

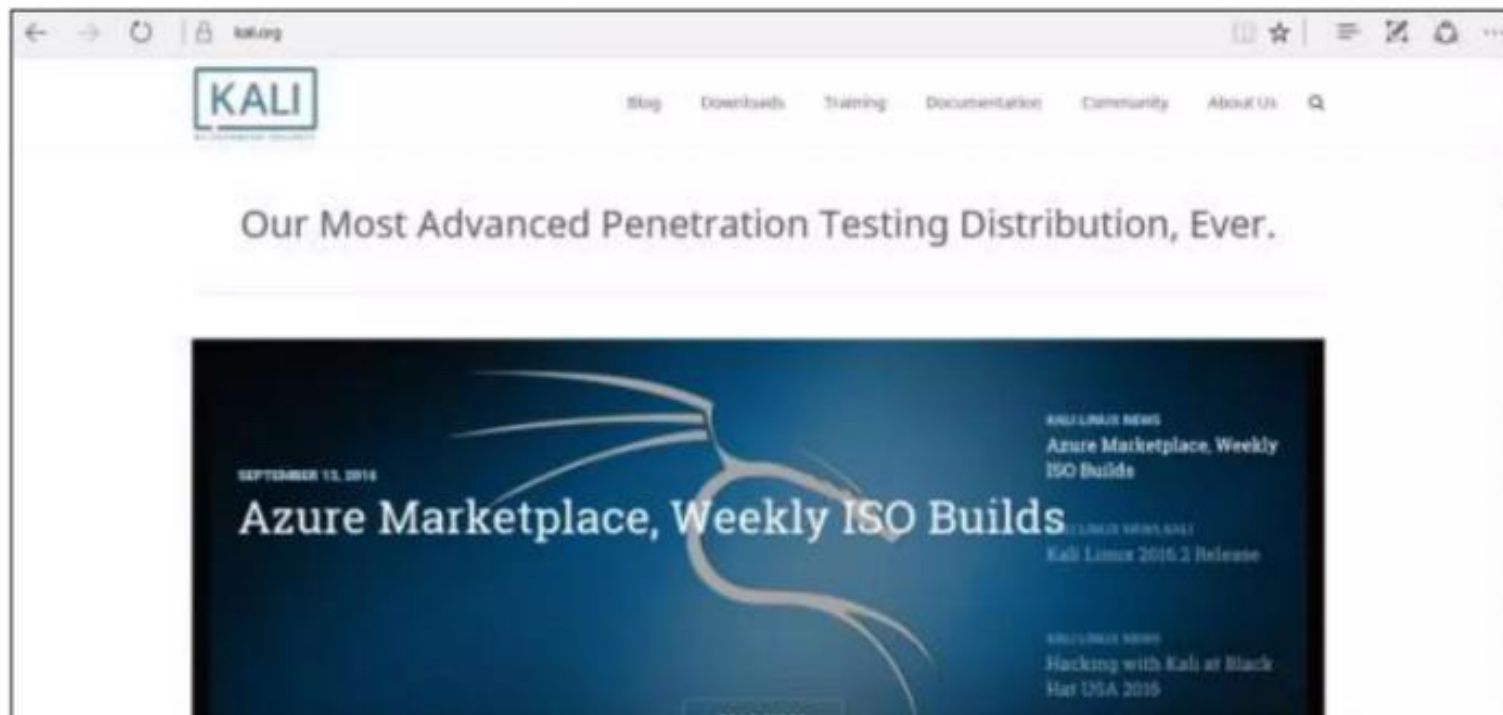
# Install Kali Linux



Kali Linux is one of the best security packages of an ethical hacker, containing a set of tools divided by the categories. It is an open source and its official webpage is <https://www.kali.org>.

Generally, Kali Linux can be installed in a machine as an Operating System, as a virtual machine which we will discuss in the following section. Installing Kali Linux is a practical option as it provides more options to work and combine the tools. You can also create a live boot CD or USB. All this can be found in the following link: <https://www.kali.org/downloads/>

**BackTrack** was the old version of Kali Linux distribution. The latest release is Kali 2016.1 and it is updated very often.



To install Kali Linux —

- First, we will download the Virtual box and install it.
- Later, we will download and install Kali Linux distribution.

## **Download and Install the Virtual Box**

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A Virtual Box is particularly useful when you want to test something on Kali Linux that you are unsure of. Running Kali Linux on a Virtual Box is safe when you want to experiment with unknown packages or when you want to test a code.

With the help of a Virtual Box, you can install Kali Linux on your system (not directly in your hard disk) alongside your primary OS which can MAC or Windows or another flavor of Linux.

Let's understand how you can download and install the Virtual Box on your system.

**Step 1:** To download, go to <https://www.virtualbox.org/wiki/Downloads>. Depending on your operating system, select the right package. In this case, it will be the first one for Windows as shown in the following screenshot.

# VirtualBox

## Download VirtualBox

Here, you will find links to VirtualBox binaries and its source code.

### VirtualBox binaries

By downloading, you agree to the terms and conditions of the respective license.

