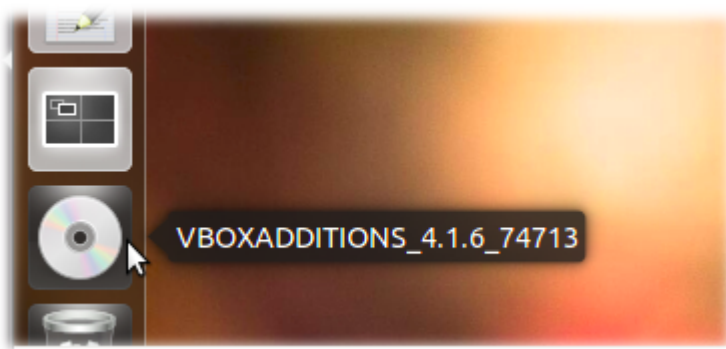




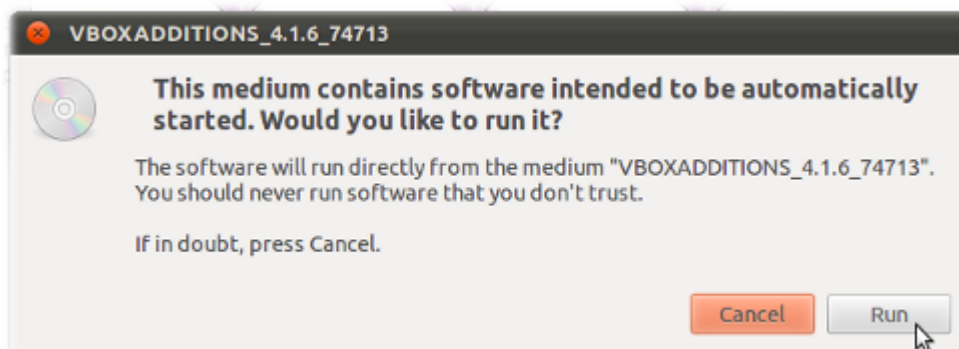
Next step is to run the *autorun.sh* script (as root) on this **mounted** CD by opening the drive and clicking on the "Run Software" button. This will build and install the vbox kernel modules needed.

## Unity

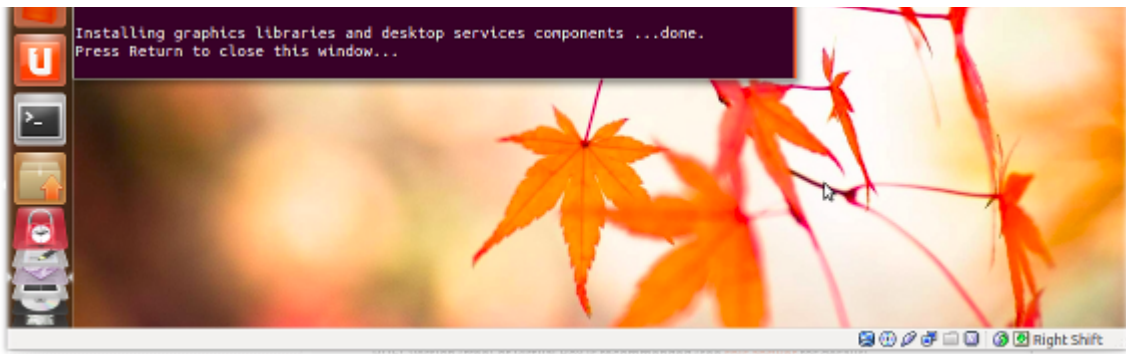
The guest additions is mounted as a virtual CD visible on the launcher:



In case the system is set up to autorun a CD it should just open the following autorun dialogue (if not select the CD symbol, choose open, then choose *Open Autorun Prompt*)



After having entered your credentials for root access the guest additions will build as seen from the terminal output:



Press  to close the terminal.

### Note 1

Guest Additions need a reboot of your guest OS to take effect.

### Note 2

In some systems the Virtual Box Guest Additions CD icon may not be shown on the desktop, but will be accessible from the *Places* menu. If the CD still was not there you may have to manually add the `VBoxGuestAdditions.iso` as a CD-ROM in the Virtual Box Manager *Storage* menu. In an Ubuntu host the disk image is in `/usr/share/virtualbox/VBoxGuestAdditions.iso`.

### Note 3

In some systems (e.g. when running **Xubuntu** guests) we may not have an *Autorun Prompt* for the mounted CD. Then we can install the guest additions by opening a terminal on the mounted guest additions `.iso` to run `sudo ./VBoxLinuxAdditions.run`. In **Lubuntu** or **Ubuntu Server** guests we additionally need to install the GNU C compiler (`gcc` 📦) and the `make` 📦 utility in the guest system to be able to compile the guest additions.

