

A FORSYTHE CASE STUDY

Server Consolidation and Data Center Optimization via x86 Virtualization

National Healthcare Provider

Business Challenge

With datacenter floor space and power distribution units nearing maximum capacity, the client recognized that immediate action would be necessary to avoid a negative impact on daily operations. The choice was either to incur a costly move to a new data center facility, or to consolidate servers via virtualization, while simultaneously refreshing technology. These common data center issues are faced by many large enterprise's today: the need to remain agile, increase processing capacity, adhere to constraints posed by the enterprise's IT infrastructure, adapt to evolving industry standards, and be freed from the limitations posed by diminishing amounts of available space and power.

Solution

The answer was server virtualization. Forsythe developed a plan to migrate from the physical x86 infrastructure using Forsythe's Virtualization Methodology.

Step 1 Capacity Planning—Forsythe assessed the performance metrics of the 560 physical servers identified as candidates for virtualization, and then created a scalable foundation for the environment to support the target virtual infrastructure and alleviate power consumption and cooling problems.

Step 2 Architecting and Implementing the Virtual Environment—Taking into account data center space and power, Forsythe deployed a blade server solution to support the virtual environment using Forsythe's Rapid Infrastructure Deployment framework. The blade server solution and the virtual backend environment were deployed in a matter of days.

Step 3 Server Virtualization—The client's 24x7x365 shop presented a major imperative: uptime and availability could not be compromised. Forsythe deployed a virtualization engine utilizing industry standard server migration tools and migrated the servers in eight days, with no downtime to the client's business-critical healthcare systems.

Step 4 Support and Transition—With the virtual infrastructure implemented and running, one of the most important phases of the

project still remained: support and transition. Forsythe virtualization consultants helped the client understand the new virtual infrastructure from build to implementation to management. With this solid knowledge transfer and instruction, the client was able to manage and deploy new virtual environments in their enterprise with ease.

Results

The server virtualization and migration process resulted in a 14:1 server consolidation ratio, zero application downtime, and a drop in power consumption by 20 KVA. Many physical servers were decommissioned, alleviating datacenter space and power concerns, and significantly reducing ongoing maintenance charges. The new environment also provided an infrastructure to address two other critical issues: rapid server deployment for new applications and a conduit to business continuity and disaster recovery. Forsythe's methodology helped the client mitigate all risks surrounding virtualization and, most importantly as a healthcare provider, provided continued application access throughout the whole process.

For more information about Forsythe's offerings, visit www.forsythe.com