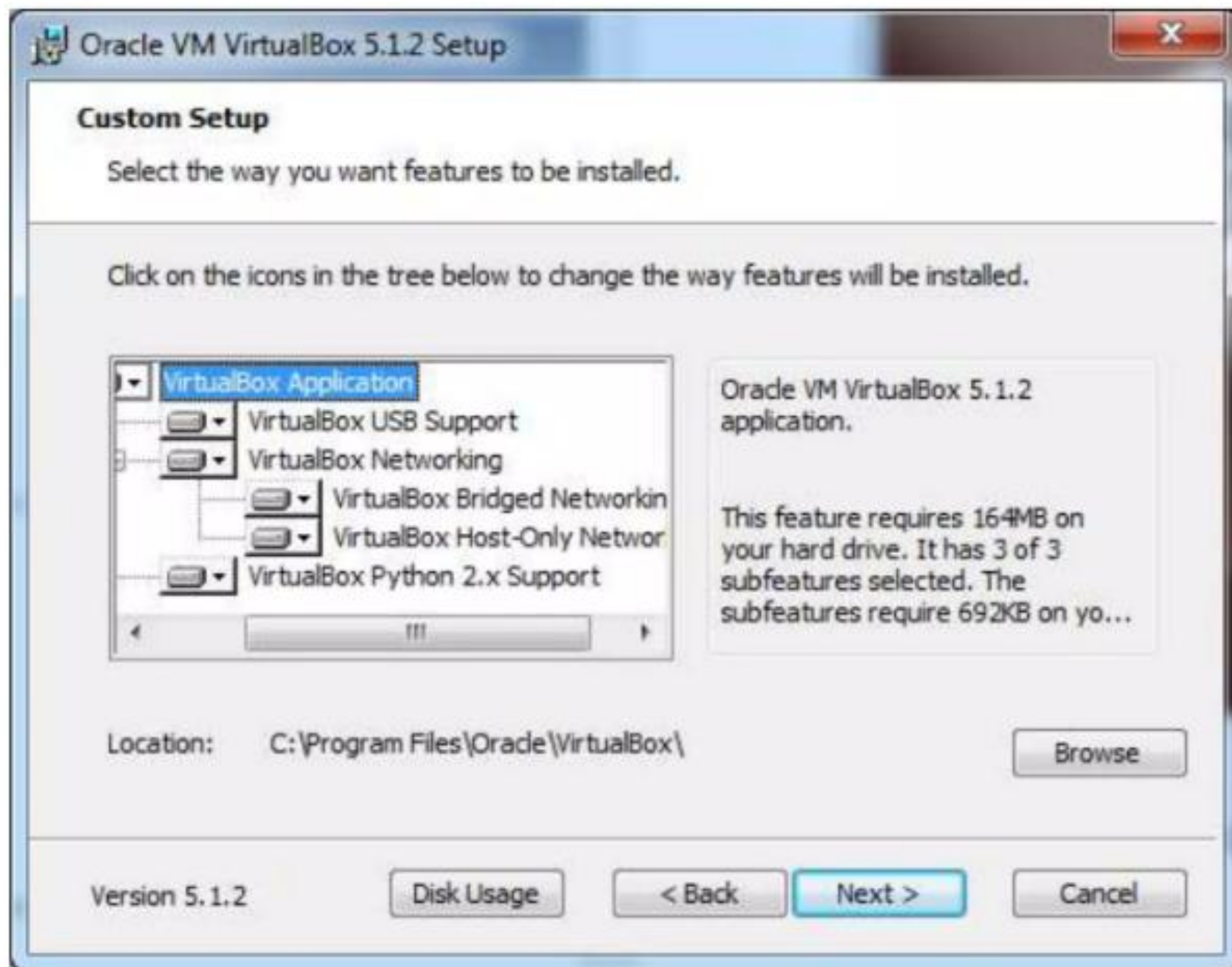
- **VirtualBox platform packages.** The binaries are released under the terms of the GPL version 2.
  - **VirtualBox 5.1.2 for Windows hosts** ⇨ [x86/amd64](#)
  - **VirtualBox 5.1.2 for OS X hosts** ⇨ [amd64](#)
  - **VirtualBox 5.1.2 for Linux hosts**
  - **VirtualBox 5.1.2 for Solaris hosts** ⇨ [amd64](#)
- **VirtualBox 5.1.2 Oracle VM VirtualBox Extension Pack** ⇨ [All supported platforms](#)  
Support for USB 2.0 and USB 3.0 devices, VirtualBox RDP and PXE boot for Intel cards. See [this chapter from the User Manual](#) for an introduction. Extension Pack binaries are released under the [VirtualBox Personal Use and Evaluation License \(PUEL\)](#).  
Please install the extension pack with the same version as your installed version of VirtualBox:  
If you are using **VirtualBox 5.0.26**, please download the extension pack ⇨ [here](#).  
If you are using **VirtualBox 4.3.38**, please download the extension pack ⇨ [here](#).

