



FAST MOVING
FORWARD THINKING

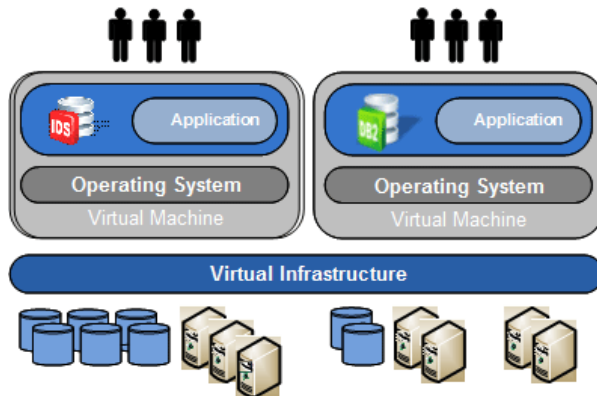
IMPERIALTM

ONLINE

Virtualization:

Virtualization

Virtualization is the creation of a virtual (rather than actual) version of something, such as an operating system, a server, a storage device or network resources.



You probably know a little about virtualization if you have ever divided your hard drive into different partitions. A partition is the logical division of a hard disk drive to create, in effect, two separate hard drives.

Operating system virtualization is the use of software to allow a piece of hardware to run multiple operating system images at the same time. The technology got its start on mainframes decades ago, allowing administrators to avoid wasting expensive processing power.

In 2005, virtualization software was adopted faster than anyone imagined, including the experts. There are three areas of IT where virtualization is making headroads, network virtualization, storage virtualization and server virtualization.

- Network virtualization is a method of combining the available resources in a network by splitting up the available bandwidth into channels, each of which is independent from the others, and each of which can be assigned (or reassigned) to a particular server or device in real time. The idea is that virtualization disguises the true complexity of the network by separating it into manageable parts, much like your

partitioned hard drive makes it easier to manage your files.

- Storage virtualization is the pooling of physical storage from multiple network storage devices into what appears to be a single storage device that is managed from a central console. Storage virtualization is commonly used in storage area networks (SAN's).
- Server virtualization is the masking of server resources (including the number and identity of individual physical servers, processors, and operating systems) from server users. The intention is to spare the user from having to understand and manage complicated details of server resources while increasing resource sharing and utilization and maintaining the capacity to expand later.

Virtualization can be viewed as part of an overall trend in enterprise IT that includes autonomic computing, a scenario in which the IT environment will be able to manage itself based on perceived activity, and utility computing, in which computer processing power is seen as a utility that clients can pay for only as needed. The usual goal of virtualization is to centralize administrative tasks while improving scalability and work loads.