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MIS 2501 – Doyle
Flash Paper 3

Our company has an opportunity to save $10,800,000 over the span of 3 years by utilizing virtualization and server consolidation under VMWare. Virtualization is the use of software to allow a piece of hardware to run multiple operating systems. The use of virtualization will allow our organization to consolidate the number of servers within our data center and provide long-term savings in server and maintenance costs.

The basic of virtualization is to run or create a virtual object or program within a computing space. A computer is able to create multiple virtual objects and programs within a physical hardware and they all would be running at the same time acting as independent physical machines (Strickland).

Server consolidation is a form of virtualization that uses one physical server to host multiple virtual servers. Server consolidation has great benefits over a traditional data center that only uses physical servers. By using virtualization to run multiple servers, the amount of physical servers we need would decrease; we can use one physical server to run as many as 10 virtual servers (VMware). Since we would have fewer physical servers the maintenances cost, power consumption and amount of cooling needed would all be reduced. The last significant benefit is utilization rate. A traditional physical server has a utilization rate of 5 to 10 percent only, but by with virtualization and server consolidation, utilization rate can increase to up to 80 percent (SMB). By investing in virtualization and server consolidation, the benefits we would receive would be greater than the cost of the investment.

By investing in virtualization and server consolidation we would be able to save $10,800,000 over the course of the next 3 years.

If we decide not to implement virtualization and server consolidation in our hardware refresh, we would be spending $8,000,000 for 1000 servers with each server costing us $8000 and $2,000,000 on maintenances services per year for the next 3 years, all this totals to $14,000,000 over the next three years. However, by investing in virtualization and server consolidation, our cost would drastically be reduced. Since 80 percent of our servers can be run on virtual machines, we would only need 200 traditional servers, which would cost us $400,000 only. The remaining 800 can be run on virtual machines at a ratio of 10:1. This would only cost us $1,280,000 for 80 virtual machine server, $1,920,000 on maintenances services for all our servers for the next 3 years. The total for this is $3,200,000, which would be a saving of $10,800,000 over traditional physical servers.

1000 servers		server- $8000		maintain-$2000 per year per server
80% virtual				
10 physical onto 1 virtual		virtual server- $16000		maintain-$3000 per year per server
NON-Virtualization		Virtualization		
1000 physical server		200 physical Servers		
$8000 each	8000000	$2000 each	400000	
$2000 maintain PS/PY*3 year	6000000	800 physical server		
total cost	14000000	10 physcial= 1 virtual		
		80 virtual servers		
		$16000 each	1280000	
		$3000 maintain PS/PY*3 year	720000	
		$2000 maintain PS/PY*3 year	1200000	
		total cost	3200000	
NON-Virtualization Cost	14000000			
Virtualization Cost	3200000			
Total Saving	10800000			

Reference

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