**Step 2:** Click **Next**.

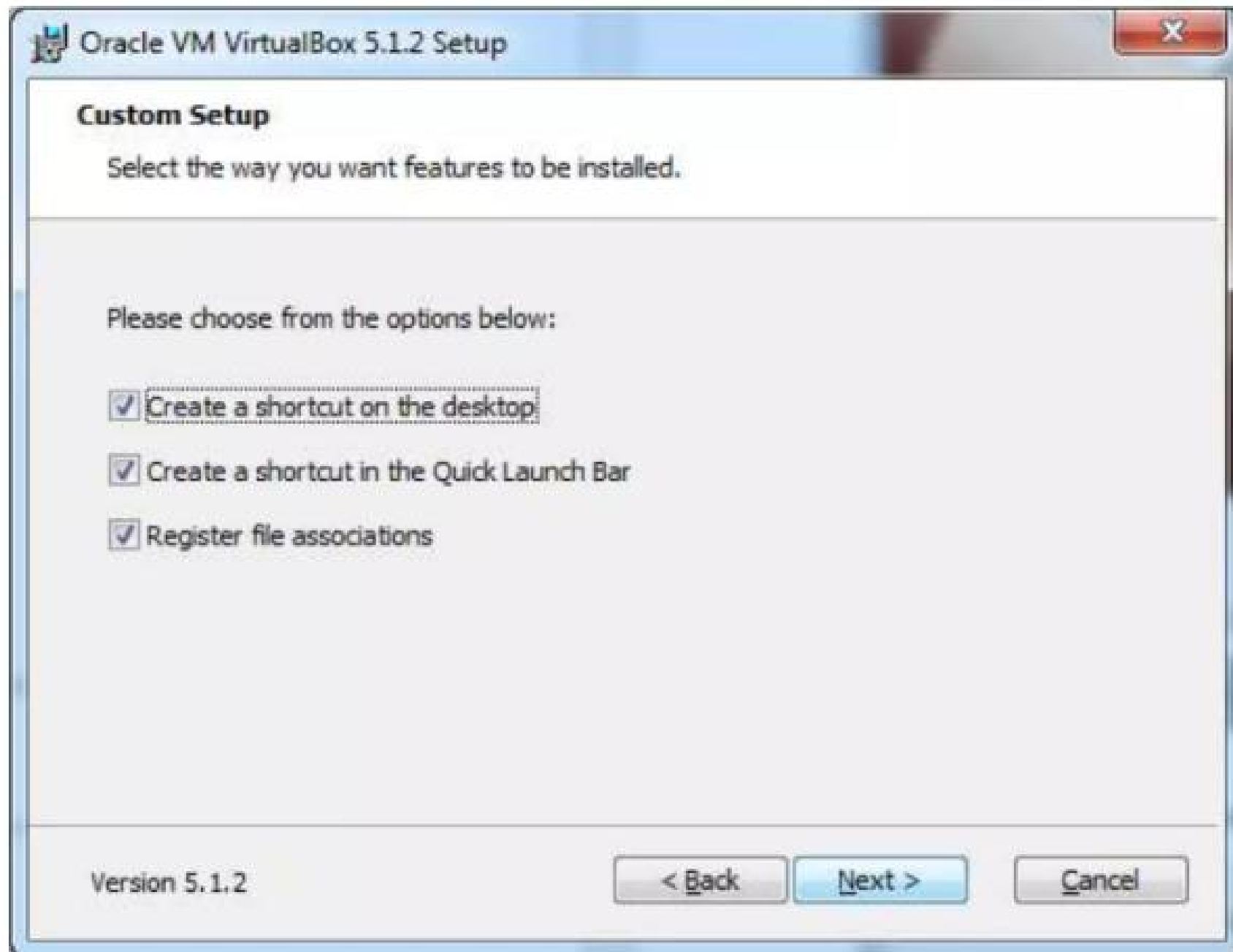




**Step 3:** The next page will give you options to choose the location where you want install the application. In this case, let us leave it as default and click **Next**.



**Step 4:** Click **Next** and the following **Custom Setup** screenshot pops up. Select the features you want to be installed and click Next.

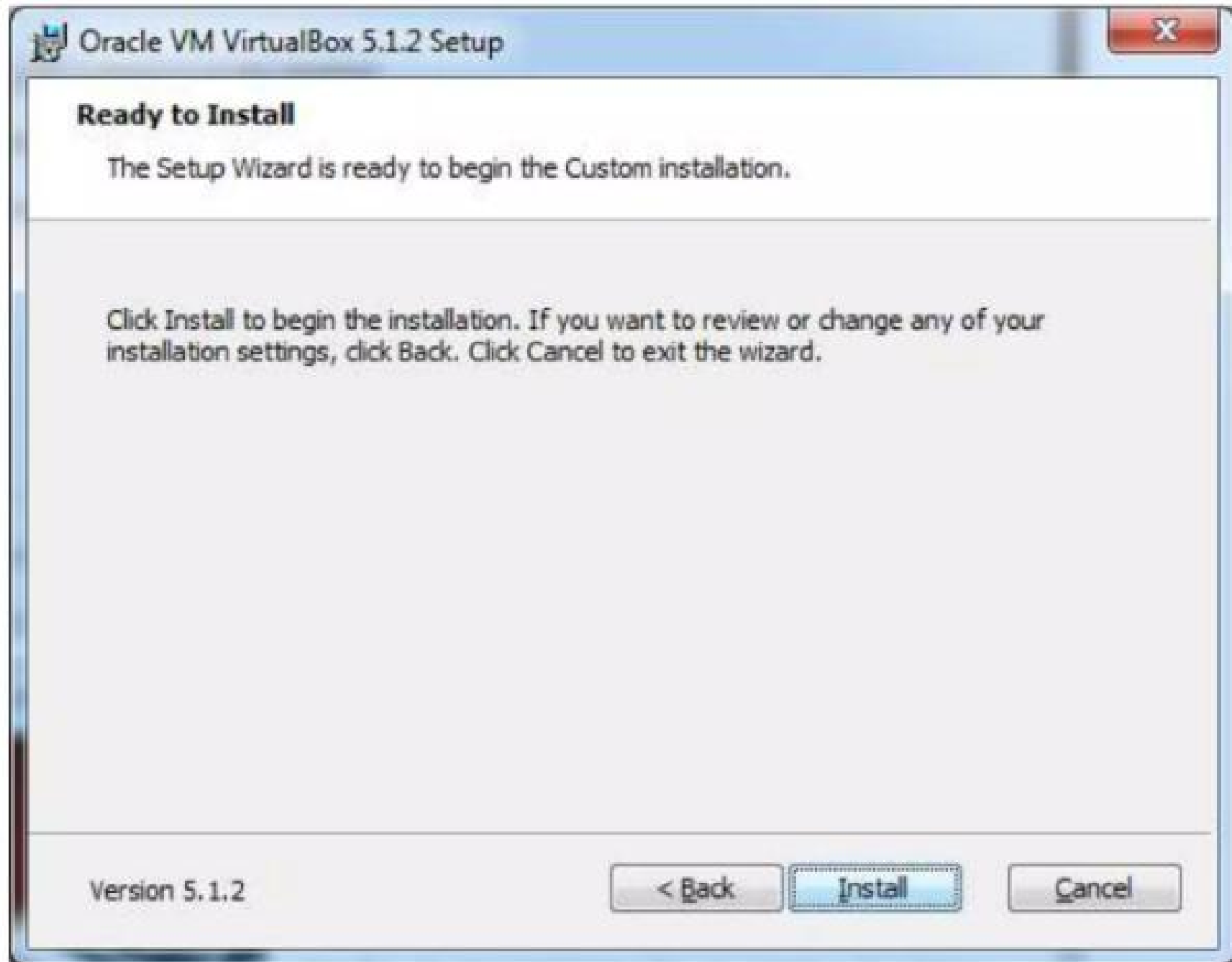


**Step 5:** Click **Yes** to proceed with the installation.





**Step 6:** The **Ready to Install** screen pops up. Click Install.



**Step 7:** Click the **Finish** button.



The Virtual Box application will now open as shown in the following screenshot. Now we are ready to install the rest of the hosts for this manual and this is also recommended for professional usage.



