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We should upgrade our current servers to virtual machines, which will cost less than replacing our current servers with similar models and require a lower annual maintenance cost. Virtual machines from VMware allow many virtual servers to be run off of one physical server. Over the next three years, the upgrade will save us over \$9,200,000. Virtual servers will allow our company to have less downtime and thus cut costs.

Virtual machines decrease energy costs by running less hardware. Since 10 virtual servers can be run on one physical server, the energy costs of running and cooling the servers will decrease. Eighty percent of our current physical servers can be run as virtual machines. Running only one application on each server is the best way to decrease the likelihood of a malfunctions , which causes the need for many servers. If we upgrade to virtual servers, each application can have its own virtual server, and many virtual servers will be on one physical server. This will cause us to have a smaller data center, meaning less cost for things like cooling.

Upgrading to virtual machines not only saves \$5,120,000 in upfront costs, it also saves \$1,360,000 a year in maintenance costs. This will save our company \$9,200,000 over the next three years. The upgrade to virtual machines are both necessary and cost effective because while each machine costs twice as much, we need one tenth of the number of machines. Fully utilizing each physical server with the use of virtual servers cuts down on waste.

Current	Year 1	Year 2	Year 3	Total
1000 Traditoinal Servers	\$8,000,000	\$0	\$0	\$8,000,000
Maintaince	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
	\$10,000,000	\$2,000,000	\$2,000,000	\$14,000,000
Upgrade	Year 1	Year 2	Year 3	Total
200 Physical Servers	\$1,600,000	\$0	\$0	\$1,600,000
80 Vmware Servers (10::1)	\$1,280,000	\$0	\$0	\$1,280,000
Physical Server Maintaince/year	\$400,000	\$400,000	\$400,000	\$1,200,000
VMware Server Maintaince/year	\$240,000	\$240,000	\$240,000	\$720,000
	\$3,520,000	\$640,000	\$640,000	\$4,800,000
3 year Net Benefit				\$9,200,000

Work's Cited

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