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Flash Research Assignment #3- Virtualization and Cloud Computing

October 1, 2013

Switching to server virtualization is beneficial to our company. Server virtualization runs multiple operating systems and applications on a single computer which enhances our disaster recovery. After three years, Virtualization will save us over $9 million.

Over the past couple of years this technology has gone from experimental to extremely valuable. Disaster recovery with server virtualization makes protecting data unproblematic. When using all physical servers we need to keep an exact replica of our hardware in case of a disaster. Virtualization does not need the same server model or hardware retailer to come back from a catastrophe. The most important aspect of disaster recovery with server virtualization is it can make a more affordable replication site by consolidating our servers with virtualization, which will take up less space in an offsite data center. Additionally our company will have the ability to test out our backup plan instantly, not having to worry if it will work in a real life situation. Another key capability of server virtualization is the ability to let programmers test out new operating systems and applications on a virtual independent system without spending money on individual secluded hardware.

In the next three years we can either spend $14 million on physical servers or $4.8 million in transitioning to server virtualization. It would cost $8 million on 1000 new servers plus $2 million annually in maintenance. When we could just spend $2.88 million on making 80% of our servers virtual machines and $640,000 dollars a year in maintenance. Only having to purchase and maintain 200 physical machines would give us a net benefit of $9.2 million over a three year span.

	Purchase Cost	Year 1	Year 2	Year 3	Total
Physical Servers	$8,000,000 (1000 servers*$8000 per server)	$2,000,000 ($2000 maintenance per server)	$2,000,000 ($2000 maintenance per server)	$2,000,000 ($2000 maintenance per server)	<u>$14,000,000</u>
Virtualization Virtual servers	$1,280,000 (80 virtual servers*$16,000 per server)	$240,000 ($3000 maintenance per virtual server)	$240,000 ($3000 maintenance per virtual server)	$240,000 ($3000 maintenance per virtual server)	$2,000,000
Physical servers	$1,600,000 (200 servers*$8000 per server)	$400,000 ($2000 maintenance per server)	$400,000 ($2000 maintenance per server)	$400,000 ($2000 maintenance per server)	$2,800,000
Total Virtualization	$2,880,000	$640,000	$640,000	$640,000	<u>$4,800,000</u>
Net Benefit of Virtualization					<u>$9,200,000</u>

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