New



Settings



Discard



Start



Details



Snapshots

## Welcome to VirtualBox!

The left part of this window is a list of all virtual machines on your computer. The list is empty now because you haven't created any virtual machines yet.

In order to create a new virtual machine, press the **New** button in the main tool bar located at the top of the window.

You can press the **F1** key to get instant help, or visit [www.virtualbox.org](http://www.virtualbox.org) for the latest information and news.



# Install Kali Linux

Now that we have successfully installed the Virtual Box, let's move on to the next step and install Kali Linux.

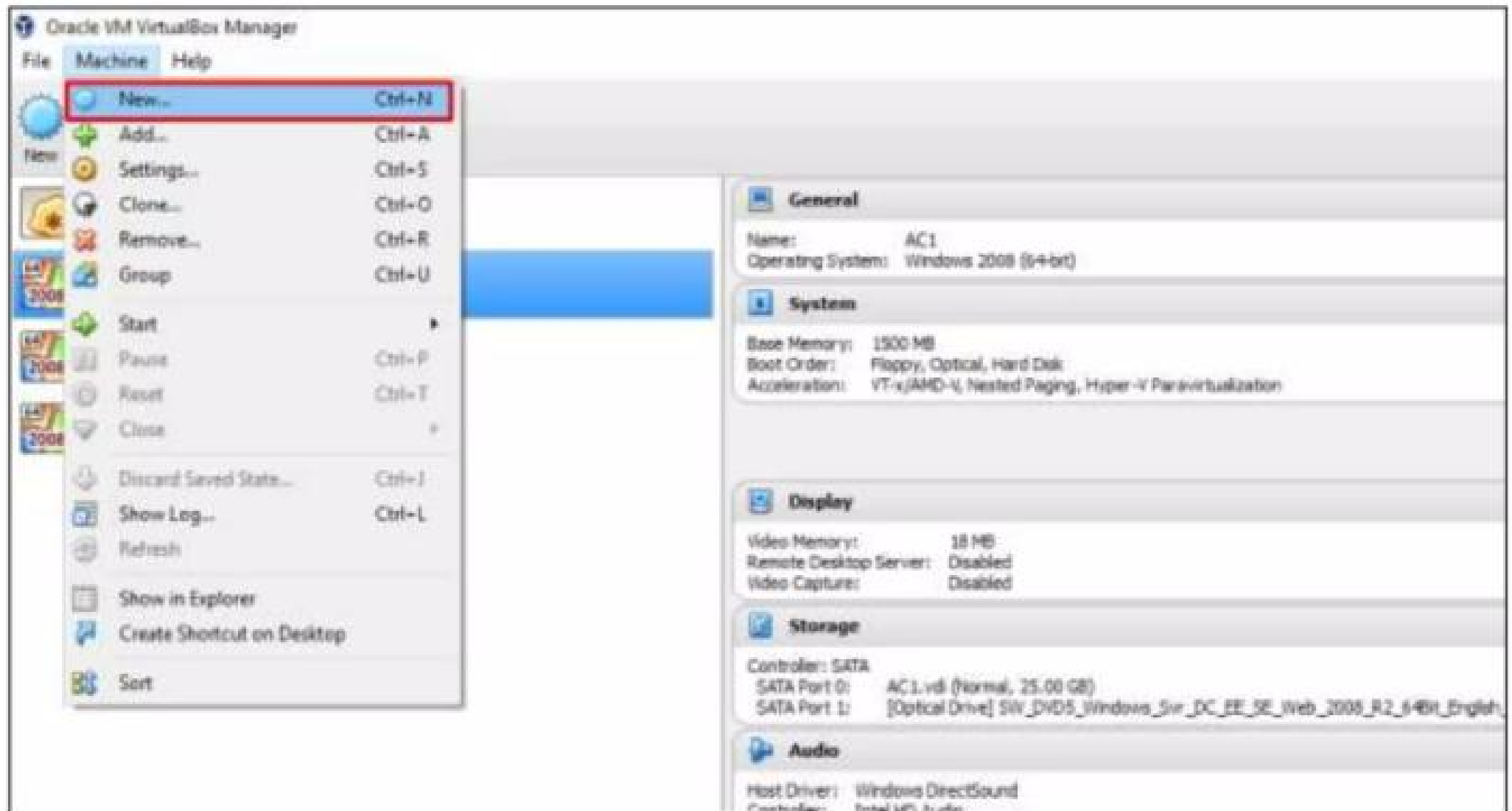
**Step 1:** Download the Kali Linux package from its official website:  
<https://www.kali.org/downloads/>



