

Cole Derhammer
Professor Doyle
MIS 2501 – Enterprise IT Architecture
October 4, 2016

Flash Research Assignment: Virtualization and Cloud Computing

Our company has the chance to save \$9.2 million over a span of three years by utilizing virtual machine technology such as VMware. We currently operate using 1000 servers; however, if we consolidate servers, we could decrease to 280 servers. A virtual machine is a separate and independent software instance that includes a full copy of an operating system and application software.

A key capability of virtualization is server consolidation, meaning it would be possible to run multiple operating systems and multiple applications on the same server at the same time. Through the use of VMware, we can utilize server consolidation and improve our businesses efficiency by allowing ten physical servers to run on one virtual machine. The benefits of this implementation for our company would be reducing our costs in hardware/software maintenance, power/cooling, and technical support.

As shown in the figure below, this implementation will save us \$14 million over three years by eliminating traditional systems, and will only cost \$4.8 million in those three years for installation and maintenance. Ultimately, our three-year net benefit would total \$9.2 million.

Works Cited

Angeles, Sara. "Virtualization vs. Cloud Computing: What's the Difference?" *Business News Daily*. 20 Jan. 2014. Web. 10 Oct. 2016.

Bigelow, Stephen J. "Understanding the Benefits of a Virtual Machine." *SearchServerVirtualization*. Tech Target, Oct. 2009. Web. 10 Oct. 2016.

Wallen, Jack. "10 Benefits of Virtualization in the Data Center - TechRepublic." *TechRepublic*. 10 Apr. 2013. Web. 10 Oct. 2016.

Costs	Year 1	Year 2	Year 3	Total
200 Traditional Servers	\$1,600,000.00	-	-	\$1,600,000.00
80 Virtual Machines	\$1,280,000.00	-	-	\$1,280,000.00
Maintenance Traditional Systems	\$400,000.00	\$400,000.00	\$400,000.00	\$1,200,000.00
Maintenance Virtual Machines	\$240,000.00	\$240,000.00	\$240,000.00	\$720,000.00
Total Costs	\$3,520,000.00	\$640,000.00	\$640,000.00	\$4,800,000.00

Benefits	Year 1	Year 2	Year 3	Total
Eliminate 1000 Traditional Systems	\$8,000,000.00	-	-	\$8,000,000.00
Eliminate Maintenance	\$2,000,000.00	\$2,000,000.00	\$2,000,000.00	\$6,000,000.00
Total Benefits	\$10,000,000.00	\$2,000,000.00	\$2,000,000.00	\$14,000,000.00
Net Benefits	6,480,000	\$1,360,000.00	\$1,360,000.00	\$9,200,000.00