

Is Virtualization Still Only Virtually Understood?

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We are approaching a point in the “virtualization” hype-cycle where performance and delivered value will have to manifest itself in some tangible form. But before we get to that point, it will be important to understand what is meant by the term, and how it can be implemented to tangibly contribute to key corporate objectives.

Getting a better grip on the impact that virtualization can have on organizations is complicated by the fact that the term is now being applied to a growing number of elements of the enterprise infrastructure – from the back office, to the desktop, to applications. “The numerous approaches to virtualization and a cacophony of terms can leave users overwhelmed or confused,” analysts at Saugatuck Technologies report.

“Virtualization has evolved from being used solely as a tactical tool to reduce costs to new use cases where it can increase revenue, productivity, and data security. While this next leg in adoption holds significant potential, it also will require more integration across the storage, server, and network environments,” says John Humphreys, program vice president in IDC’s Enterprise Platform Group.

Application and desktop virtualization offer enterprises the next opportunity to leverage the benefits of virtualization. Nonetheless, the enterprise IT marketplace is skeptical about taking virtualization to the next level—down to the users. Cultural barriers, both among users and IT managers, must be overcome if enterprises want to spread the gains they have made in the backroom out to core business processes and individual users.

Expanded deployment of virtualization can help enterprises further reduce the number of disparate architectures and remove duplicative infrastructure. A relatively unexploited aspect of virtualization is application infrastructure virtualization. This manifestation of virtualization allows data centers to run applications on any application server in a common resource pool. Furthermore, administrators can deploy resources during peak periods, while achieving application response times and performance parameters that meet service level agreements (SLAs).

Application Virtualization as a Silo-buster

By building on efficiency gains realized from server and storage virtualization, application infrastructure virtualization helps IT managers rein in a principal cause of rising costs and complexity in the data center—the unintended formation of data “silos” and redundant server resources. Moreover, application infrastructure virtualization reduces server under-utilization, which costs US companies \$140 billion annually, according to IDC research. Meanwhile, total cost of ownership for servers rose from \$98 billion to more than \$250 billion between 1996 and 2006, even though initial purchase costs for servers has actually remained flat. Rising TCO is attributable principally to server management and administration costs, but also increasingly to rising energy prices.

Virtualization’s Benefits

In addition to reducing complexity and easing system maintenance and administration, application infrastructure virtualization can help enterprises dramatically reduce IT costs. In the short term, IT managers will be able to realize measurable savings in:

- Reduced administrative expenses.
- Improved utilization of existing resources.
- Reduction in new data center servers.
- Reduced software licensing costs.
- Reduced real estate footprint.
- Reduced energy costs.

Application infrastructure virtualization also delivers long-term value for enterprise IT infrastructure:

- Increased quality of services to ensure the health of applications, services, and associated processes.
- Increased application availability.
- Improved response time and performance via real-time monitoring and response of system performance.
- Rapid deployment of new applications, features, and services.
- Improved load management and response to unforeseen demand.
- Reduced energy costs.