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Flash Research Paper 2
Virtualization and Cloud Computing

Our company can save \$9,200,000 by consolidating 80% of our physical servers to virtual machines with VMware virtualization. Virtualization is the creation of a virtual environment by running multiple operating systems on one machine and can help our organization consolidate physical servers. Server consolidation can cut costs, increase space in our datacenter, and accelerate accessibility and transfer of the data. For the upcoming hardware refresh cycle, we should eliminate unnecessary equipment to make optimal use of our resources and maximize return on investment.

Virtual machines can hold 10 traditional physical servers in one. Currently, we have 1,000 physical servers, but if we consolidate 80% of our servers through virtualization, we would only need 280 machines total. As a result of consolidation, maintenance costs for hardware, software, power, and cooling will decrease. In addition, VMware allows seamless exchange of data between servers for improved business continuity and disaster recovery.

The 10:1 consolidation from physical servers to virtual machines reaps investment benefits due to cost reduction strategy in maintenance and hardware costs. The total cost to purchase and maintain 200 physical servers and 80 virtual servers over three years is \$4,800,000. The three-year benefit of eliminating 1000 physical machines and the associated maintenance costs is \$14,000,000. After the consolidation of 1,000 servers to 280, we will realize a three-year net benefit of \$9,200,000, previously being wasted on server sprawl and energy inefficiencies. The investment serves to improve the reliability of our servers and centralize the management of our datacenter while saving our organization millions of dollars.

Works Cited

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Costs	Year 1	Year 2	Year 3	Total
200 Physical Servers	\$1,600,000	\$0	\$0	\$1,600,000
80 Virtual Machines	\$1,280,000	\$0	\$0	\$1,280,000
200 Physical Maintenance	\$400,000	\$400,000	\$400,000	\$1,200,000
80 Virtual Machines	\$240,000	\$240,000	\$240,000	\$720,000
Total Costs				\$4,800,000
Benefits				
Eliminate 1000 Physical Servers	\$8,000,000	\$0	\$0	\$8,000,000
Eliminate 1000 Physical Maintenance	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Total Benefits				\$14,000,000
			Net Benefits	\$9,200,000