

VirtualBox

Computer Tech 2016

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- Using VirtualBox for Windows
- From the schedule:
 1. Demo install of **Oracle's Virtual Box**.
 2. Install a Virtual Machine image of **Ubuntu**.
 3. Take tour of **Ubuntu**'s features.

Background

- I'm a recently-retired (2016-01-01) engineer with ManTech International Corporation (<http://mantech.com>)
- I've been using Unix and GNU/Linux and FOSS professionally for over 22 years

The sessions are interrelated:

- Free Software
 - 09:00 AM - Room 127
- Introduction to Linux
 - 10:00 AM - Room 309
- Introduction to Perl 6
 - 11:00 AM - Room 309

These links are on your handout and are related to my sessions:

<<https://computertechnwf.org/2016/sessions/sessions.html>>

<<https://nwflug.org>>

<<http://nicevile.pm.org>>

<<https://github.com/tbrowder>>

Why GNU/Linux?

- Powerful operating system (O/S or OS) that can be used in place of Windows or Mac
- Command-line-interface (CLI) that permits complex pipeline tasks and GUI-less programming
- Thousands of free software packages to suit nearly every interest
- Especially valuable as a modern slide-rule or calculator for scientists, mathematicians, engineers, and analytical professionals in all fields

Testing Linux distros (distributions)

Several methods

- VirtualBox
- Live CD/DVD
- Bootable USB drive
- Spare computer (native install; dual or single boot)

We'll use VirtualBox for this presentation

Note at the website the **Downloads** and **End-user docs** links and the **News Flash** section



The screenshot shows the Oracle VM VirtualBox website homepage. The browser address bar displays <https://www.virtualbox.org>. The page features the VirtualBox logo, a navigation menu on the left, a main content area with a welcome message and a large 'Download VirtualBox 5.0' button, and a 'News Flash' section on the right.

VirtualBox

Welcome to VirtualBox.org!

VirtualBox is a powerful x86 and AMD64/Intel64 virtualization product for enterprise as well as home use. Not only is VirtualBox an extremely feature rich, high performance product for enterprise customers, it is also the only professional solution that is freely available as Open Source Software under the terms of the GNU General Public License (GPL) version 2. See "About VirtualBox" for an introduction.

Presently, VirtualBox runs on Windows, Linux, Macintosh, and Solaris hosts and supports a large number of guest operating systems including but not limited to Windows (NT 4.0, 2000, XP, Server 2003, Vista, Windows 7, Windows 8), DOS/Windows 3.x, Linux (2.4, 2.6 and 3.x), Solaris and OpenSolaris, OS/2, and OpenBSD.

VirtualBox is being actively developed with frequent releases and has an ever growing list of features, supported guest operating systems and platforms it runs on. VirtualBox is a community effort backed by a dedicated company: everyone is encouraged to contribute while Oracle ensures the product always meets professional quality criteria.

Download VirtualBox 5.0

<https://www.virtualbox.org/wiki/Downloads>

News Flash

- Hot!** **October 2nd, 2015**
VirtualBox 5.0.6 released!
Oracle today released the first 5.0 maintenance release which improves stability and fixes regressions. See the [ChangeLog](#) for details.
- Hot!** **July 9th, 2015**
VirtualBox 5.0 released!
Install the official [See press release](#) for details.
- Hot!** **July 30th, 2015**
VirtualBox 4.3.30, 4.2.32, 4.1.16, and 4.0.32 released!
Oracle today released maintenance releases which improve stability and fix regressions. See the [respective change logs](#) for details.
- Hot!** **February, 2015**
We're hiring!
Looking for a new challenge? Were looking for generic product developers (Plurals).

