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MIS 3406- Enterprise IT Architecture

Over 3 years there will be $9,200,000 in net benefits if we utilize virtualization to our servers. Virtualization is the process of creating a visual representation of something physical. With virtualization we can cut down our costs by consolidating our physical server workloads into virtual machines. By utilizing virtualization, we can consolidate 10 physical servers into a single virtual machine server, which will cut down our server costs.

The key capability of virtualization and cloud computing is the ability to consolidate our server workloads. For our company, server consolidation with the use of VMware, for our company would let us make ten of the physical servers we have now into one virtual machine. For example, now we have 1,000 servers ,but with the use of virtualization we can turn 800 of the servers into virtual machines. With the use of virtualization and cloud computing we will be able to compress our physical servers into higher-end virtual machine servers while cutting down our single server costs.

Implementing server consolidation with VMware will costs us $4,800,000 over a three year period including the initial cost, hardware maintenance, software maintenance, technical support, power and cooling for our virtual machines. However, we would yield a benefit of $14,000,000 over a 3 year period thus having a net benefit of $9,200,000 over a three year period.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Original Servers | Year 1 | Year 2 | Year 3 | Total (Per Server) | Total for all servers (1000) |
|  |  |  |  |  |  |
| Initial Cost | $8,000 | 0 | 0 | $8,000 | $8,000,000 |
| Maintenance | $2,000 | $2,000 | $2,000 | $6,000 | $6,000,000 |
| Total | $10,000 | $2,000 | $2,000 | $14,000 | $14,000,000 |
|  |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 80 VMware200 Original Servers | Year 1 | Year 2 | Year 3 | Total for all servers (1000) |
| Initial Cost of VMware | $1,280,000 | 0 | 0 | $1,280,000 |
| Initial Cost of Original Servers | $1,600,000 | 0 | 0 | $1,600,000 |
| Maintenance cost of VMware | $240,000 | $240,000 | $240,000 | $720,000 |
| Maintenance cost of Original Servers | $400,000 | $400,000 | $400,000 | $1,200,000 |
| Total | $3,520,000 | $640,000 | $640,000 | $4,800,000 |

References:

“VMware – Official Site.” *VMWare*, 16 Feb. 2018, www.vmware.com/.

 “Server Consolidation: Benefits and Challenges.” *Technology Research*, Gartner, Inc., 28 Mar.

2002, www.gartner.com/doc/354152/server-consolidation-benefits-challenges.

“How server consolidation can benefit your data center.” *SearchServerVirtualization*,

searchservervirtualization.techtarget.com/tip/How-server-consolidation-can-benefit-your-data-center.

“Virtualization Technology & Virtual Machine Software: What Is Virtualization?” *VMWare*, 14

Sept. 2018, www.vmware.com/solutions/virtualization.html.