### Note 4

Running **DKMS** in the guest OS will keep Guest Additions installed after a guest kernel update. It is not a prerequisite for Guest Additions but if used it should be installed **before** we install the Guest Additions.

## Installing Guest Additions from a Terminal

## Remove Guest Additions

In case something went wrong with installing the guest additions, or the guest OS can not boot after installing we may have to remove the additions. This can also be done from a [root shell](#) by running an uninstallation script located in the **guest** `/opt` directory.

```
cd /opt/<VirtualBoxAdditions-x.x.xx>/
sudo ./uninstall.sh
```

Replace `x.x.xx` with your current version of guest additions.

Share Improve this answer

edited May 15 2018 at 9:28

community wiki

Follow

24 revs, 8 users 83%

Takkat

- 
- 12 I came across this answer while trying to install Guest Additions on Ubuntu Server. One step is missing if you need to install on server: run `sudo apt-get install dkms` first. (ref [virtualbox.org/manual/ch04.html#idp19765808](https://www.virtualbox.org/manual/ch04.html#idp19765808)) – Charles Roper May 23 2012 at 7:30
- 
- 1 I tried your solution for ubuntu 12.10 server as guest and mac os x as host. Virtual box is 4.2.6. I am unable to to get the shared folders to work. somehow the guest additions are not working. Even Devices > Install Guest Additions did not work too. Not even the package `virtualbox-guest-additions` helped. Every attempt to run the `iso GuestAdditions.iso` does NOT lead to the iso showing up under `/media/cdrom`. Please advise. – Kim Stacks Jan 3 2013 at 10:43
- 
- 1 @kimsia: you need to **mount** the `.iso` in your server first. After that you can install the GA with `sudo ./<mountpoint>/VBoxLinuxAdditions.run` – Takkat Jan 3 2013 at 11:16
- 
- 2 @!!!!!!!!!!!!!!!!!!!!!!: sure - covering everything is all a "canonical" Q&A. is about. Anything missing, anything outdated? – Takkat Aug 12 2015 at 6:11
- 
- 1 You don't need to install the ISO on the host. You can just do it on the guest then mount it with the `mount` command. – sudo Aug 2 2017 at 16:53

114

You could also try the following (this worked for me after I had to reinstall the Guest Additions after Update Manager killed them). Solution found here:

<http://www.unixmen.com/install-guest-addition-in-ubuntu-1010-maverick-meerkat-fix/>

In summary:

```
sudo apt-get update
sudo apt-get install build-essential linux-headers-$(uname -r)
sudo apt-get install virtualbox-ose-guest-x11
```

This found and updated the correct version of the VirtualBox Guest Additions and my system seems to work properly again, and I'm assuming this will also work if Guest Additions are failing to install from the menu item.

One other thing of note. I originally tried to run this under the fish shell - make sure you're using bash (i.e. type "bash" into the terminal before you start).

Note on more recent systems, the command has been changed to

```
sudo apt-get install virtualbox-guest-x11
```

Share Improve this answer

Follow

edited Aug 1 2014 at 6:47



nook  
115 6

answered Jan 29 2012 at 6:41



Aaron Newton  
1,241 1 10 11

your answer helped even though i was installing in a fresh installation ubuntu server. thank you.  
[superuser.com/questions/527507/...](http://superuser.com/questions/527507/...) – Kim Stacks Jan 3 2013 at 11:05

- 18 The package is called `virtualbox-guest-x11` on more recent systems. I think this should be the accepted answer, because guest additions from ISO might not auto-update, in contrast to those installed using `apt-get`. – krlmlr Jan 21 2014 at 12:33
- 2 Note that I didn't have to install `build-essentials` on a freshly installed 14.04, and `linux-headers` were already installed. So running `sudo apt-get install virtualbox-guest-x11` on the guest system was all I had to do. – pcworld Apr 25 2014 at 13:19
- 1 I liked to use this method for the mentioned reason. However, it didn't work for me on `OSX` host (10.9.3) and Ubuntu 12.04 guest on VirtualBox (4.3.12). I had to use `ISO` installation [askubuntu.com/a/22745/24203](http://askubuntu.com/a/22745/24203) (otherwise got not such device error [stackoverflow.com/questions/3492466/...](http://stackoverflow.com/questions/3492466/...)) – IsaacS Jun 8 2014 at 23:14
- 1 Ok this worked for me. ubuntu 32 and 64 versions 14.04 – Kangaroo Jul 24 2014 at 22:54

44

Within the guest operating system, install the package `virtualbox-guest-dkms`. For example, using the Terminal application, type `sudo apt-get install virtualbox-guest-dkms`.

