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Virtualization and Cloud Computing

Our company will see a net benefit of \$9.2 million by consolidating 80% of our servers into virtual machines using VMware. VMware is able to support the server workloads by combining ten physical servers into a single virtual machine server. By switching to VMware, our company will significantly reduce the overall cost by \$14 million.

VMware is a software solution that enables multiple operating systems to run on just a single physical machine. On average, a physical workstation only uses about 5% to 15% of the operating system capabilities. By taking advantage of virtualization we are able to capitalize on the unused processing power. We also reduce the cost of electricity that is needed to power multiple machines. Overall, we are able to increase IT productivity, optimize file sharing, minimize downtime, eliminate interruption, and continue normal business operations that could be interrupted by system failure.

One key factor of virtualization is that it is cheaper to run multiple virtual machines on a single physical machine because they need less hardware and maintenance. By converting 80% of our servers to virtual machines, our company will see a total benefit of \$14 million. Over three years, the cost of implementation would be \$4.8 million. The return of investment will yield a net benefit of \$9.2 million in three years. Therefore, by consolidating 80% of our physical servers to virtual machines using VMware will make the most business sense.

Figures

Figure 1:

Current Costs	Year 1	Year 2	Year 3	Total
1000 Physical Servers (Initial Cost)	\$8,000,000	\$0	\$0	\$8,000,000
Maintenance 1000 Physical Servers	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Total Cost				\$14,000,000

Figure 2:

Investment Costs	Year 1	Year 2	Year 3	Total
200 Physical Servers (Initial Cost)	\$1,600,000	\$0	\$0	\$1,600,000
Maintenance 200 Physical Servers	\$400,000	\$400,000	\$400,000	\$1,200,000
80 VMware Servers (Initial Cost)	\$1,280,000	\$0	\$0	\$1,280,000
Maintenance 80 VMware Servers	\$240,000	\$240,000	\$240,000	\$720,000
Total Cost				\$4,800,000
Total Benefit				\$14,000,000
Total Net Benefit				\$9,200,000

Works Cited

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