

## Assignment 1

Question 1 Suppose you are running a Windows machine, but you have a program that needs to run in a Linux environment. How can you run the program while still technically using your Windows machine?

You can set up an environment that can host a Linux distribution. Tools such as virtual box, parallels, or natively hosting a server on your machine. You run the program from your virtual environment hosted on the windows machine.

Question 2 What is the difference between a native and a hosted virtual machine monitor (hypervisor)?

A native virtual machine would be mounted to your drive. It would have access to your root directories and you can switch between them. A hosted virtual machine allocates a specific space in memory while running. It does not necessarily have to be mounted to a local drive but you could specify that when setting up the environment.

Question 3 What is the difference between a virtual machine and a virtual appliance?

A virtual appliance is an application or a set of applications that you can package together for a virtual machine and/or run on a virtual machine that exists solely on the VM.

Question 4 What are the associated benefits of using virtualization software? Give a few examples of each benefit..

Some benefits of using virtual software include the ability to run different operating systems on the same machine without having both OS's exist on a drive. When writing software this allows you to expand testing, meaning you can see if your software works on a variety of operating systems and their versions. VM's are also very lightweight meaning that they don't allocate nearly as much memory as dual booting another operating system. Mostly they are a nifty way of being able to work out of customized environments based on your needs and the needs of your software.

Question 10 Do virtual machines have different IP addresses?

Yes each instance of a virtual machine you create has a different IP address from other virtual machines as well as the local machine host.

