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Enterprise IT Architecture

Flash Research Paper #2

Virtualization and Cloud Computing

Virtualization of our servers can give our company a net benefit of $9,200,000 over a three year period. By converting physical servers to virtual servers through VMware, we can increase efficiency, running more than one virtual computer system on a single physical system. This virtualization will take up less space, and save the company money.

There is a 10:1 ratio for the number of physical servers we can put into a single virtual server. There will be a total of 80 VMs being utilized compared to the current 1,000 physical servers. This will result in significantly less maintenance for the VMware servers. Hypervisors are part of the technology we get when we use VMs. Hypervisors allow us to host several different machines on a single hardware, host or guest, and make cloning replication easy. It puts down a layer that separates the different software environments and the actual host hardware to ensure interoperability issues never happen between the VMs.

The physical servers cost $8,000,000 and $6,000,000 per year adding up to a $14,000,000 total cost avoidance benefit in a 3-year period. The 80 VMs will cost $1,280,000, and $720,000 over three years for maintenance, costing $2,000,000. The 200 not put on a VM will cost us $2,800,000 for allocation, having total costs equal $4,800,000. The total net benefit of virtual server allocation will be $9,200,000.

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