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Virtualization and Cloud Computing

The net benefit of \$9.2 million for implementing virtual machines will outweigh the cost of replacing one thousand physical servers this upcoming year. Virtualization is software that separates physical infrastructures to create various dedicated resources and is the core technology that powers cloud computing. Gains of this server consolidation include running multiple application systems/operating systems on the same hardware.

Benefits of server consolidation include maximizing resources, running multiple application systems/operating systems on the same hardware while permitting access to multiple servers from one platform. The reduction in server space, faster server provisioning, increased uptime, and most importantly access to multiple servers from one platform, will take place with sever consolidation and allow mobile access to all information on one platform.

The benefits of changing the servers to virtual machines are that all the costs of using a virtualization system are included in the IT operations. The implementation cost of consolidating 80% of the physical servers to virtual machines will be at a price of \$1.28 million to purchase, and a yearly maintenance cost of \$240,000. Over a three year period the virtual servers will cost a total of \$4.8 million to purchase and maintain, and will produce a better return on energy, server space, uptime, access and savings, with a 3 year net benefit of 9.2 million.

	Year 1	Year 2	Year 3	Total
Costs				
80 Virtual Servers (80%) 10:1 consolidation	\$1.28 Million (purchase)	0	0	\$1.28 million
200 Physical Servers or 20%	\$1.6 million	0	0	\$1.6 million
Maintenance 200 Traditional Servers	\$400,000	\$400,000	\$400,000	\$1,200,000
Maintenance 80 Virtual Servers	\$240,000	\$240,000	\$240,000	\$720,000
Total Cost				\$4,800,000
Benefits				
Eliminate 1000 new Traditional servers	\$8 million	0	0	\$8 million
Eliminate maintenance on new servers	\$2million	\$2million	\$2million	\$6 million
Total Benefits				\$14 million

Net Benefits				\$9.2 million
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Work Cited

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