Running Ubuntu from USB with VirtualBox

Overview

As an emergency backup for VirtualBox challenges, I've assembled a special variant of Ubuntu that includes VirtualBox built in. It can be run directly from a USB drive, or alternatively, it can be installed on a partition on your system. Either approach will work. To get it running, follow these steps.

For this guide, you'll need…

1. USB drive, minimum of 2 GiB of space
2. Linux Live USB Creator (Installed)
3. Ubuntu 18.04 (Bionic) ISO with VirtualBox

Writing the Image with LiLi USB Creator

To write to the USB device, run the Linux Live USB Creator, select the USB drive, and then select the location of the Ubuntu-VB image (see Figure).

Note that if you intend to run from the USB drive, you may want to use the remaining space as persistent storage – i.e., space where working files can be kept. However, you will likely need another drive – internal or external – to store your virtual machine images and snapshots.

Running the USB Image

The USB image can be used directly as a "Live" environment or may be used to install Ubuntu; in either case, VirtualBox is made available to you. Note that in order to run VirtualBox in Ubuntu, you will need to **disable Secure Boot** in your system setup! Otherwise, VirtualBox will be unable to load its custom modules in Linux.

Using VirtualBox

VirtualBox can be run directly from the application menu. You can also directly open virtual machines on other drives, though there are sometimes problems loading machines with multiple snapshots. As a general rule, it is recommended that a fresh import of an appliance or clone of an existing machine be made when moving a machine into the Ubuntu VirtualBox environment.

As notes earlier, dedicated space will be needed by your virtual machines; it is unlikely that a typical USB "pen drive" will have enough space to hold VMs. As such, it is recommended that you either a) store VMs on your Windows partition (drive), b) allocate dedicated space on another partition on your drive, or c) use an externally attached USB hard disk drive or solid state drive.