

Installing Guest Additions on an Ubuntu VM in VirtualBox

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Given:

You have installed an Ubuntu Desktop VM through the VirtualBox hypervisor on your computer;

You have **sudo** access to make system-wide changes to the Ubuntu Desktop VM;

You have an Internet connection for your computer.

The version of VirtualBox used in this demonstration is: 7.2.4

The version of Ubuntu Desktop being installed is: 24.04.03

During the creation of a VBox virtual machine, Guest Additions should be installed. However, it may be necessary from time to time to re-install Guest Additions (as when, for example, you upgrade the installed version of VirtualBox hypervisor). In this how-to, we will go step-by-step over creating and installing Guest Additions on an Ubuntu virtual machine in VirtualBox.

“Guest Additions are designed to be installed inside a virtual machine after the guest operating system has been installed. They consist of device drivers and system applications that optimize the guest operating system for better performance and usability.”

— 4.1. Introduction to Guest Additions, User Guide for Release 7.2
<https://www.virtualbox.org/manual/>

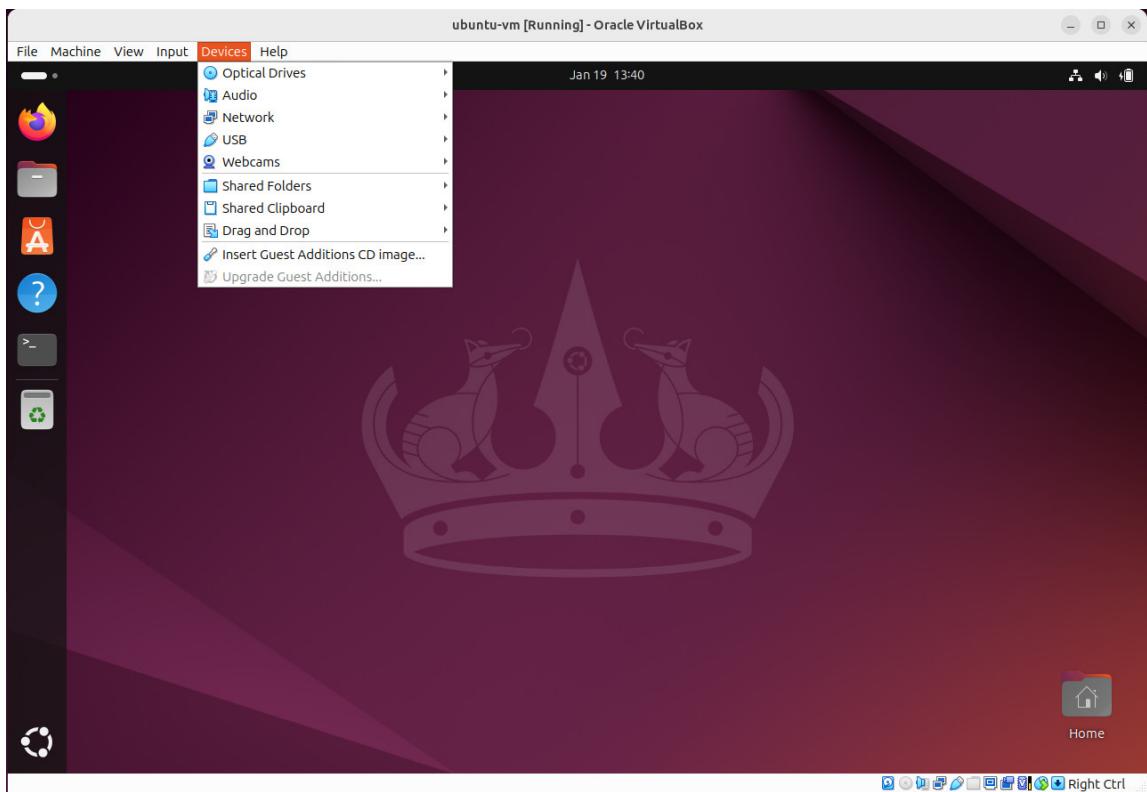


Figure 1: **The Devices menu in a VBox VM window.**

Please note that close to the bottom of the menu items is **Insert Guest Additions CD image...**. Select item.

