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MIS2501 - Enterprise IT Architecture

Flash Research Paper #2

Virtualization and Cloud Computing

Our company can gain a net benefit of \$9.2 million over 3 years by replacing our physical servers with virtualization. Since our company is at the beginning of a hardware refresh cycle, we will have to replace all 1,000 of our servers in the next year and utilizing visualization to consolidate servers is the most cost effective option because it will reduce the amount of physical servers in our data center, therefore reducing maintenance costs.

By implementing virtualization, our company will be able to consolidate ten physical servers onto a single virtual machine server. Virtualization allows for physical servers to be separated into virtual servers by running multiple operating systems on a single computer. By using virtualization, we will be able to consolidate our current 1,000 servers into only 280 servers. After consolidating our current servers, we will only need 80 virtual machines and 200 physical machines. Decreasing the number of physical servers in our data center will reduce maintenance costs.

Server consolidation through virtualization will cost \$4.8 million, but will lead to a \$14 million benefit over 3 years by greatly reducing maintenance cost for the physical servers. Over three years, our company will see a net benefit of \$9.2 million by reducing costs associated with maintaining our current servers.

Works Cited

Dawson, Philip., & Hill, Nathan. (2014) Hype Cycle for Virtualization, 2014. Gartner. N.p., n.d. Web. 6 Oct. 2016.

Strickland, Jonathan. "HowStuffWorks "Why Use Server Virtualization"" HowStuffWorks. N.p., n.d. Web. 6 Oct. 2016.

“Virtualization Basics.” VMware Virtual Machine & Virtualization Benefits. Web. 6 Oct. 2016.

Benefits:	Year 1	Year 2	Year 3	Total
Eliminating Physical Servers	\$8,000,000	0	0	\$8,000,000
Eliminating Maintenance Costs	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Total Benefits:	\$10,000,000	\$2,000,000	\$2,000,000	\$14,000,000
Costs:	Year 1	Year 2	Year 3	Total
VM Servers	\$1,280,000	0	0	\$1,280,000
VM Servers Maintenance	\$240,000	\$240,000	\$240,000	\$720,000
Physical Machines	\$1,600,000	0	0	\$1,600,000
Physical Machines Maintenance	\$400,000	\$400,000	\$400,000	\$1,200,000
Total Costs	\$3,520,000	\$640,000	\$640,000	\$4,800,000
Net Benefits:	Year 1	Year 2	Year 3	Total
	\$6,480,000	\$1,360,000	\$1,360,000	\$9,200,000