[More information...](#)

After selecting “Downloads”



The screenshot shows a web browser window with the address bar displaying `https://www.virtualbox.org/wiki/Downloads`. The page features the VirtualBox logo on the left and a navigation menu with links for About, Screenshots, Downloads, Documentation, Technical docs, Contribute, and Community. The main content area is titled "Download VirtualBox" and contains the following text:

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 5.0.6 for Windows hosts** [\(x86/amd64\)](#)
 - **VirtualBox 5.0.6 for OS X hosts** [\(amd64\)](#)
 - **VirtualBox 5.0.6 for Linux hosts**
 - **VirtualBox 5.0.6 for Solaris hosts** [\(amd64\)](#)
- **VirtualBox 5.0.6 Oracle VM VirtualBox Extension Pack** [\(All supported platforms\)](#)
Support for USB 2.0 devices, VirtualBox RDP and PXE boot for Intel cards. See this chapter from the User Manual for an introduction to this Extension Pack. The 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 4.3.30**, please download the extension pack [\(here\)](#)
if you are using **VirtualBox 4.3.32**, please download the extension pack [\(here\)](#)
if you are using **VirtualBox 4.3.40**, please download the extension pack [\(here\)](#)
if you are using **VirtualBox 4.6.32**, please download the extension pack [\(here\)](#).
- **VirtualBox 5.0.6 Software Developer Kit (SDK)** [\(All platforms\)](#)

See the [changelog](#) for what has changed.
You might want to compare the

- [SHA256 checksums](#) or the

`download.virtualbox.org/virtualbox/5.0.6/VirtualBox-5.0.6-103037-Win.exe`

Don't forget the "Extension Pack" (for USB 2/3)

The "Extension Pack" is not distributable



The screenshot shows a web browser window displaying the VirtualBox Downloads page. The browser's address bar shows the URL <https://www.virtualbox.org/wiki/Downloads>. The page features the VirtualBox logo on the left and a navigation menu with links for About, Screenshots, Downloads, Documentation, End-user docs, Technical docs, Contribute, and Community. The main content area is titled "Download VirtualBox" and contains the following text:

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download.virtualbox.org/virtualbox/5.0.6/Oracle_VM_VirtualBox_Extension_Pack-5.0.6-103037.vbox-extpack

Upgrading or installing

After downloading the main file, double-click on it and install it as usual on Windows (or the equivalent on Mac).

When upgrading or installing, you lose network access temporarily. You may have to uninstall an old version when upgrading.

Considerations (* recommended)

- amount of RAM (* 2 GB+)
- 32- or 64-bit (* 64-bit)
- 64-bit guest on 32-bit host? (NOT recommended)
- type network interface (remote access needed?)

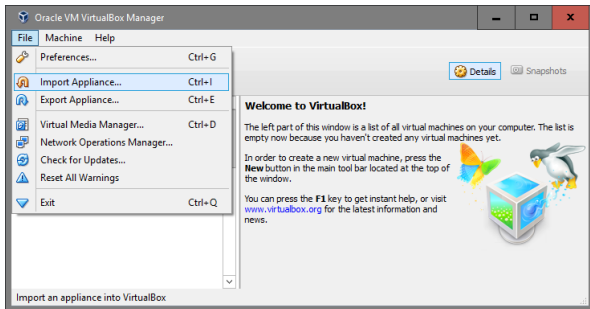
We have a VM already prepared for you here through a link on the Computer Tech NWF home page:

- <https://computertechnwf.org/virtualbox-vm.html>

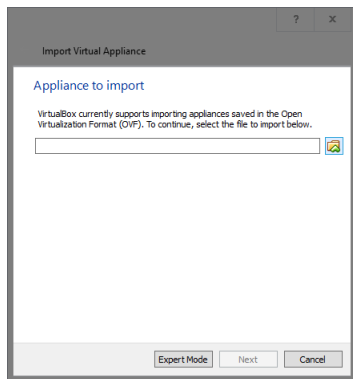
Download and import it

At 4+ Gb it will take a while to download!