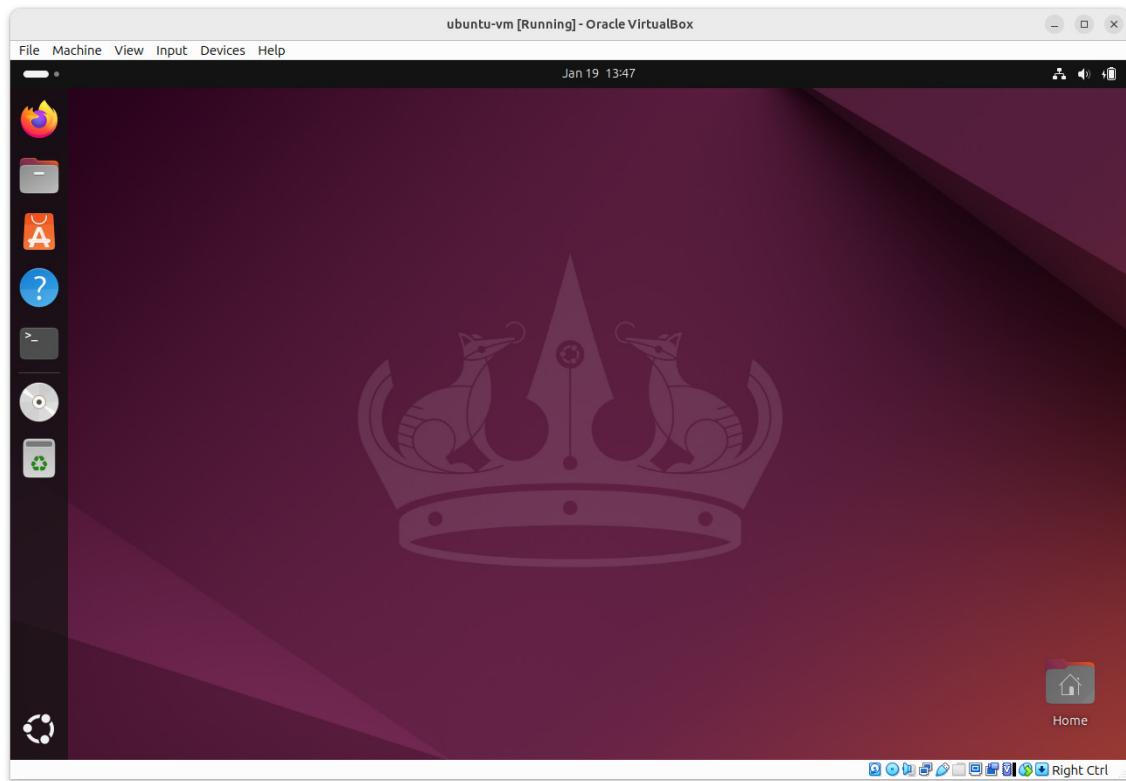


Figure 2: **Mounting the Guest Additions CD image.**

Please note the CD image icon that appears in the Favorites bar on the lefthand side of the desktop. Now launch the terminal window.

