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Virtualization and Cloud Computing

Implementing virtual machines for the data center will bring \$9.2 million to our company in three years. VMware's software allows users to create multiple virtual computer systems on a single server which can help us to get rid of 80% of the physical servers that we are using now. Fewer servers means lower capital and operating costs for the datacenter.

Virtualization reduces costs while increasing the efficiency and utilization of hardware simply by running multiple operating systems and applications on the same physical server. We used to need 1000 traditional servers to operate, but after implementing VMware, we will only need 200 traditional servers and 80 VM servers to do the same work. VMware shares basic resources between servers like memory, storage and desktop. Every server can function as an emergency backup. Moreover, all the servers also perform as independent computers which means people could install different programs or systems to different virtual machines without affecting each other.

If we start the hardware refresh cycle now, we could replace all 1000 servers by next year. Virtualization will save our company \$9.2 million to over a three-year period. Total costs of the implementation will be \$4.8 million but the benefit that we can generate from it is \$14 million. For these great reasons, virtualization is the best choice for our company.

Work Citation

Carr, David F. "Virtualization: Spending Money To Save Money." *Forbes*. Forbes Magazine, n.d. Web. 12 Feb. 2015.

"What Is VMware?" *What Is VMware?* Computer Hope, n.d. Web. 12 Feb. 2015.

"Virtualization." *Technology & Virtual Machine Software*. VMware, n.d. Web. 11 Feb. 2015.

Annual Cost

	Current	Virtualization	Difference
Physical Servers	1,000	200	
Cost per Physical Server	\$8,000	\$8,000	
Cost of Servers	\$8,000,000	\$1,600,000	
Number of VM Servers		80	
Cost of VM servers		\$1,280,000	
Maintenance(\$2000/server)	\$2,000,000	\$400,000	
Maintenance(\$3000/server)		\$240,000	
Total Cost	\$10,000,000	\$3,520,000	\$6,480,000

3 year cost/benefit of Virtualizaion

	Year 1	Year 2	Year 3	Total
Cost				
Physical Servers (200)	\$1,600,000	\$0	\$0	\$1,600,000
VM servers (80)	\$1,280,000	\$0	\$0	\$1,280,000
Physical Servers Maintenance	\$400,000	\$400,000	\$400,000	\$1,200,000
VM servers Maintenance	\$240,000	\$240,000	\$240,000	\$720,000
Total Cost	\$3,520,000	\$640,000	\$640,000	\$4,800,000
Benefit				
Eliminate traditional servers	\$8,000,000	\$0	\$0	\$8,000,000
Eliminate maintenance	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Total benefit	\$14,000,000	\$2,000,000	\$2,000,000	\$14,000,000
Net Benefit				\$9,200,000