



Virtualization - Part 1

It is general consensus that virtualization indeed has fundamentally changed how we do IT in a way that was unforeseen even as recently as five years ago. Every one of our clients (across all industries, e.g., financial, healthcare, manufacturing, media, etc...) that has embraced the concept has had a huge positive experience. In addition to improving key business processes, such as Business Continuity (BC) and High Availability (HA), virtualization provides companies of all sizes –and in particular within our segment (the SMBs)-- with flexibility, cost savings, and disaster recovery options critical to their success and growth.

But what exactly is virtualization and how can it help your company the way it has helped our clients? Well...here's a quick run-down: To start, the term 'virtualization' can be applied to many aspects of an IT infrastructure: applications, networks, storage, hardware, and end-users. We will easily define what virtualization really is and focus on how certain trends, such as server virtualization, are helping to change the landscape for the SMB segment. We'll take a quick look at what makes virtualization so attractive to companies in terms of efficiencies, improved resource utilization, cost reductions, and automation (just to name a few). We'll also address the ways in which virtualization optimizes the performance of servers, desktops, applications, and of course the end-users!

What is Server Virtualization?

Server virtualization consists of running multiple operating systems (e.g. Microsoft Windows Server 2012 R2) and applications on the same physical server at the same time. This eliminates the

The concept of virtualization actually originated back in the era of mainframes (1960's). Modern advances, especially the introduction of Intel x86 architecture and inexpensive PCs, have finally made virtualization technology possible. This innovation has enabled companies of all sizes to flexibly accommodate a multitude of users, extend the life of their datacenters (for larger companies), and save on hardware purchases and utility costs, in addition to streamlining server administration (which makes our Consultants' lives a lot easier, hence passing on cost savings to you).

Additionally, virtualization has substantially leveled the economic playing field, enabling small to medium businesses to compete and reach parity with much larger enterprises, something that was impossible a few years ago. By using server virtualization, SMBs can quickly generate tremendous computing power to handle a greater number of tasks while achieving energy, hardware, and management savings.

For you SMBs out there, virtualization increases application availability and can dramatically shorten disaster recovery time to significantly improve business continuity preparedness.

For larger businesses, virtualization offers levels of efficiency in security, management, automation, and VM deployment as well as the ability to provide increased resources to more users.

Plain and simple, across the board, virtualization allows enterprises/big corporations and SMBs to reduce the number of physical machines in their data centers (or small server rooms) while maximizing the number of underlying applications. How nice is that!

traditional, yet inefficient, model with its 1-to-1 correspondence between a dedicated server and a single operating system (OS). The current process of partitioning one physical server into several operating systems, or virtual machines (VMs), lets you simultaneously deploy, operate, and manage these multiple operating system instances on that single physical server. This offers enormous expansion opportunities for accommodating increased numbers of applications and unique users*.

Stay tuned for part 2 in our March edition...

*A recent study by Forrester Research reported that data virtualization will continue to grow to \$10 billion by the end of 2016.

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