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Flash Research Assignment

Virtualization and Cloud Computing

Currently, we spend \$14,000,000 over a 3-year period to operate our data center.

Virtualization will not only reduce the current costs, but it allows for greater consolidation within our growing company. We can reduce our physical servers from 1,000 servers down to 280 servers. Switching to VMware will give us a 3-year net benefit of \$9,200,000.

Virtualization utilizes partitioning, which allows for multiple operating systems to be run on one physical machine. The 10:1 consolidation of physical machines frees up valuable space for our company, while also multiplying the capacity of a single physical machine. The current servers only operate between 5 – 15% of their current capacity. Switching to a virtual machine will increase the utilization to as much as 80% per machine.

The upgrade will produce a \$14,000,000 cost avoidance over three years for purchasing and maintenance. Upgrading to virtual machines will cost a one-time amount of \$2,880,000 to buy, and approximately \$1,920,000 over three-years for maintenance. The three-year net benefit of switching to virtualization is \$9,200,000.

Costs	Year 1	Year 2	Year 3	Total
200 Traditional	\$1,600,000	\$0	\$0	\$1,600,000
80 New	\$1,280,000	\$0	\$0	\$1,280,000
Maintenance 200	\$400,000	\$400,000	\$400,000	\$1,200,000
Maintenance 80	\$240,000	\$240,000	\$240,000	\$720,000
Total Costs				\$4,800,000

Cost Avoidance Benefits	Year 1	Year 2	Year 3	Total
Buying	\$8,000,000	\$0	\$0	\$8,000,000
Maintenance	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Total Avoidance Benefit				\$14,000,000

Net Benefit				\$9,200,000
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References

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