

Nick Rivera
Enterprise IT Architecture
Mart Doyle
Flash Research Paper #2

Virtualization and Cloud Computing

When our company switches to VMware virtual servers from traditional physical servers, we will save \$9.2 million over three years. This switch will save our company in hardware and maintenance costs, by consolidating physical servers onto virtual server machines. Since we are in the midst of our three year hardware refresh cycle, converting 80% of our physical servers to VMware virtual servers will save our company money as well as space.

VMware virtual machine servers offer a great arrangement of server utilization. Through this virtualization, our company will be able to consolidate 10 physical servers on to 1 virtual machine server. Our processes will still operate with the same computing capacity, yet use 1/10th of the space, which is great for a small and rapidly growing company. With this sever consolidation, we will be able to cut our total server count from 1,000 to 280, because VMware virtual servers allow multiple virtual servers to run on one physical platform. Virtualizing servers to consolidate and decrease total server count will be great for our company by saving money on implementation and maintenance in the long run.

The initial cost of implementing 80 VMware virtual server machines, as well as 200 physical server is \$4.8 million. Over the span of three years, our company will have a net benefit of \$9.2 million, by saving \$14 million in physical server and maintenance costs. Investing in VMware virtual server machines will save our company because we will have less physical servers, which results in less maintenance expenses.

Dawson, Phillip., & Hill, Nathan. "Hype Cycle for Virtualization, 2015." Gartner, 8 July, 2015. Web. 23 Sept. 2015.

<<http://www.gartner.com/document/3089927?ref=TypeAheadSearch&qid=730acd953ec28f380ff38483d5b6a2b4>>.

"Server Consolidation." *VMware*. 2015. Web. 23 Sept. 2015. <<http://www.vmware.com/consolidation/consolidate>

"Virtualization." *VMware*. 2015. Web 23 Sept. 2015. < <http://www.vmware.com/virtualization/how-it-works.html>>.

3 Year Benefit Analysis

<u>Benefits:</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Totals:</u>
Remove physical servers	\$8,000,000	\$0	\$0	\$8,000,000
Eliminate maintenance costs	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
<u>Total Benefits:</u>	<u>\$10,000,000</u>	<u>\$2,000,000</u>	<u>\$2,000,000</u>	<u>\$14,000,000</u>

3 Year Cost Analysis				
<u>Costs:</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Totals:</u>
VMware servers	\$1,280,000	\$0	\$0	\$1,280,000
Maintenance	\$240,000	\$240,000	\$240,000	\$720,000
Physical Servers	\$1,600,000	\$0	\$0	\$1,600,000
Maintenance	\$400,000	\$400,000	\$400,000	\$1,200,000
<u>Total Costs:</u>	<u>\$3,520,000</u>	<u>\$640,000</u>	<u>\$640,000</u>	<u>\$4,800,000</u>

<u>Net Benefits:</u>	<u>\$6,480,000</u>	<u>\$1,360,000</u>	<u>\$1,360,000</u>	<u>\$9,200,000</u>
-----------------------------	---------------------------	---------------------------	---------------------------	---------------------------