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Flash Research #2

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Virtualization and Cloud Computing

Our company can reduce 3-year server costs by over \$9M by investing in virtualization with VMware. Server virtualization enables up to 10 machines to be consolidated into a single server running in a virtual environment. Server consolidation will help our growing business by reducing our number of physical servers, cutting overall investment and yearly maintenance costs by 65%.

A key capability of virtualization is server consolidation. We can consolidate our 1,000 physical servers to just 280, saving space, saving space and costs. Another key capability is being able to migrate workloads from one server to another at any time. This redundancy acts as a safety measure in case a server fails, since another server can run the application. In addition, when maintenance is required, we can simply migrate one server's workload to another server, minimizing service interruption and downtime.

The total cost of virtual servers is \$4.8M. This consists of a purchase cost, including system software, and a yearly maintenance cost for hardware and software maintenance, technical support, and power and cooling. Virtualization eliminates our costs for 1,000 physical servers, giving us a total benefit of \$14M over 3 years. Investing in virtual servers will not only reduce downtime and help our growing company operate more efficiently, but will benefit our bottom line with a total 3-year net benefit from total cost savings of \$9.2M.

I. References

Bigelow, Stephen J. "How Server Consolidation Can Benefit Your Data Center."

SearchServerVirtualization, Tech Target, Oct. 2009.

Strickland, Jonathan. "How Server Virtualization Works." *HowStuffWorks*, HowStuffWorks,

2 June 2008.

"What Is Server Virtualization?" *Small Business IT Tips and Resources - Cisco*, Cisco, 2 Feb.

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II. Cost Structure

	Purchase Cost	Maintenance Cost
Dedicated Servers	\$8,000	\$2,000
Virtual Servers	\$16,000	\$3,000

III. 3-year Investment Outlook Calculations

	Physical Servers	Year 1	Year 2	Year 3	Total
Purchase Traditional Servers (20%)	200	\$1,600,000			\$1,600,000
Purchase Virtual Servers (80%)	80	\$1,280,000			\$1,280,000
Maintain Traditional	200	\$400,000	\$400,000	\$400,000	\$1,200,000
Maintain Virtual	80	\$240,000	\$240,000	\$240,000	\$720,000
Total Costs					\$4,800,000
Cost Avoidance Benefits					
Eliminate 1000 traditional servers	1000	\$8,000,000			\$8,000,000
Eliminate maintenance on 1000 servers	1000	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Total Benefit					\$14,000,000
Net Benefits					\$9,200,000