

## **Flash Research Assignment #2: Virtualization and Cloud Computing**

By consolidating our servers through virtualization, we will gain a net benefit of \$9,200,000 over three years. Virtualization allows many physical servers to be consolidated into fewer virtual servers. Server consolidation will decrease our yearly server costs and increase our servers' performance.

We currently have 1,000 physical servers in our datacenter. Through virtual consolidation, we can reduce the number of servers we have from 1,000 physical servers to only 200 physical servers and 80 virtual servers. Our physical servers are not being used to full capacity right now which means they are underutilized resources. With server consolidation, our servers will be utilized more and require less resources. As more servers can fit on a single virtual machine server, it will decrease our server costs dramatically.

This virtualization to consolidate our servers would cost \$4,800,000 over three years comprised of an initial investment of \$2,880,000 and a yearly maintenance fee of \$1,920,000. Once complete, we will gain a cost avoidance benefit of \$14,000,000 comprised of \$8,000,000 from eliminating the traditional servers and \$2,000,000 from eliminating the maintenance fees for them. Over three years, this virtualization and consolidation will result in a net benefit of \$9,200,000.

Virtualization:

<b>Costs:</b>	<b>Year 1:</b>	<b>Year 2:</b>	<b>Year 3:</b>	<b>Totals:</b>
200 Physical Servers	\$1,600,000			\$1,600,000
80 Virtual Servers	\$1,280,000			\$1,280,000
Physical Server Maintenance	\$400,000	\$400,000	\$400,000	\$1,200,000
Virtual Server Maintenance	\$240,000	\$240,000	\$240,000	\$720,000
Total Costs				\$4,800,000
<b>Benefits:</b>	<b>Year 1:</b>	<b>Year 2:</b>	<b>Year 3:</b>	<b>Totals:</b>
Eliminating 1000 Physical Servers Investments	\$8,000,000			\$8,000,000
Eliminating 1000 Physical Servers Maintenance	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Total Benefits:				\$14,000,000
<b>Net Benefit:</b>				<b>\$9,200,000</b>

## Works Cited

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