Chaimaa Elmalhi

**Virtualization and Cloud Computing**

 By switching to virtual machine servers, we can create a net benefit of $9,200,000 over a three-year span. VMware servers are less expensive, easier to manage, and more scalable. By consolidating 10 physical servers onto a single virtual, we reduce the yearly costs of maintenance down by $1,360,000.

Server consolidation increases the effective utilization of server hardware by allowing one physical server to host multiple virtual machine instances. With more workloads running on less hardware, power and cooling demands are also lowered. We can consolidate 10 physical servers into one single virtual machine server by updating our organization’s 1000 physical servers to 200 physical servers and 80 virtual machines servers. This translates to lower operating costs for the business. Server consolidation with virtualization also allows the flexibility to seamlessly migrate workloads between physical servers.

The total cost of 200 physical servers and 80 VMware virtual servers and their maintenance is $4.8M over three years. The benefit of eliminating the 1000 physical servers and their annual maintenance is $14M over the period of three years. Server consolidation will result in a net benefit of $9.2M in a three-year span.

**Work Cited**

D. (2012, June 01). Server Consolidation Benefits - With Real World Examples. Retrieved October 11, 2017, from <http://www.sysprobs.com/server-consolidation-benefits-with-real-world-examples>

How server consolidation can benefit your data center. (n.d.). Retrieved October 11, 2017, from http://searchservervirtualization.techtarget.com/tip/How-server-consolidation-can-benefit-your-data-center

Server Consolidation: Benefits and Challenges. (2002, March 28). Retrieved October 11, 2017, from <https://www.gartner.com/doc/354152/server-consolidation-benefits-challenges>

Davis06/20/2011, D. (n.d.). Top 10 Benefits of Server Virtualization. Retrieved October 11, 2017, from https://virtualizationreview.com/articles/2011/06/20/top-10-benefits-of-server-virtualization.aspx