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Flash Research Assignment #2 - Virtualization and Cloud Computing

Our company can save \$9.2 million over three years by utilizing virtualization to consolidate server workloads. Virtualization allows for physical servers to be consolidated onto virtual servers. By utilizing virtualization technology, we will save costs and operate more efficiently.

Virtualization uses software to simulate the existence of hardware, meaning that multiple operating systems and applications can be run on a single physical server. In our case, utilizing virtualization will allow us to consolidate 10 physical servers onto a single virtual machine server. 80% of our servers could run as virtual machines under VMware without any decrease in performance; this means that we could run 200 traditional servers and 80 virtualization servers instead of 1,000 traditional servers.

The cost to purchase and maintain 200 traditional servers and 80 virtualization servers is \$4.8 million over three years. By eliminating the need for a high volume of traditional servers, we will realize cost-saving benefits of \$14 million. Therefore, the net benefit of utilizing virtualization to consolidate server workloads is \$9.2 million over a three-year period.

Works Cited

Natarajan, Ramesh. "VMware Virtualization Fundamentals – VMware Server and VMware ESXi." *The Geek Stuff*. N.p., 10 Apr. 2013. Web. 27 Feb. 2017.

"Virtualization Technology & Virtual Machine Software." *VMware*. N.p., 2017. Web. 27 Feb. 2017.

"What is Virtualization? - Definition from Techopedia." *Techopedia*. N.p., 2017. Web. 27 Feb. 2017.

Benefits	Year 1	Year 2	Year 3	Total
Eliminating Server costs	\$ 8,000,000	\$ -	\$ -	\$ 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
Server costs	\$ 2,880,000	\$ -	\$ -	\$ 2,880,000
Maintenance costs	\$ 640,000	\$ 640,000	\$ 640,000	\$ 1,920,000
total costs	\$ 3,520,000	\$ 640,000	\$ 640,000	\$ 4,800,000
Net Benefits	Year 1	Year 2	Year 3	Total
Costs	\$ 3,520,000	\$ 640,000	\$ 640,000	\$ 4,800,000
Benefits	\$ 10,000,000	\$ 2,000,000	\$ 2,000,000	\$ 14,000,000
Total Benefits	\$ 6,480,000	\$ 1,360,000	\$ 1,360,000	\$ 9,200,000