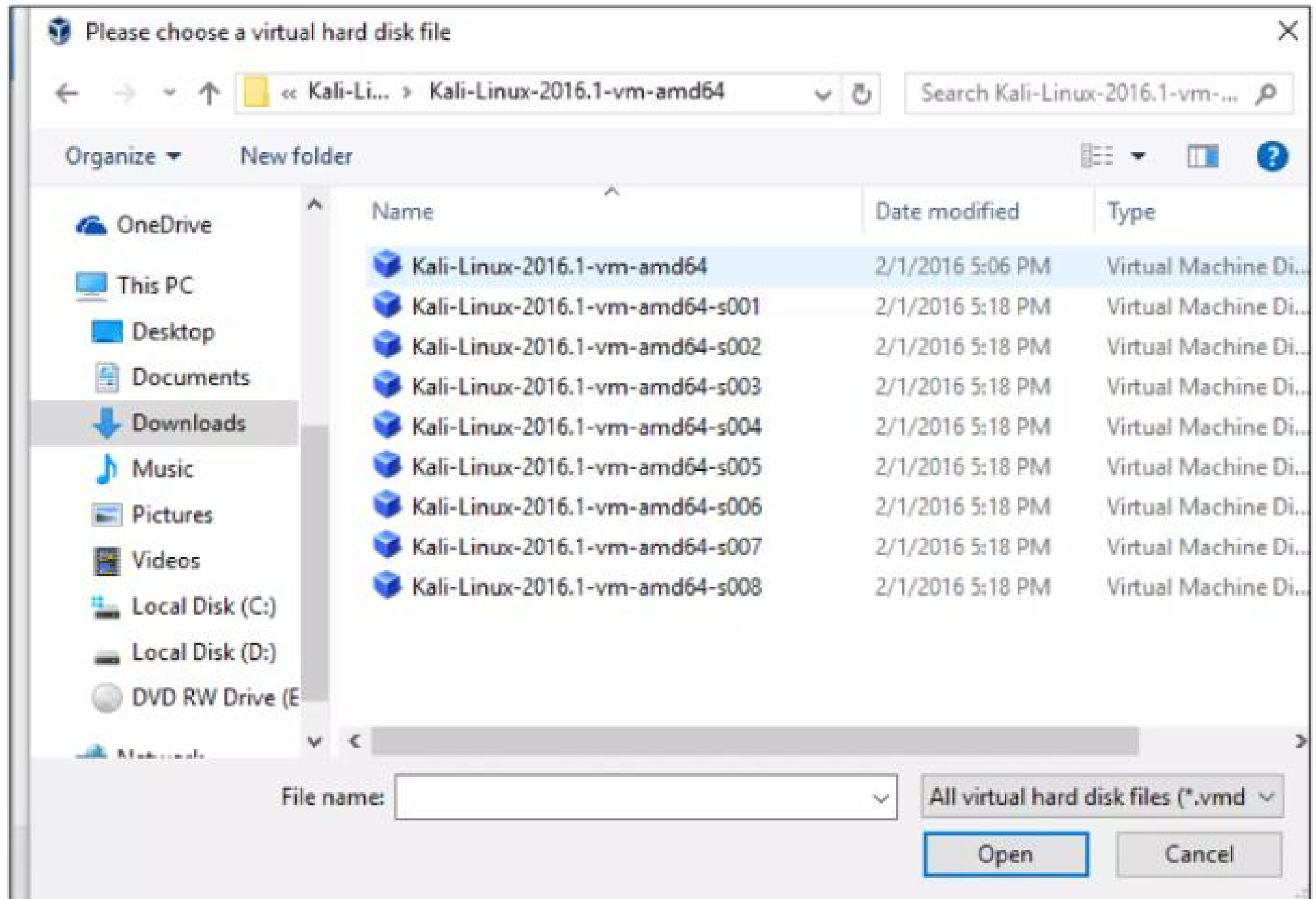
The screenshot shows a web browser window with the URL `offensive-security.com/kali-linux-vmware-virtualbox-image-download`. The page features the Offensive Security logo and navigation links for Blog, Courses, Certifications, and Online Labs. Two tabs are visible: "Prebuilt Kali Linux VMware Images" and "Prebuilt Kali Linux VirtualBox Images". The latter is selected and highlighted. Below the tabs is a table listing available Kali Linux VM images.

Image Name	Torrent	Size	Version	SHA1Sum
Kali Linux 64 bit VM	Torrent	2.0G	2016.1	2b49bf1e77c11ecb5618249ca69a46f23a6f5d2d
Kali Linux 32 bit VM PAE	Torrent	2.0G	2016.1	e71867a8bbf7ad55fa437eb7c93fd69e450f6759