Share Improve this answer Follow

answered May 13 2014 at 13:18

 **ChrisJ**  
441 4 2

2 Worked for me on Ubuntu 14 LTS. – **Jongosi** Jun 11 2015 at 21:16

2 Worked for me for Ubuntu 16.04 – **InvisibleWolf** Oct 20 2016 at 1:51

Worked for me on Ubuntu 16.04.1. Make sure to reboot the machine after the installation. worked seemelessly. – **Giora Guttsait** Jan 5 2017 at 0:04

Worked on 16.04.4 (although still need to futz around with graphics settings ...) – **Ben Bolker** Apr 15 2018 at 20:24

2 Worked for me on Ubuntu 18.04.1 LTS. I still can't copy and paste things from the host to the guest though (also not with any of the other methods mentioned here); shouldn't that work after this?  
– **Carlo Wood** Nov 14 2018 at 18:26

24

The *standard* "virtualbox-guest-additions" package on the .iso provided by *Oracle*, has general tools for different Guest Operating Systems...

However, Ubuntu has its own dedicated **Ubuntu-specific** Guest Addon package(s)... named `virtualbox-ose-guest-dkms` and `..-x11` and `..-utils`.

These 'virtualbox-ose-guest-\*' packages are DKMS aware.. "(DKMS is a framework designed to allow individual kernel modules to be upgraded without changing the whole kernel.)"

Here is the link to a question I asked 5-6 months ago on this issue... [How can I get Compiz to work in a VirtualBox VM](#)

Share Improve this answer

Follow

edited Apr 13 2017 at 12:24

 **Community Bot**  
1

answered Apr 13 2011 at 13:51

 **Peter.O**  
23.1k 35 110 159

I get "Unable to locate package virtualbox-ose-guest-dkms". Do I need to add an apt repo?  
– **Dan Dascalescu** Dec 1 2014 at 8:25

1 I think all you need to install on newer Ubuntu is the package `virtualbox-guest-x11`, which will draw in any other required dependencies. – **Lambart** Dec 11 2014 at 22:45

3 It's now called `virtualbox-guest-dkms`. By the way, this is the only acceptable answer in this thread to me as this is the only way my guest additions worked in VBox. I've added my user to `vboxusers` group in advance, this might helped? – **Erikas** Jul 13 2016 at 22:15



24



Here are the manual steps to install [VirtualBox Guest Additions](#) kernel modules inside the VM:

1. Download the ISO file, e.g.

```
wget http://download.virtualbox.org/virtualbox/5.0.20/VBoxGuestAdditions_5.0.20.iso -P /tmp
```

2. Mount the ISO file:

```
sudo mount -o loop /tmp/VBoxGuestAdditions_5.0.20.iso /mnt
```

3. Run installer (add `-x` after `sh` to debug):

```
sudo sh /mnt/VBoxLinuxAdditions.run
```

To find the right version of ISO file, check it at: <http://download.virtualbox.org/virtualbox/>

If you're using Vagrant, installation is much simpler by following these commands:

```
vagrant plugin install vagrant-vbguest
vagrant up
vagrant vbguest
```

Share Improve this answer

edited Feb 23 2017 at 23:33

answered Jun 8 2016 at 16:08

Follow



**kenorb**

8,792 1 68 86

- 1 These steps finally allowed me to have a full screen terminal. My host OS is Windows 7, VirtualBox version 5.1. My guest OS is Ubuntu 16.04.1 LTS. I also have the following two lines in `/etc/default/grub`: `GRUB_GFX_MODE=1600x1200` and `GRUB_GFXPAYLOAD_LINUX=keep` – [nicholsonjf](#) Jul 21 2016 at 21:16

Definitely an underrated answer -- super straightforward and will allow you to install a newer version of the Guest Additions than may be available in your apt repo. Also, no need to add a virtual CD-ROM drive to your guest! – [bonh](#) Feb 23 2017 at 21:00

- 2 Best answer. IDK why all the other answers take unnecessary steps like building from source or creating virtual drives. – [sudo](#) Aug 2 2017 at 16:52

I added a variation of this to my Vagrant provisioning script. Works perfect. – [ddoxey](#) Jun 19 2021 at 15:47

Great post! Using Vagrant I found I can specify `vagrant-vbguest` as a plugin in my `Vagrantfile` : Here's I've specified it as part of a list (so other plugins can be specified if needed), `config.vagrant.plugins = [ "vagrant-vbguest", ]` – [Andrew Richards](#) Oct 18 2021 at 16:25



▲  
19

Here are the steps I ran which finally worked, but as user named 'pcworld' stated above it may have been the case that only the last command was actually required. I'll never know, but I want to share in case this helps anyone else:

▼  
🔄

```
sudo apt-get install virtualbox-guest-additions-iso
sudo apt-get update
sudo apt-get dist-upgrade
sudo apt-get install virtualbox-guest-x11
```

And don't forget to set your VirtualBox instance to use like 128MB video ram and Enable 3D Acceleration under the "Display" settings section for your instance, for good performance.

