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FRA#2

### Virtualization and Cloud Computing

By changing our physical servers to virtualized ones our company stands to save \$9.2 million over the course of the next three years. Virtualization technology allows us to put multiple servers on a single virtual machine. Due to our company being at the start of a hardware refresh cycle this would be the optimal time to implement this cost cutting technology.

Virtualization cuts down the cost of server purchasing and maintaining servers by placing multiple servers onto a single virtual machine. On average we will be able to place 10 “physical servers” onto one virtual machine. Virtual machines work by allowing the servers to have multiple operating systems running. We will consolidate approximately 80% of our servers onto these virtual machines. The other 20 % will remain physical servers and will leave us with 200 physical servers that can be utilized. Also, on a virtual machine network, we would be able to replace faulty servers and install new ones with a few clicks by copying a “gold standard” server.

As stated earlier, the net benefit from switching to virtual machines from physical servers will be \$9.2 million over a three year period. The cost of continuing with physical servers will be approximately \$14 million while it would be \$4.8 million with virtual machines over the same three year period. Overall, the savings created by virtual machines and the increased functionality make them the better choice for our upcoming hardware refresh cycle.

## Works Cited

Angeles, Sara. "Virtualization vs. Cloud Computing: What's the Difference?" *BusinessNewsDaily.com*.

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"Extend Your Datacenter with a Microsoft Hybrid Cloud." *Virtualization of the Datacenter*. Microsoft,

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<b>Cost Comparison</b>	Year 1	Year 2	Year 3	Total	
Physical Servers	\$ 10,000,000.00	\$ 2,000,000.00	\$ 2,000,000.00	\$ 14,000,000.00	
Virtualized Servers	\$ 3,520,000.00	\$ 640,000.00	\$ 640,000.00	\$ 4,800,000.00	
				\$ 9,200,000.00	<b>Savings</b>
<b>VM Ware Benefits</b>	Year 1	Year 2	Year 3	Total	
Eliminate Physical Servers	\$ 8,000,000.00	\$ -	\$ -	\$ 8,000,000.00	
Eliminate PS Maintenance	\$ 2,000,000.00	\$ 2,000,000.00	\$ 2,000,000.00	\$ 6,000,000.00	
				\$ 14,000,000.00	<b>Total Benefits</b>
<b>VM Ware Costs</b>	Year 1	Year 2	Year 3	Total	
VM Servers	\$ 1,280,000.00	\$ -	\$ -	\$ 1,280,000.00	
Physical Servers	\$ 1,600,000.00	\$ -	\$ -	\$ 1,600,000.00	
Maintenance VM	\$ 240,000.00	\$ 240,000.00	\$ 240,000.00	\$ 720,000.00	
Maintenance Physical	\$ 400,000.00	\$ 400,000.00	\$ 400,000.00	\$ 1,200,000.00	
				\$ 4,800,000.00	<b>Total Costs</b>
				\$ 9,200,000.00	<b>Nets Benefits</b>