

# Virtualizing Application Servers

**Cisco IT reaps significant cost and productivity benefits from virtualizing data center application servers.**

Like many IT departments, Cisco IT historically dedicated a single server to each application or instance, creating an explosion in the number of servers to be purchased, deployed, and managed. With nearly 4000 applications running on more than 15,000 physical and virtual servers as of early 2008, Cisco IT faced a server growth rate of 15 percent per year.

This growth only exacerbated the existing challenges of high server and support costs, and diminished available data center space, high demand for expensive electrical power and air conditioning, and long delays (12 weeks and more) for deploying new servers. These delays, in particular, greatly impacted Cisco's internal application development efforts.



To overcome these challenges, Cisco IT has deployed virtualized servers and related Cisco technologies for server networking and data center management. Cisco IT currently uses the VMware Infrastructure 3 to create virtualized servers, with 10 to 20 virtualized servers running on a single physical server. Cisco technologies that support virtualized servers include

routing, switching, load balancing, content switching, and storage-area networks (SANs) for connecting servers, storage devices, and other data center systems across the Cisco network. IT also uses an internal management system for managing devices on the Cisco network, including the virtualized servers.



As of early 2008, Cisco IT had deployed approximately 2700 virtualized servers, producing cost avoidance and savings valued at a cumulative total of more than US\$19 million. With fewer physical servers to install, Cisco can slow the demand for data center space and resources, increase productivity for IT personnel, and improve application security and stability.

Read more in the newly updated case study, "[How Cisco IT Virtualizes Data Center Application Servers.](#)"