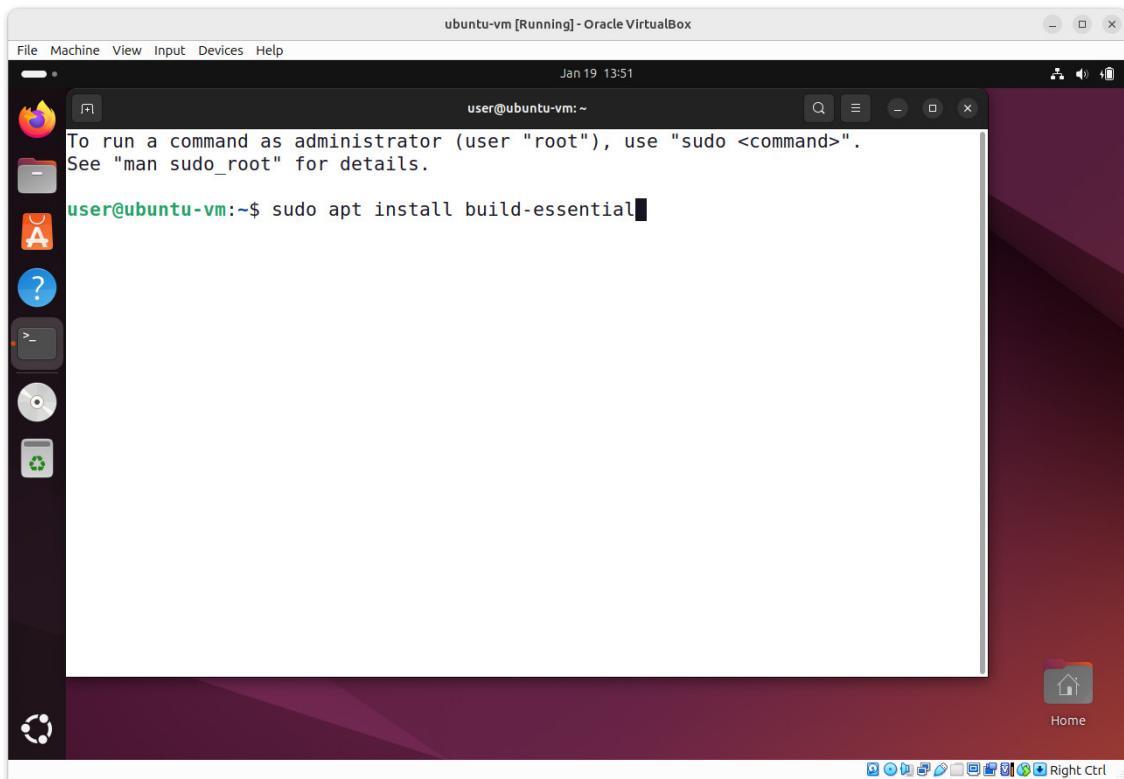
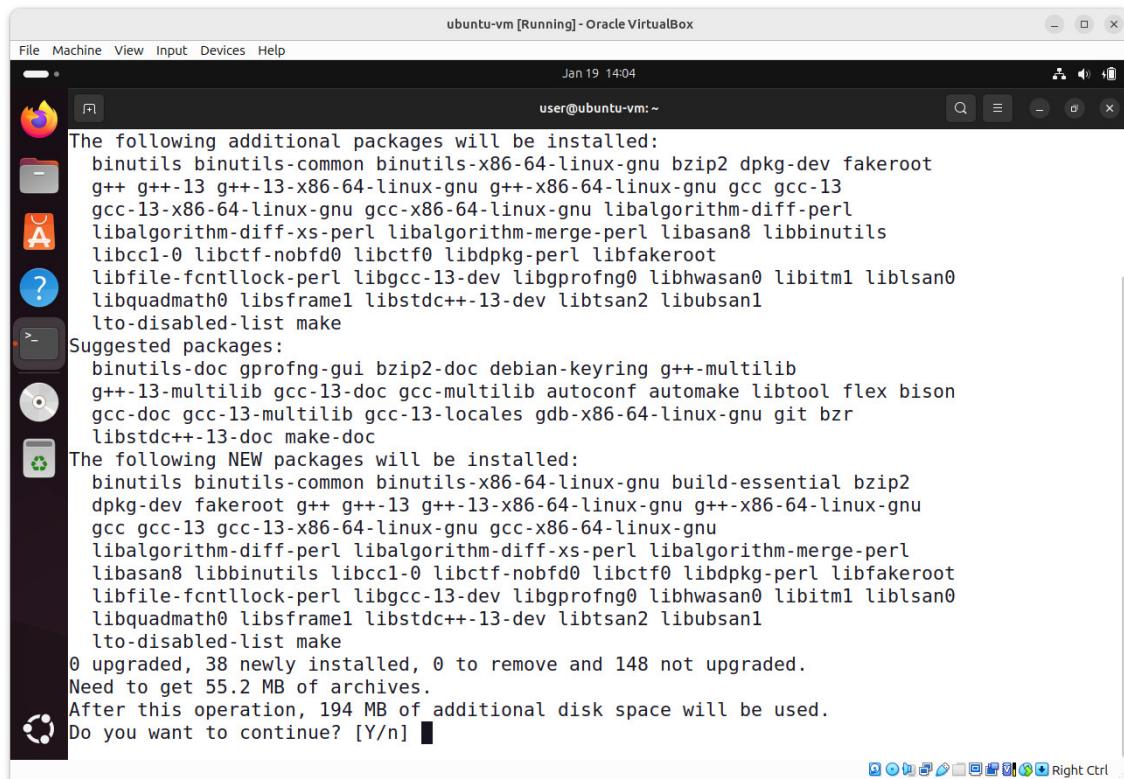


Figure 3: **Installing the build-essential tools.**

The tools needed to compile the code in the Guest Additions CD image. The tools are available for download in online Ubuntu repos.

We use the `sudo` command to run the statement as a superuser because the tools are installed in system directories; and we use the `apt` tool to instruct our system to fetch the tools from those repos and install them.

After hitting **ENTER** to execute this statement, you will be prompted to authenticate with your password. Enter your password, then hit **ENTER** again.



