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To: CIO Mart Doyle

Subject: Server Virtualization

By consolidating our servers through server virtualization we can save $9.2 million dollars over the next three years. We have to replace our 1,000 servers as part of the hardware refresh cycle, and we can decrease our number of servers to 280 with server virtualization by allowing one physical server to run multiple virtual servers. Therefore, we will save money through decreased power, cooling, maintenance, and staffing costs.

Server virtualization involves creating a virtual version of a server by partitioning a physical server into multiple virtual servers. Each virtual server can run its own operating system and applications, essentially performing as an individual server. Typically each server is dedicated to one application; however, with server virtualization, several applications with little processing power can be consolidated onto one server. This consolidation decreases physical space, which also decreases costs to cool and power data centers. Therefore, by consolidating multiple servers onto one virtual server, each virtual server will operate at a fraction of the cost of the physical servers while performing at the same level as our current servers.

By investing $3.52 million in server virtualization, we will save $9.2 million over the next three years. With this new technology we are able to run 80% of our servers as virtual servers, and ten of our physical servers can be consolidated to one virtual server. Therefore, we will decrease the number of physical servers by 72%. This downsize will decrease our energy and maintenance costs as less power will be needed to cool and run the servers, and less staff will needed to maintain the servers. Server virtualization is a technology worth investing in because it will decrease yearly maintenance costs by 68%,, increase capacity, decrease downtime, and increase customer satisfaction.

Table 1

Current Strategy		VMWare Strategy	
		Number of Virtual Machine Servers	80
Servers	1000	Number of average servers	200
Server Purchase Cost	$ 8,000	VM Purchase Cost	$ 16,000
Maintenance Cost	$ 2,000	VM Maintenance Cost	$ 3,000
Total Cost per Server	$ 10,000	Total Cost Per Server	$ 19,000
Total Costs	**$ 10,000,000**	Total Costs for VM servers	$1,520,000
		Additional Cost for 200 average servers	$2,000,000
		Total Costs	**$3,520,000**

Table 2

	Current Strategy	VMWare Strategy
First Year Cost	$ 10,000,000	$ 3,520,000
2nd Year	$ 2,000,000	$ 640,000
3rd Year	$ 2,000,000	$ 640,000
Total Costs	$ 14,000,000	$ 4,800,000
3 Year Savings	**$ 9,200,000**	

References

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