Growing numbers of small and mid-size businesses that have evaluated various server virtualization technology in preproduction are now on the brink of moving to a production environment. But in most cases, they will need some guidance on what to purchase.

“Previously, SMBs were asking if they should virtualize,” says Declan Kenny, global product manager for IT Consulting Services at Dell. “Today more and more the question is, ‘How do I virtualize?’”

The shift occurred as the benefits of virtualization started to become well known: Consolidating underutilized physical servers onto fewer, more powerful servers can lower both capital and energy expenses. Virtualization is ideal for upgrading aging servers while keeping the applications running as virtual machines. The post-virtualization environment is easier to manage and maintain. This is music to the ears of executives, since “as much as 70 percent of every IT dollar is spent on ongoing maintenance,” says Dave Sobel, CEO of Evolve Technologies, an IT consulting firm in Fairfax, Va.

Virtualization can deliver backup and disaster recovery capabilities on par with those of larger enterprises. “Software-based servers enable us to easily combine on-site and off-site backup services in a way that we couldn’t do with physical servers,” says Sobel. Virtualization is the basis for cloud computing, an IT delivery model with growing appeal.

Evaluating business reasons first
Rather than diving into server speeds and feeds and hypervisor selection, experts recommend first analyzing the state of your current infrastructure, the post-virtualization environment and the expected benefits. “You need to assess your project from a business-value perspective,” says Sobel. “What business gains do you expect, and how will you measure them after the fact?”

After you understand the business reasons for virtualizing, only then should you begin planning your virtual environment, selecting vendors and products, as well as deploying the necessary technology.

IT leaders without extensive virtualization expertise would do well to bring in outside help. As Sobel says, “For the same reason you call an accountant to help with your taxes, and a lawyer when you go to court, you call on a consulting organization to help with your IT infrastructure.”

To assist in assessing your present infrastructure and expected gains from virtualization, Dell Services offers a Virtualization Readiness Assessment (see related story), either on-site or remotely. This month-long assessment helps IT leaders to better determine consolidation opportunities and offers recommendations for implementing a virtualization solution designed to maximize performance and efficiency.

“The assessment creates useful information related to workloads on the CPUs, memory, storage and network, and then we take those utilization metrics and deliver a report,” says Dell’s Kenny.

The report provides an analysis of the gains that virtualization could offer, as well as recommendations on which servers to virtualize, consolidation ratios and technology selection. As Dell works with the leading virtualization software providers, the analysis explores alternative solutions using software from VMware®, Microsoft® or Citrix®.
As well as implications for the storage and network architecture, "We’re not just advising on the correct hypervisor," Kenny adds, "but the right network switches and storage technology as well." Storage is a special concern because of its link to data management and disaster recovery. "Before virtualization, we often see storage sprawl, where customers have to perform multiple backups to disk or tape," says Kenny. "As you virtualize, you need to understand how to manage and protect the data flow from the VMs." Dell provides assistance with storage consolidation around the VMs, perhaps through the use of a single storage area network (SAN) box. Shared storage is crucial because it enables fast recovery of VMs if the hardware fails.

Once virtualization is deployed, there’s a need to master the software and manage the environment. Dell Services offers training and ongoing health checks throughout the virtualization lifecycle, and the hypervisor software providers offer rich training resources as well. "If you embrace the training, documentation and best practices that are out there," says Sobel, "you are likely to achieve the returns that virtualization promises."

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