The following additional packages will be installed:

```
binutils binutils-common binutils-x86_64-linux-gnu bzip2 dpkg-dev fakeroot
g++ g++-13 g++-13-x86_64-linux-gnu g++-x86_64-linux-gnu gcc gcc-13
gcc-13-x86_64-linux-gnu gcc-x86_64-linux-gnu libalgorithm-diff-perl
libalgorithm-diff-xs-perl libalgorithm-merge-perl libasan8 libbinutils
libccl-0 libctf-nobfd0 libctf0 libdpkg-perl libfakeroot
libfile-fcntllock-perl libgcc-13-dev libgprofng0 libhwasan0 libitm1 liblsan0
libquadmath0 libsframe1 libstdc++-13-dev libtsan2 libubsan1
lto-disabled-list make
Suggested packages:
binutils-doc gprofng-gui bzip2-doc debian-keyring g++-multilib
g++-13-multilib gcc-13-doc gcc-multilib autoconf automake libtool flex bison
gcc-doc gcc-13-multilib gcc-13-locales gdb-x86_64-linux-gnu git bzr
libstdc++-13-doc make-doc
The following NEW packages will be installed:
binutils binutils-common binutils-x86_64-linux-gnu build-essential bzip2
dpkg-dev fakeroot g++ g++-13 g++-13-x86_64-linux-gnu g++-x86_64-linux-gnu
gcc gcc-13 gcc-13-x86_64-linux-gnu gcc-x86_64-linux-gnu
libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl
libasan8 libbinutils libccl-0 libctf-nobfd0 libctf0 libdpkg-perl libfakeroot
libfile-fcntllock-perl libgcc-13-dev libgprofng0 libhwasan0 libitm1 liblsan0
libquadmath0 libsframe1 libstdc++-13-dev libtsan2 libubsan1
lto-disabled-list make
0 upgraded, 38 newly installed, 0 to remove and 148 not upgraded.
Need to get 55.2 MB of archives.
After this operation, 194 MB of additional disk space will be used.
Do you want to continue? [Y/n] ■
```

Figure 4: Build-essential apps and libraries to install.

apt enumerates the items it will install on the system from enabled repos.

Enter “Y” and hit **ENTER** to continue. Let **apt** run to completion.

Once the installation finishes, double-click on the Guest Additions CD image to open it.

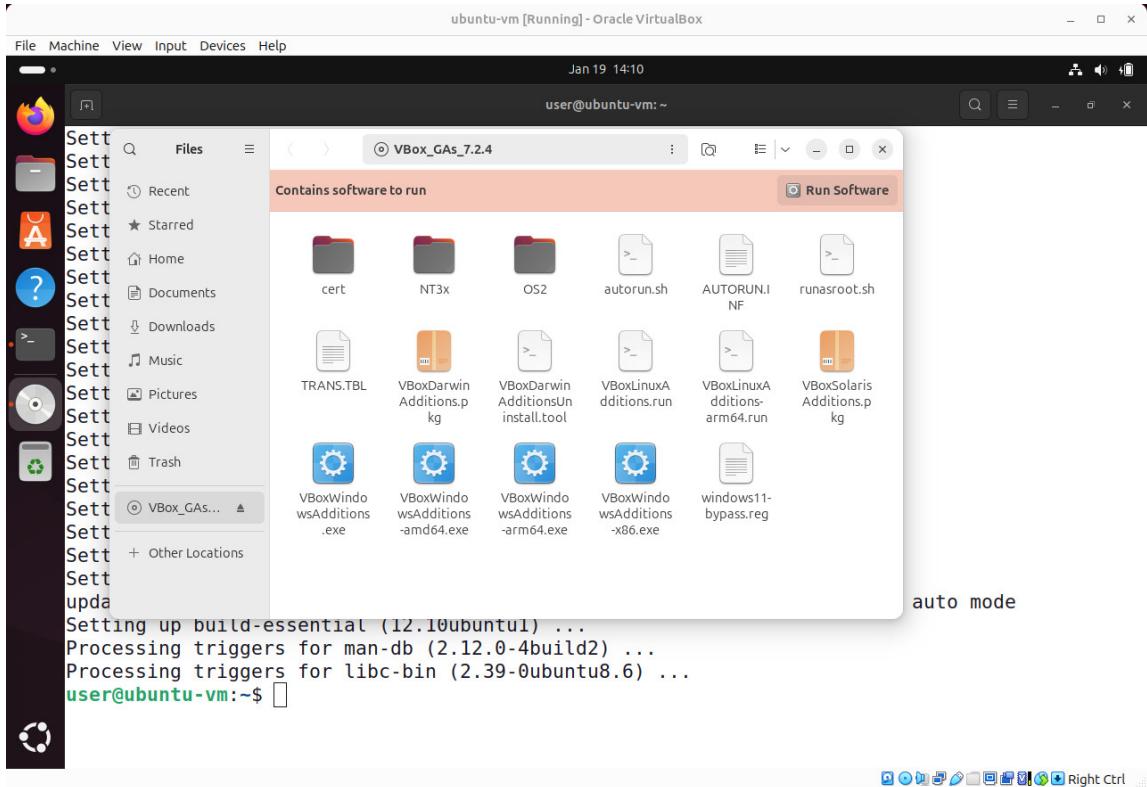


Figure 5: **The Guest Additions CD image, opened.**

Please note the **Run software** button in the upper righthand corner of the window. Click it. You'll get a pop-up windows that asks if you're sure you want to run the software. Click the **Run** button and authenticate.

It may take several minutes for the Guest Additions to be compiled and installed. Once finished, reboot the VM for changes to take effect.

This ends this how-to on installing an Ubuntu VM in VirtualBox.