Flash Research Paper 2- Virtualization

Our company can save $9,200,000 over three years by implementing VMware virtualization in our data center. VMware allows us to consolidate our 1,000 physical servers into just 280 by running multiple server operating systems on one physical machine. Instead of buying and maintaining 1,000 lower end servers, VMware will allow us to consolidate 800 servers into just 80 higher end servers, significantly reducing our costs and improving utilization of our datacenter hardware.

VMware will allow us to run the same 1000 servers we currently have on only 280 total physical machines. Combining multiple servers into a single physical server dramatically increases server utilization rates and provides a more efficient use of the physical technology we purchase. According to EnergyStar.gov, the “one workload, one box approach” we currently use in our data center averages less than a 10% utilization rate, meaning that we only utilize 10% of each server’s processing power. Running multiple servers on each machine will dramatically improve the rate at which we use the technology we purchase and avoids wasting money on separate physical resources with an excess of processing power.

VMware will save our company $9,200,000 over three years as we will need to purchase and maintain only 280 physical servers rather than 1,000. We will spend $2,880,000 on new server hardware and installation and $640,000 in maintenance costs, totaling $4,800,000 over three years. As we are beginning our hardware refresh cycle, all of our servers will be replaced in the next year. Compared to the $14,000,000 we would spend replacing the current hardware, this technology provides us with the $9,200,000 savings.

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| --- | --- | --- | --- | --- |
| **With VMware** | |  |  |  |
|  | Year 1 | Year 2 | Year 3 | 3 Year Total |
| Hardware | $2,880,000 | 0 | 0 | $2,880,000 |
| Maintenance | $640,000 | $640,000 | $640,000 | $1,920,000 |
|  |  |  | Total Cost | $4,800,000 |
| **Without VMware** | |  |  |  |
|  | Year 1 | Year 2 | Year 3 | 3 Year Total |
| Hardware | $8,000,000 | 0 | 0 | $8,000,000 |
| Maintenance | $2,000,000 | $2,000,000 | $2,000,000 | $6,000,000 |
|  |  |  | Total Cost | $14,000,000 |
|  |  |  |  |  |
| $14,000,000 |  |  |  |  |
| -$4,800,000 |  |  |  |  |
| $9,200,000 |  |  |  |  |
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Works Cited

Marshall, David. "Top 10 Benefits of Server Virtualization." *InfoWorld*. 2 Nov. 2011. Web. 8 Feb. 2015. <http://www.infoworld.com/article/2621446/server-virtualization/top-10-benefits-of-server-virtualization.html>.

"Server Virtualization." *ENERGY STAR*. Web. 8 Feb. 2015. <https://www.energystar.gov/index.cfm?c=power\_mgt.datacenter\_efficiency\_virtualization>.

"Virtualization Basics." *Advantages of Virtualization: VMware*. Web. 8 Feb. 2015. <http://www.vmware.com/virtualization/virtualization-basics/virtualization-benefits>.