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Virtualization and Cloud Computing

We have an opportunity to save \$9.2million over a three-year period by utilizing virtualization to consolidate our current servers. By using virtual machine servers, 80% of our servers can run as virtual machines and we can consolidate 10 physical servers into one virtual server. That will decrease the cost to \$640,000 for hardware and software maintenance, technical support, power and cooling.

The advantage of virtualization is that it allows a physical server to run multiple operating systems and multiple applications at the same time. Also, server consolidation can allow us to get more out of our existing hardware through running multiple virtual machines on a single physical server. A traditional non-virtualized application server might reach only 5% to 10% utilization. However, a virtual server which hosts multiple Virtual machines can reach 50% to 80% utilization, which improves our workload efficiency and significantly reduces the cost of energy and cooling systems.

Our current physical servers cost us \$10million including purchasing, hardware & software maintenance, technical support, energy and cooling at the first year, and then costs \$2million for each the second and third year. By utilizing virtualization, we can invest \$3.52million the first year, and then we only spend \$640,000 for both the second and third year. As a result, we can save \$9.2million over a three-year period. Therefore, utilizing virtualization is a worthy investment.

	Year 1	Year 2	Year 3	3-Year Period Total
Current Physical Servers	\$10,000,000	\$2,000,000	\$2,000,000	\$14,000,000
Consolidated Physical Servers and Virtual Servers	\$3,520,000	\$640,000	\$640,000	\$4,800,000
Net Saving	\$6,480,000	\$1,360,000	\$1,360,000	\$9,200,000

Works Cited

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