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MIS 2501: Enterprise IT Architecture

Virtualization and Cloud Computing

By utilizing virtualization to consolidate server workloads, our company can save \$9,200,000 over the next three years. By upgrading, companies can reduce the time it takes to provision new servers. Although it will take \$4,800,000, the company can minimize server costs with server virtualization and consolidation.

The key capability with server virtualization is that companies are able to increase utilization from 10-15% for physical servers to as much as 80% for virtual machines. Physical servers follow a “one workload, one box” approach by running at a low utilization rate whereas virtual machines run independently on the same physical server at the same time. Server virtualization will help improve business productivity by saving time and power costs. Server consolidation allows the company to decrease downtime and also have a built-in disaster recovery.

Our company will save \$9.2 million in the first three years of implementing server virtualization. The cost of implementation is \$4.8 million for virtual machines instead of the initial \$14 million for our current system. By changing from our 1,000 physical servers to 200 physical and 80 virtualized servers, our company will have a three-year net benefit of \$9.2 million.

	Year 1	Year 2	Year 3	Total
Current server cost (per server)	8,000,000	0	0	8,000,000
Current maintenance cost (per server)	2,000,000	2,000,000	2,000,000	6,000,000
Total	10,000,000	2,000,000	2,000,000	14,000,000

	Year 1	Year 2	Year 3	Total
Getting 200 non-virtualized servers	1,600,000	0	0	1,600,000
Getting 80 virtualized servers	1,280,000	0	0	1,280,000
Maintenance	640,000	640,000	640,000	1,920,000
Total Cost	3,520,000	640,000	640,000	4,800,000

Net Benefit 9,200,000

"Reduce IT Costs and Increase Control with Server Virtualization." Server Virtualization & Consolidation. N.p., n.d. Web. 07 Oct. 2016.
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