**Step 2:** Click **VirtualBox -> New** as shown in the following screenshot.

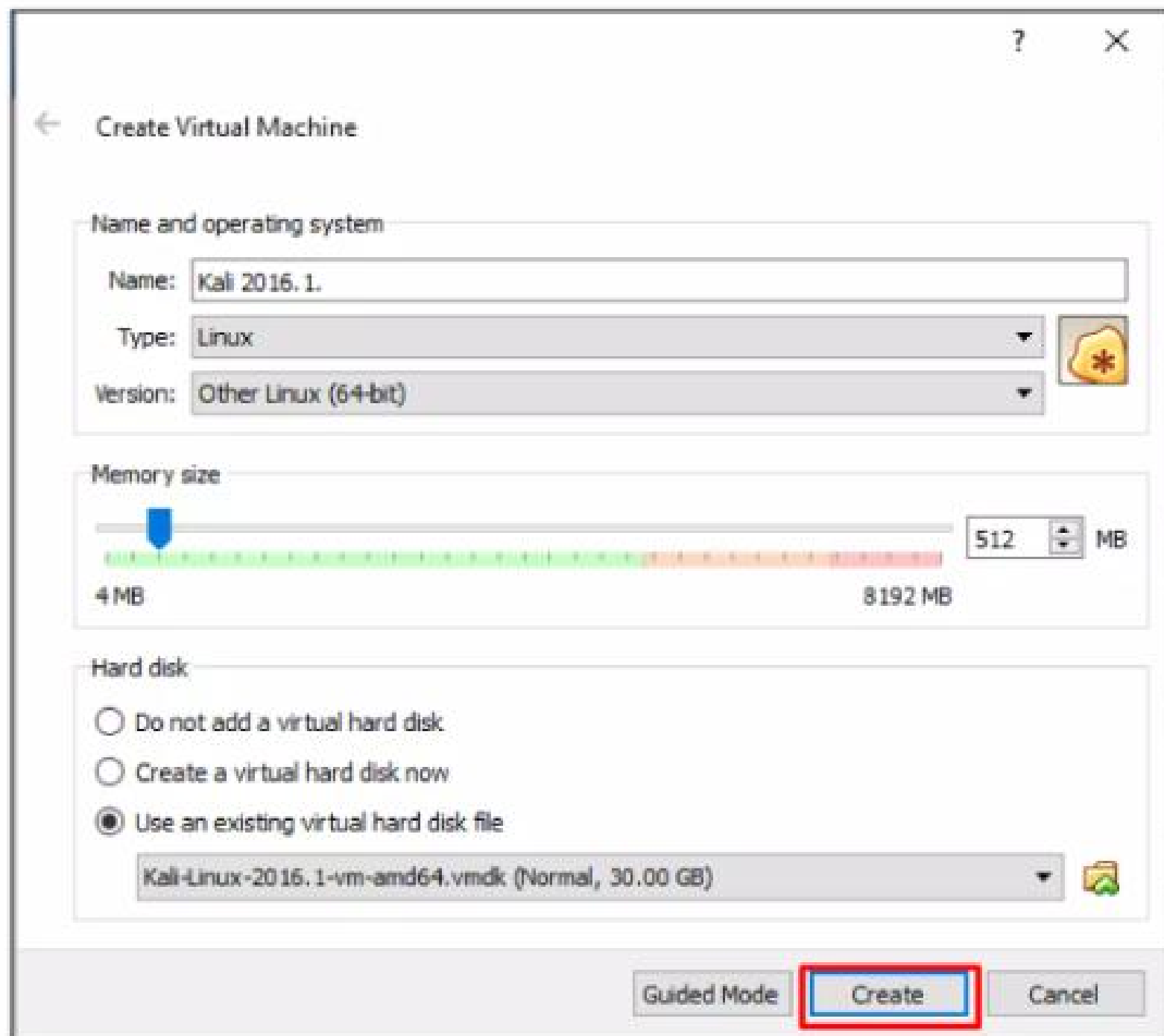


**Step 3:** Choose the right **virtual hard disk file** and click **Open**.





**Step 4:** The following screenshot pops up. Click the **Create** button.



The screenshot shows the 'Create Virtual Machine' dialog box. The 'Name and operating system' section has 'Name' set to 'Kali 2016. 1.', 'Type' set to 'Linux', and 'Version' set to 'Other Linux (64-bit)'. The 'Memory size' section shows a slider set to 512 MB, with a range from 4 MB to 8192 MB. The 'Hard disk' section has three radio buttons: 'Do not add a virtual hard disk', 'Create a virtual hard disk now', and 'Use an existing virtual hard disk file'. The 'Use an existing virtual hard disk file' option is selected, and the file path 'Kali-Linux-2016.1-vm-amd64.vmdk (Normal, 30.00 GB)' is entered. The 'Create' button is highlighted with a red rectangle.

← Create Virtual Machine

Name and operating system

Name:

Type:

Version:

Memory size

512 MB

4 MB 8192 MB

Hard disk

☐ Do not add a virtual hard disk

☐ Create a virtual hard disk now

☒ Use an existing virtual hard disk file

Guided Mode **Create** Cancel

**Step 5:** Start Kali OS. The default username is **root** and the password is **toor**.

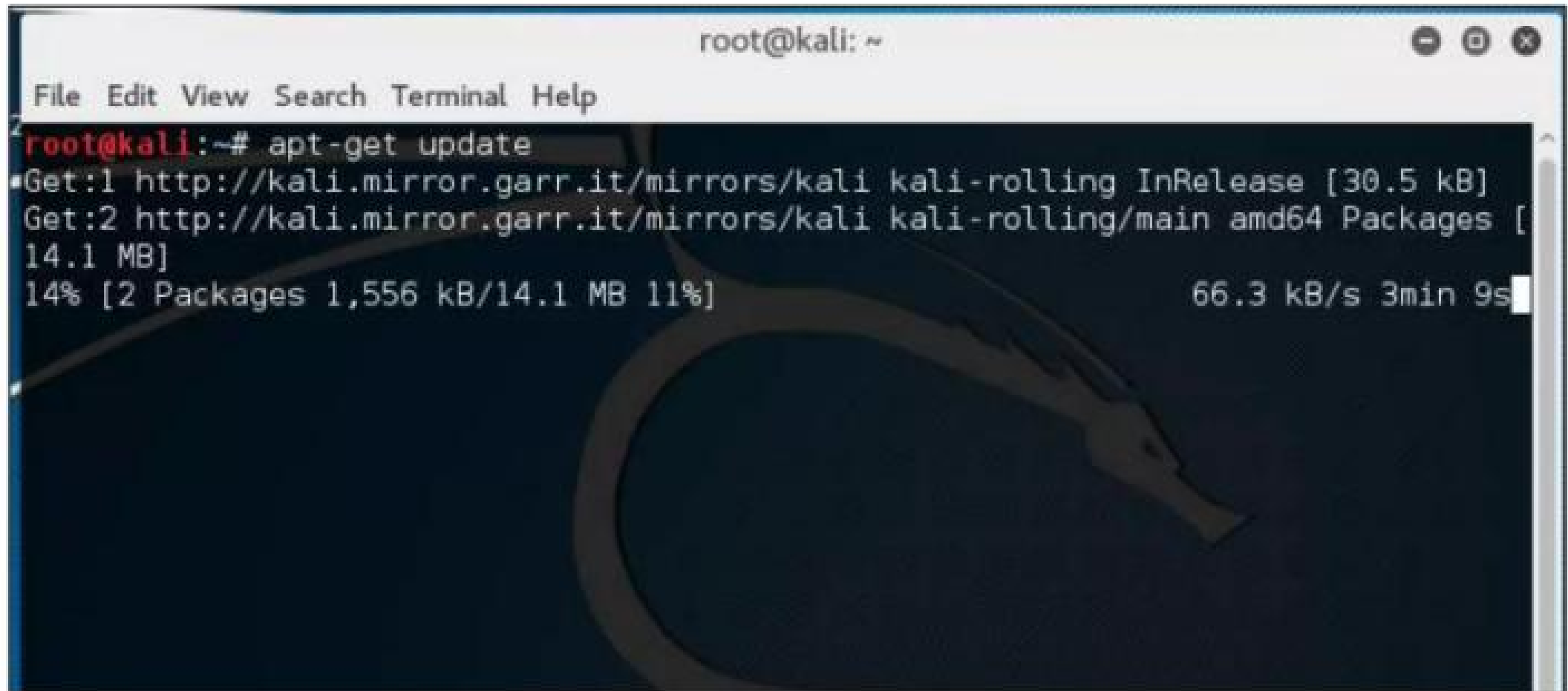


# Update Kali

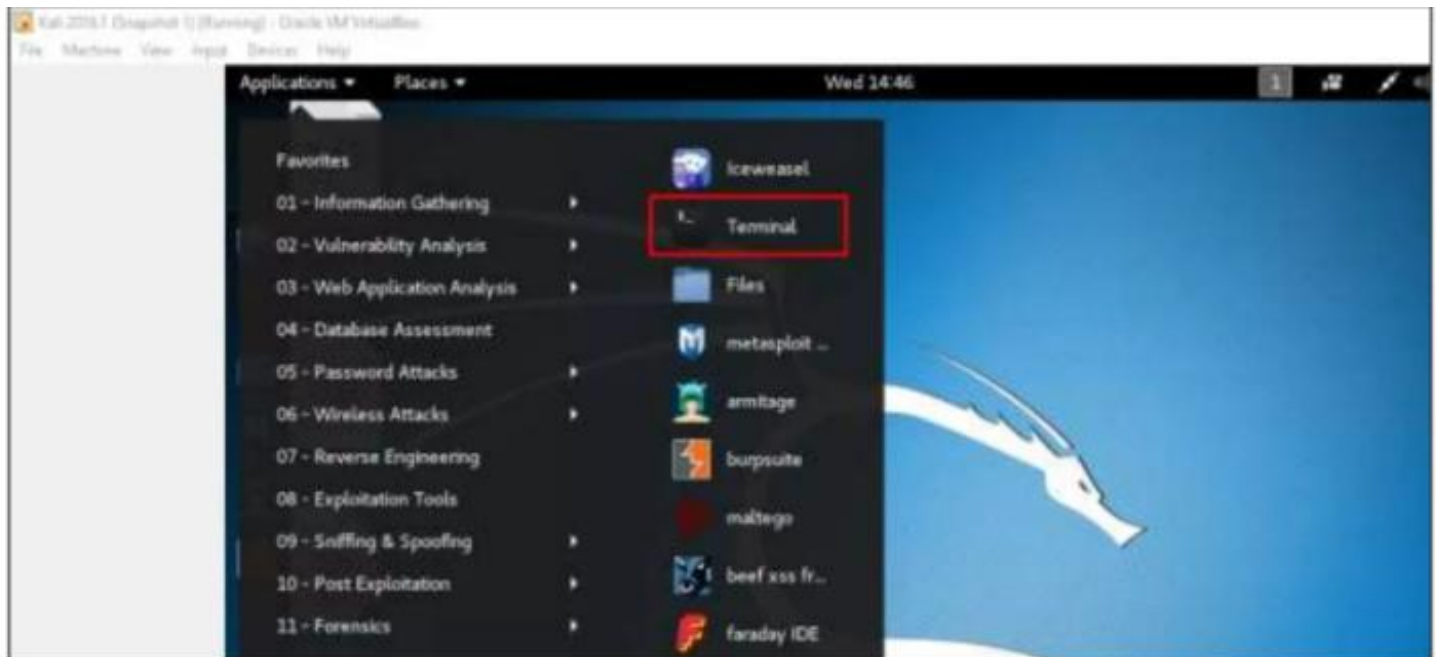
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It is important to keep updating Kali Linux and its tools to the new versions, to remain functional. Following are the steps to update Kali.

**Step 1:** Go to Application -> Terminal. Then, type "apt-get update" and the update will take place as shown in the following screenshot.

A screenshot of a terminal window titled 'root@kali: ~'. The window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal output shows the command 'apt-get update' being executed. The output includes two lines from the Kali mirror: 'Get:1 http://kali.mirror.garr.it/mirrors/kali kali-rolling InRelease [30.5 kB]' and 'Get:2 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main amd64 Packages [14.1 MB]'. The progress bar shows '14% [2 Packages 1,556 kB/14.1 MB 11%]' and the download speed is '66.3 kB/s 3min 9s'. A faint Kali Linux dragon logo is visible in the background of the terminal window.

```
root@kali: ~  
File Edit View Search Terminal Help  
root@kali:~# apt-get update  
Get:1 http://kali.mirror.garr.it/mirrors/kali kali-rolling InRelease [30.5 kB]  
Get:2 http://kali.mirror.garr.it/mirrors/kali kali-rolling/main amd64 Packages [14.1 MB]  
14% [2 Packages 1,556 kB/14.1 MB 11%] 66.3 kB/s 3min 9s
```