Share Improve this answer Follow

answered Aug 7 2014 at 7:24



**Clay Ferguson**

466 4 7

---

After installing docker in vagrant I had that error with Guest Addition. `sudo apt-get dist-upgrade` did the trick. Thanks Clay. – **Robert Gabriel** Feb 11 2018 at 12:19

---



This worked for me for a Ubuntu Server 14.04 guest VM (no GUI):

14

*Edit: also works with Ubuntu Server 15.04 and 16.04*



1) Install dkms. From the guest run:



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

2) From the VirtualBox VM window menu select: Devices --> Insert Guest Additions CD image...

3) Use blkid to identify the CD-ROM device. From the guest run:

```
sudo blkid
```

One of the lines in the output should look like this:

```
/dev/sr0: LABEL="VBOXADDITIONS_4.3.16_95972" TYPE="iso9660"
```

The first part ( /dev/sr0 ) is the name of the CD-ROM device.

4) Mount the CD (replace /dev/sr0 by the device name found above):

```
sudo mount /dev/sr0 /media/cdrom/
```

5) Run the Guest Additions installer:

```
sudo /media/cdrom/VBoxLinuxAdditions.run
```

6) Reboot the guest.

Share Improve this answer

Follow

edited May 12 2017 at 13:52

answered Sep 20 2014 at 2:27



David Levesque

661 7 11

- 3 `sudo sh /media/cdrom/VBoxLinuxAdditions.run` The `sh` was needed because the CD had been mounted without execute permission. – [Steve Pitchers](#) May 19 2015 at 15:10

Hello @DavidLevesque , I've been tried in 16.04 but unfortunately I cannot get it run. Also I tried with `--nox11` parameters. Do you have any idea? – [efkan](#) Sep 29 2016 at 9:16

@efkan Unless you provide more details, I have no idea. It worked for me with Ubuntu 16.04. – [David Levesque](#) Sep 29 2016 at 13:53

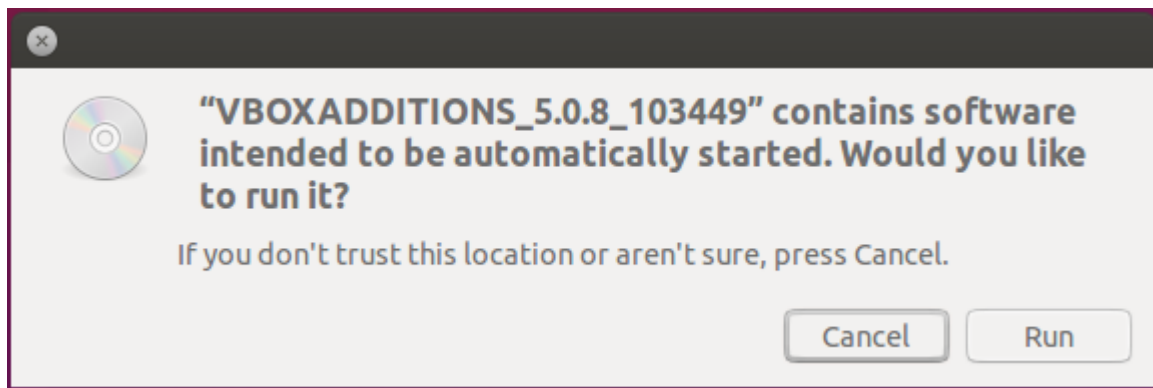
@DavidLevesque you're right :) I use VirtualBox v5.0.26 on Windows 10. And I install Ubuntu Server 16.04.1 in VirtualBox. (The server doesn't have X Window System) Then I followed the steps that are over here: [en.ig.ma/notebook/2012/...](http://en.ig.ma/notebook/2012/...) . Then I reboot and try to perform copy-paste action but I cannot see any action. Thanks. – [efkan](#) Sep 29 2016 at 14:09

@efkan I suppose it doesn't work on a real console. – [Polluks](#) Jan 27 at 11:45

▲ The procedure is quite simple.

