

Setting up an Ubuntu 9.04 Desktop VM in Parallels 4.0 on a MacBook Pro followed by setting up an Ubuntu 9.04 Server VM in VirtualBox OSE 2.1.4.

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Virtual Machines are as the name implies, something like imaginary computers.

Now, that's a bit fanciful of a name but what it means is that a software application, a Virtual Machine Manager or Hypervisor supports an application session or window on the host physical computer on which it's running where a guest OS can be installed, behaving like a separate computer but being able to access services and hardware of the host machine.

Typically, this guest system runs fully contained within the VM and makes no changes whatsoever to the host OS or computer. This provides a safe two-way relationship between the working host computer and the exploratory guest machine where the host is safe from potentially harmful activities done in the guest and the guest is to a degree safe behind the secure protection of a typical host configuration.

Working with Virtual Machines is easy enough for a relative newbie to explore. That is to say, it's not inherently more difficult or sophisticated than running and working with other software applications.

Benefits of running VMs for a hobbyist:

Protects the host OS and can protect the guest OS from the outside world

Guest OS runs as a sandbox suitable for playing around as the name implies

Makes no changes to your host OS or computer

Consists of a couple of files that can be simply deleted leaving no trace of your explorations

Provides services of guest OS such as running Windows in GNU/Linux

Supports OS exploration such as BSD and GNU/Linux distros

Supports exploration of configurations and optimizations that can later be applied to the host OS or other physical machines

Provides faster reboots when necessary during the above activities

Provides Virtual Appliances where a set of services are contained wholly within the VM such as a Web or Database server

Perfect for self-directed training such as System and Web and DB administrator

Useful for running older versions of software in required older OSes

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This WNYLUG presentation will demonstrate the process for setting up guest OSes in Macintosh OS X using Parallels 4.0 and VirtualBox 2.2.2 on a MacBook Pro laptop computer. The host physical computer has an Intel Core 2 Duo 2.16 GHz processor, 667 MHz bus, 3GB of system RAM, ATI Radeon video with 128 MB VRAM, and a 5400 RPM 160 GB hard drive.

We will be using the recently-released Ubuntu 9.04 desktop GNU/Linux distribution for our

example VM guest OS running in Parallels 4.0 in OS X.

Following the creation of that VM we will install VirtualBox OSE 2.1.4 using the Synaptic package manager on the Ubuntu guest OS and demonstrate the process of using that application in setting up a VM as would be done on a typical GNU/Linux system.

Finally, using VirtualBox 2.2.2 in OS X, we will create an Ubuntu 9.04 server guest OS VM, with SSH and LAMP services.

This will allow us to explore how these VMs may be accessed from the host OS as well as by each other. Our explorations will involve connecting via SSH and SFTP in both directions, connecting via browser to the VM's Apache2 Web server, and connecting to the VM's MySQL database server both from the guest OS directly and from the host OS remotely via SSH using the MySQL CLI console.

Navigation locally and remotely will involve Midnight Commander installed via apt-get, which will also be used to edit the home page in the Web root directory.

There is no need to burn install CDs or DVDs of the downloaded OS files as both VMMs support booting directly from the ISO files. Of course, they also support conventionally booting from both LiveCDs/DVDs and install optical media.

For those intending to follow along with the demonstration and actually have a VM up and running in a GNU/Linux or OS X or Windows host by the end, the first step, performed in advance of the meeting, becomes downloading the ISOs and performing MD5 checksums on them to establish that they are not corrupted.