**Step 2:** Now to upgrade the tools, type "apt-get upgrade" and the new packages will be downloaded.

```

Applications ▾ Places ▾ Terminal ▾ Wed 14:56
root@kali: ~

File Edit View Search Terminal Help
Reading package lists... Done
root@kali:~#
root@kali:~#
root@kali:~# apt-get upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following packages were automatically installed and are no longer required:
 castxml gccxml gdebi-core libasn1-8-heimdal libgssapi3-heimdal
 libhcrypto4-heimdal libhdb9-heimdal libheimbase1-heimdal
 libheimntlm0-heimdal libhx509-5-heimdal libkdc2-heimdal libkrb5-26-heimdal
 libntdb1 libroken18-heimdal libwind0-heimdal python-ctypeslib python-ecdsa
 python-ntdb python-pyatspi python-tidylib vlc-plugin-notify vlc-plugin-samba
Use 'apt autoremove' to remove them.
The following packages have been kept back:
 adwaita-icon-theme apktool backdoor-factory bind9-host binwalk bluez
 bluez-obexd bundler cadaver couchdb cpp cpp-5 cutycapt default-jdk
 default-jre default-jre-headless dnsutils dradis driftnet erlang-asnl
 erlang-base erlang-crypto erlang-eunit erlang-inets erlang-mnesia
 erlang-os-mon erlang-public-key erlang-runtime-tools erlang-snmp erlang-ssl

```



**Step 2:** Now to upgrade the tools, type "apt-get upgrade" and the new packages will be downloaded.

```
Applications ▾ Places ▾ Terminal ▾ vved 14:56
root@kali: ~

File Edit View Search Terminal Help
Reading package lists... Done
root@kali:~#
root@kali:~#
root@kali:~# apt-get upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following packages were automatically installed and are no longer required:
  castxml gccxml gdebi-core libasn1-8-heimdal libgssapi3-heimdal
  libhcrypto4-heimdal libhdb9-heimdal libheimbasel-heimdal
  libheimntlm0-heimdal libhx509-5-heimdal libkdc2-heimdal libkrb5-26-heimdal
  libntdb1 libroken18-heimdal libwind0-heimdal python-ctypeslib python-ecdsa
  python-ntdb python-pyatspi python-tidylib vlc-plugin-notify vlc-plugin-samba
Use 'apt autoremove' to remove them.
The following packages have been kept back:
  adwaita-icon-theme apktool backdoor-factory bind9-host binwalk bluez
  bluez-obexd bundler cadaver couchdb cpp cpp-5 cutycapt default-jdk
  default-jre default-jre-headless dnsutils dradis driftnet erlang-asn1
  erlang-base erlang-crypto erlang-eunit erlang-inets erlang-mnesia
  erlang-os-mon erlang-public-key erlang-runtime-tools erlang-snmp erlang-ssl
  erlang-syntax-tools erlang-tools erlang-xmerl evolution-data-server
  evolution-data-server-common file folks-common ftp g++ g++-5 gcc gcc-5
  gcc-5-base gdm3 gedit gedit-common ghostscript gir1.2-gdkpixbuf-2.0
  gir1.2-gnomedesktop-3.0 gir1.2-gst-plugins-base-1.0 gir1.2-gstreamer-1.0
  gir1.2-javascriptcoregtk-4.0 gir1.2-mutter-3.0 gir1.2-totem-1.0
```

**Step 3:** It will ask if you want to continue. Type "Y" and "Enter".

```
zsh-common
1264 upgraded, 0 newly installed, 0 to remove and 480 not upgraded.
Need to get 955 MB of archives.
After this operation, 162 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
```

**Step 4:** To upgrade to a newer version of Operating System, type "**apt-get dist-upgrade**".

```

root@kali:~# apt-get dist-upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done

The following packages were automatically installed and are no longer required:
caribou-antler castxml creepy dff gccxml gdebi-core girl.2-clutter-gst-2.0 girl.2-evinced-3.0 girl.2-glib-3.0
girl.2-packagekit-glib-1.0 girl.2-xkl-1.0 gnome-icon-theme-symbolic gnome-packagekit gnome-packagekit-data
gtk2-engines gucharmap hwd-data libapache2-mod-php5 libasnl-8-heimdal libavcodec-ffmpeg56 libavdevice-ffmpeg56
libavfilter-ffmpeg5 libavformat-ffmpeg56 libavresample-ffmpeg2 libavutil-ffmpeg54 libbasicusageenvironment0
libbind9-98 libboost-filesystem1.58.0 libboost-python1.58.0 libboost-python1.61.0 libboost-system1.58.0
libboost-thread1.58.0 libcamel-1.2-54 libchromaprint0 libclutter-gst-2.0-0 libcrypto++9v5 libcurl-perl
libcurl-ui-perl libdns100 libedatasever-1.2-21 libexporter-tiny-perl libfftw3-single3 libgdict-1.0-9
libglew1.13 libgrilo-0.2-1 libgroupsock1 libgssapi3-heimdal libgtkglext1 libgucharmap-2.90-7
libhcrypto4-heimdal libhdb9-heimdal libheimbasel-heimdal libheimtla0-heimdal libhunspell-1.3-0
libhx509-5-heimdal libical2 libilmbase6v5 libisc95 libisccc90 libisccfg90 libjasper1 libjpeg9
libkdc2-heimdal libkrb5-26-heimdal liblist-moreutils-perl liblivesmedia23 libllvm3.7 liblouis9 liblwres90
libnm-glib-vpnl libntdb1 libonig2 libopenexr6v5 libopenjpeg5 libpff1 libpgm-5.1-0 libphonon4 libpoppler57
libpostproc-ffmpeg53 libpth20 libqdbm14 libqmi-glib1 libquvi-scripts libquvi7 libradare2-0.9.9 libregf10
libroken18-heimdal libsodium13 libswresample-ffmpeg1 libswscale-ffmpeg3 libtask-weaken-perl libtre5 libtrio5
libusageenvironment1 libvpx3 libwebp5 libwebpdemux1 libwebpmux1 libwebRTC-audio-processing-0 libwildmidi1

```