**11** In Virtual Box menu select **Devices > Insert Guest Additions CD Image....**

▼ The following popup will appear on your Ubuntu desktop :



Select  and Guest Additions will automatically be installed.

Share Improve this answer

Follow

edited Nov 3 2015 at 14:29



[cl-netbox](#)

30k 7 88 128

answered Nov 3 2015 at 10:19



[hg8](#)

13.1k 12 69 101

- 2 Worked for me on Ubuntu 14.04 LTS installed on Oracle VM 5.0 on Windows 10. Only 2 clicks..... thank you! – [Sym-Sym](#) Jul 13 2016 at 19:04

- 2 This is the best answer, because it ensures that the Guest Additions are updated for and appropriate for your specific version of VirtualBox. Ubuntu's package and the `wget` URLs in the other answers can be outdated. – [Chai T. Rex](#) Nov 18 2016 at 20:51

- 1 Works for me in Ubuntu 18.04 – [Rennish Joseph](#) Feb 2 2019 at 23:48



I think the right way to do this right now (2020-Apr-27) with the newest stable Ubuntu (20.04) and the current Virtualbox (6.1.6) is to just do the following:

```
sudo apt install virtualbox-guest-dkms virtualbox-guest-x11 virtualbox-guest-utils
```

I just did that and it worked.

I guess this won't get a lot of attention down here but at least if somebody searches for 20.04 they might be able to find some more recent information. ;)

Share Improve this answer Follow

answered Apr 27 2020 at 11:06



---

This is quite large: 457 newpackages with 154 MB to download, 867 MB of additional disk space , I suggest to add `--no-install-recommends` which results in just 30MB download and 300MB – [rubo77](#) Apr 27 2020 at 23:00

---

and `virtualbox-guest-utils` is not needed – [rubo77](#) Apr 27 2020 at 23:45

---

@[rubo77](#) Might be true. Are you sure? What is it for? It seems `mount.vboxsf` might be required for mounting a shared folder? But the dependencies are mostly on the other two anyway. – [Warkwark](#) Apr 29 2020 at 21:43

---

Not sure anymore, if it's needed – [rubo77](#) Apr 30 2020 at 0:42

---



The `virtualbox-guest-additions` package has to be installed. Furthermore, it *may appear* that nothing has happened, but all the "Install Guest Additions" button do is mounting the cdrom. You should open the File manager (Nautilus / Dolphin), select the "CD device" and run the installer.

Share Improve this answer Follow

answered Jan 22 2011 at 12:50



## ▲ For Ubuntu 16.04 users inside Ubuntu 16.04 Virtualbox

▼ After trying many of the main-stream generic instructions I found [Lubuntu specific instructions](#):  
🕒

### Install Virtualbox Guest Additions onto a Lubuntu Virtual Machine

First step: Install required software

```
sudo apt-get update
sudo apt-get install make gcc
```

Next, use Virtualbox to download the Guest Additions, then select "Install Guest Additions" from the Virtualbox menu.

If the VBOXADDITIONS cd does not pop up in File Manager, Use File Manager to open the contents of the VBOXADDITIONS cd, then open a terminal there, by going to File Manager's menu and selecting 'Open Current Folder in Terminal'

```
sudo sh VBoxLinux*
```

reboot and enjoy!

Share Improve this answer

Follow

edited Jun 12 2020 at 14:37



Community Bot

1

answered Jul 7 2018 at 18:29



WinEunuuchs2Unix

90.6k 28 197 375

▲ If you have the guest additions .iso, mount it in VirtualBox via the guest OS settings. Then start the guest OS and run the vboxwindowsadditions-x86 or amd64 exe.

2

▼ Share Improve this answer

Follow

edited Jul 7 2018 at 7:48

user833907

answered Jan 29 2015 at 1:33



Karl Morrison

7,824 19 55 84



-1



Open Ubuntu in VirtualBox. Open FireFox and go here:

<http://download.virtualbox.org/virtualbox/>

Find your version of Virtualbox and click the link to open it.

Download your version of VBoxGuestAdditions (iso):

Open it in Archive manager and extract files.

Run: `sudo VBoxLinuxAdditions.run`

Reboot.

This works if you can't open the iso file in VirtualBox (ISO9660 error).

Share Improve this answer

Follow

edited Oct 20 2014 at 16:10



Eliah Kagan

111k 51 301 468

answered Jun 30 2014 at 18:18



user299272

31



**Highly active question.** Earn 10 reputation (not counting the **association bonus**) in order to answer this question. The reputation requirement helps protect this question from spam and non-answer activity.