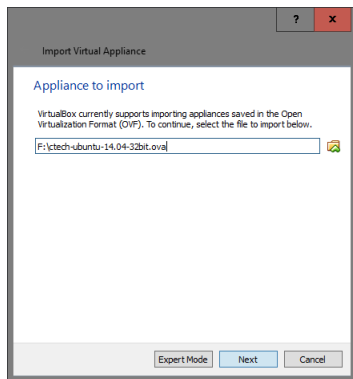
Importing the VM (1)



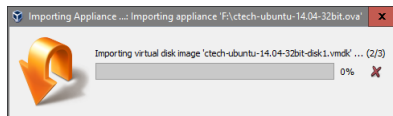
Importing the VM (2)



Importing the VM (3)

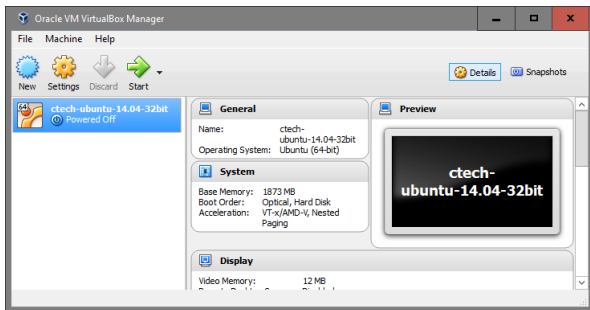


Importing the VM (4)

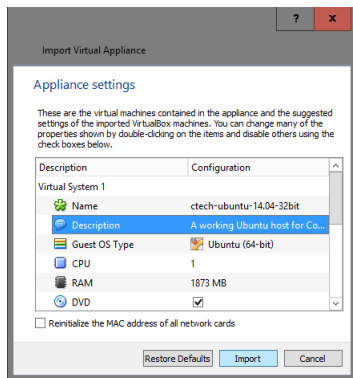


Importing the VM (5)

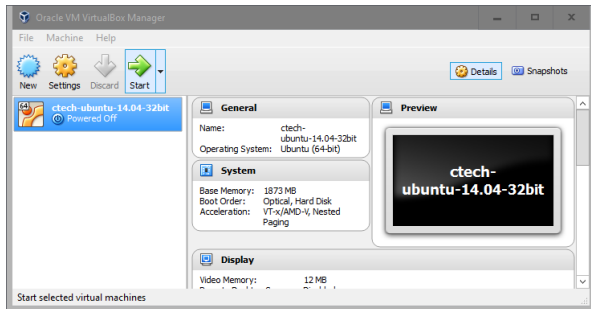
Complete, now check settings



Importing the VM (6)



Now start the VM



The VM has a few things added over the initial installation:

- a simple Emacs customization file (`~/.emacs.d/init.el`)
- Perl 6

- Using the VM (**demo**)
 - Terminal window
 - Package manager
 - Emacs
 - Perl 6

A very brief Linux tour (2)

Some CLI fun using my Debian 7 laptop ([demo](#))

How many files are on my laptop?

```
$ time locate / > tt
real    0m58.954s
user    0m0.712s
sys 0m1.876s
$ wc tt
1141036 1371237 89324910 tt
```

A very brief Linux tour (3)

How many files are in my home directory?

```
$ time locate $HOME > t
real    0m0.513s
user    0m0.468s
sys 0m0.044s
$ wc t
102133  108278 8084166 t
```

How many are PDF files (end in “.pdf”)?

```
$ grep -i '\.pdf$' t > ttt
$ wc ttt
475    533 30446 ttt
```


(demo)

- Free Linux tutorial (sponsored by the Linux Foundation <<http://www.linuxfoundation.org/>>: go to <<https://www.edx.org/>> and search for “LFS101x.2”
- Linux for Dummies (book)
- Linux Bible (**demo**)
- Our local Linux user group: <<https://nwflug.org/>> meets once a month

Summary

- Today we have taken a look at getting a usable Linux installation for learning.
- If you find Linux useful, consider joining our local Linux user group.
- There is something out there in Linux land for nearly any interest. I encourage you to venture forth, have fun, and expand your knowledge and skills.
- I am glad to help via e-mail (please mention Computer Tech 2016 in the subject):
 - [tom.browder@gmail.com]