

Virtualization

More is not always better, especially when it wastes resources. Server virtualization enables companies to maximize computing power, reduce costs, be earth friendly, and provide disaster recovery protection.

Managing server growth can be a daunting challenge. This is especially true for software development companies. These companies must test their applications on various operating systems, patches, plug-ins, and hardware. This challenge has only increased with the adoption of open source platforms as a target market for software vendors. Virtualization can help reduce the physical hardware required for testing and increase the availability of computing resources.

Virtualization is a way to enable one physical machine to appear to users or applications as multiple machines. Some have described the concept as a computer with multiple personalities. The most obvious application of this technology is the software testing environment. Instead of loading multiple operating systems on multiple machines, you may install multiple operating systems on one machine.

Another benefit of virtualization is server consolidation. The computing power of most servers is underutilized. The servers respond to bursts of tasks then wait for the next command. Print servers are prime candidates for virtualization due to their on-demand nature. When the CPU isn't managing print requests, it is doing very little work.

Server consolidation can be used to help reduce cost and share equipment across departments. Finance, HR, and sales have traditionally used department-specific applications. Utilizing virtualization, they can still maintain separate applications, security levels, and storage, but on shared hardware.

A software development shop will normally have a print server, version control server, backup server, and multiple development machines hosting various databases and target deployment platforms. By deploying virtual servers, some of these servers can be consolidated, reducing the hardware, maintenance, and service costs to the company.

An often overlooked benefit of virtualization is disaster recovery. Creating a virtual machine takes less time than building a new physical machine. Consider the following scenario: The roof leaks on your e-mail server and the hardware is destroyed. Assuming you have a valid backup of your data, where do you restore your files? One option is to purchase a new machine, install a current image, and begin your restore. Another option is to create a virtual e-mail server using existing hardware. Using a virtual server can reduce the length of your outage from days to hours. This time difference can be critical to your business. You will still need to replace the damaged hardware, but users are up and running with minimal business interruption.

One issue that has slowed virtualization adoption is licensing. Traditional license models do not account for CPU virtualization. Work with your vendor to ensure that you purchase the proper amount and type of licenses.