Few note virtualization's 'stealthy creep'

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Virtualization, a concept that replaces the old model of a computer as a single “box” running only its own operating system and storing only its own data in its own format, is likely to revolutionize the IT industry.

There’s a plot afoot, and it’s not the latest detective show on prime time. It’s what’s known as virtualization.

“The disruptive force of virtualization is likely to revolutionize the IT industry in the next three to four years. But few are really noticing its stealthy creep,” says Dr. Jurij Paraszczak, Chief Technology Officer of the IBM Venture Capital group and Director of Technology for the IBM Research Emerging Business Group.

Virtualization is a broad concept, which may explain why it’s less noted than it deserves. Perhaps the simplest definition is that virtualization replaces the old concept of a computer as a single “box” running only its own operating system and storing only its own data in its own format. In place of the old model, virtualization allows a single computer to play different roles for different users. It also encompasses software that allows disparate operating systems and hardware to work together and file systems that allow access to information regardless of its form or origin. It even means virtual “computers” that are actually a collection of machines, some of which are called upon only when needed, on demand.

“Without a doubt virtualization is occurring across the entire IT stack — from the chips through the hardware subsystems, the operating system and applications,” says Dr. Paraszczak.

In the real world, that translates to giving the Australian Open an infrastructure that can scale up to handle more than 80 times its regular traffic during the tennis tournament and then scale down once the matches are over. Or it can mean providing Locus Pharmaceuticals in Pennsylvania access to IBM Deep Computing Capacity on demand. The company can use supercomputing power whenever it's needed and pay only for the resources it uses.

"The combination of increased speed and access to computing power has expanded our project capacity by a factor of four, allowing us to consider even more critical disease targets," says Jeff Wiseman, a Locus vice president.

"Integrated virtualization will dramatically change the control points in the system architecture and allow enterprises to focus on business features rather than the underlying infrastructure," says Dr. Paraszczak.

Source: IBM