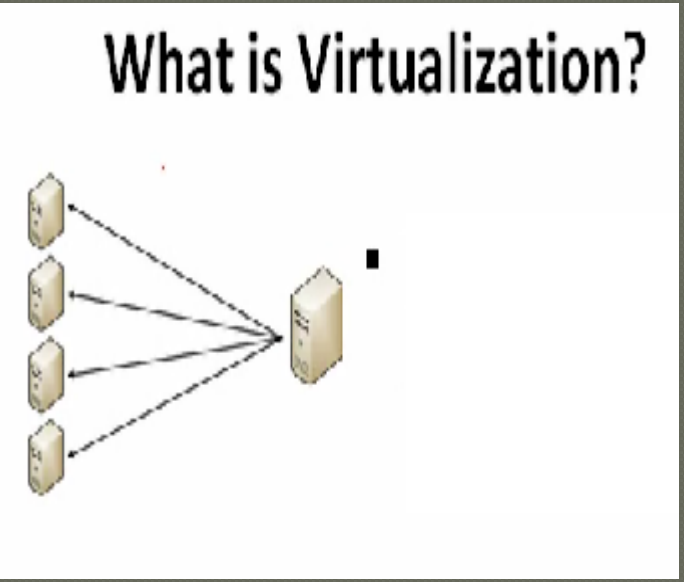
VIRTUALIZATION



Virtualization is the concept of having one physical computer act as though it is multiple computers.

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I can have one physical box in my office, and on that one box I can have many virtual machines. Each of those virtual machines will act independently of all the other virtual machines. It is having 4 computer on one main computer.

Virtualization allows for not only multiple instances of one operating
System to be run on a single computer but also different operating
Systems to run on the same computer. So I can have windows 7 and
Windows XP running virtually on the same system each in their own space.

You can have Microsoft and non Microsoft operating systems running
as virtual machines on the machine.

Benefits of Using Virtualization

- Server Costs
- Saves Energy
- Separation of Services
- Easier to Manage
- Compatibility Issues
- Support for Different Platforms

Hyper-V is the virtual machine technology that allows multiple operating systems to run concurrently on the same system.

Hyper-V will work only on 64-bit systems.

The editions that include Hyper-V are as follows. The most significant differences between these editions are related to how many virtual servers each edition can host.

Windows Server 2008 Standard with Hyper-V The Standard with Hyper-V edition is for small to medium-sized businesses. It includes support for a single virtual server.

Windows Server 2008 Enterprise with Hyper-V The Enterprise edition is for larger organizations and can support up to four virtual servers. It also includes support for clustering and hot-add memory capabilities.

Windows Server 2008 Datacenter with Hyper-V The Datacenter edition is for high-end applications and large-scale virtualization. It adds to the features of the Enterprise edition, including hot-add processor capabilities. An unlimited number of virtual servers can be hosted on the Datacenter edition.

Using Virtual PC 2007

Virtual PC is an excellent tool that will allow you to install multiple instances of Windows Server 2008 on a single operating system. For example, you may be running Windows XP or Windows Vista on your primary computer. Instead of making this system a dual-boot or multiboot operating system, you can use Virtual PC to install all of these operating systems and make them easily accessible within your primary operating system.

Exercise 1.1 will show you how you can download and install Virtual PC and begin installing any operating system within Virtual PC.

Virtualization Examples

- You have a temporary need for an additional server and can't justify the cost of purchasing another computer.
- You have an application which will only run on an older operating system and you don't want to use another computer just for that one application.
- You need to test a new product, but don't have the budget to purchase a test computer.

MED-V

The key benefit of MED-V is that it helps enterprises deal with incompatibility between applications and the operating system. For instance, if a user needs to run an early version of Internet Explorer and that version of Internet Explorer is not supported on Windows Vista, the administrator can use MED-V 1.0 to deploy this early version of Internet Explorer to the user as part of a Windows XP virtual image

From the user's perspective, both copies of Internet Explorer appear as if they were running on the local computer. MED-V does this by allowing users to run legacy applications within a virtual machine that has an earlier version of Microsoft Windows installed. The user can then access these applications either from a virtual desktop (as with Virtual PC 2007 running natively on a system) or by using application windows that are seamlessly integrated into the local desktop of the user's computer (similar to RemoteApp in Remote Desktop Services). The key usage scenario for MED-V is resolving application-to-operating system Incompatibility

MED-V video

http://technet.microsoft.com/en-us/windows/gg699451

APP-V

Microsoft Application Virtualization (App-V) also helps enterprises handle application compatibility issues, but it addresses challenges differently than MED-V does. Specifically, App-V lets you resolve conflicts that arise between different applications or different versions of the same application;

MED-V, on the other hand, allows users to run older versions of Microsoft Windows concurrently with the local desktop of their computers, which can help with issues where legacy applications are unable to run natively on the most recent version of Windows installed on the user's computer.