David Dupell

Professor Mart Doyle

MIS 2501 – Flash Research Assignment #3

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Virtualization and Cloud Computing

 Our company has an opportunity to save approximately $11,000,000 over the span of five years by utilizing virtualization under VMWare. Virtualization will allow our company to shift our focus from maintenance to efficiency and innovation. Also, it will allow our organization to reduce capital and operation expenses. Virtualization is the solution to our decreased budget this year and will save our company millions of dollars in maintenance and server costs each year.

 Server consolidation and virtualization will decrease electrical consumption for server power and cooling, and decrease the amount of physical space required for servers. By having 80% of our servers virtually on physical servers, it will allow for less maintenance on physical servers. Also, virtualization will completely utilize server-computing power. This will allow our servers to replicate multiple production servers on one server with the capability to run several virtual operating systems. Virtualization will allow our organization to copy our virtual operating system to an external device and restore the original system if failure were to occur. Virtualization will remove the dependency on hardware and reduce unplanned application and system downtime.

 Virtualization through VMWare will allow our organization to reduce capital expenses through server consolidation and improve operating expenses through automation. Virtualization will minimize lost revenue due to planned and unplanned downtime, and outages and failures. Also, it will allow our company to decrease the number of servers in our data center by 79.2% and consolidate the number of our servers to only 8 virtual servers and 200 physical servers; ultimately providing a larger return on investment. Virtualizing our servers will cut power, cooling, and management costs of maintaining the organizations systems and applications.

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| --- |
| **Current Costs** |
| **Current Physical Server Costs** |
| # of Servers | Avg Cost per Server | Total Server Costs | Avg Maintenance Cost per Service | Total Maintenance Cost per Year | Total Server Cost |
| 1,000 | 8,000 | 8,000,000 | 2,000 | 2,000,000 | 10,000,000 |
|  |  |  |  | **Total Cost Year 1** | **10,000,000** |
|  |  | **Total Cost Year 2** | **2,000,000** |
|  |  |  |  |  |  |
| **VMWare Implementation Cost**  |
| **Virtual Server Costs** |
| # of Virtual Servers | Avg Cost per Server | Total Server Costs | Maintenance Cost per Server | Total Maintenance Cost per Server | Total Server Cost |
| 8 | 16,000 | 128,000 | 3,000 | 24,000 | 152,000 |
| **Physical Server Costs** |
| # of Servers | Avg Cost per Server | Server Costs | Maintenance Cost per Server | Total Maintenance Cost per Server | Total Server Cost |
| 200 | 8,000 | 1,600,000 | 2,000 | 400,000 | 2,000,000 |
|  |  |  |  | **Total Cost Year 1** | **2,152,000** |
|  |  |  |  | **Total Cost Year 2** | **424,000** |
|  |  |  |  |  |
|  |  |  |  |  |
| **VMWare Cost Savings** |  |  |
| **Cost Savings** |  |  |
| Year # | Current Cost | VMWare Costs |  |  |
| 1 | 10,000,000 | 2,152,000 |  |  |
| 2 | 2,000,000 | 424,000 |  |  |
| 3 | 2,000,000 | 424,000 |  |  |
| **Totals Costs** | **14,000,000** | **3,000,000** |  |  |
|  | **Total Savings** | **11,000,000** |  |  |

Works Cited

"VMware: Benefits of Virtualization." *VMware*. N.p., n.d. Web. 1 Oct 2012. <http://www.vmware.com/virtualization/>.

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