Eddy E. Lantigua

Flash Paper #2

Mart Doyle

Virtualization and Cloud Computing

Dear CIO,

The company can save $9.2 million just by consolidating 1000 physical servers to 280 virtual servers. Consolidation of 80% of our servers will allow us to save money by reducing electricity used. Virtualization combines servers by letting several operating systems and applications run on a single server as oppose to our current physical servers that allow us to run one application per server.

Virtualization allows us to increase productivity by allowing the servers to run multiple operating systems on one machine. VMware will allow us to combine our servers while maximizing use out of our servers. Getting data from a virtual server improves the use of resources, such as storage capacity. Having fewer servers’ cuts down organizational issues while decreasing cost from power in our data center.

The company could have a net benefit of $9,200,000 over a period of three years if VMware is applied. The company is at the beginning of a hardware refresh phase that requires replacing 1000 servers on hand. Virtualization allows us to replace 1000 physical servers to 200 virtual servers. Outlining the fact that 80% of our physical servers can be run as Virtual Machines, placing the total amount of servers to 280 having both physical and virtual machines. Physical servers cost $8,000 per server including software while VMware cost $16,000 per server making the three year cost at $4.8 million. This change from switching from physical to virtual machines will allow increasing efficiency with a three-year benefit of $14 million.

**Chart:**

**Table 1: Physical Server Cost**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Physical Servers** | **Installation Cost** | **First year****Maintenance** | **Second year Maintenance** | **Third year****Maintenance** | **Total Cost** |
| 1000 | $8,000,000 | $2,000,000 | $2,000,000 | $2,000,000 | $14,000,000 |
|  | **Total Cost** | **$14,000,000** |

**Table 2: Virtual Server Cost**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Virtual Servers** | **Installation Cost** | **First year** | **Second year** | **Third year** | **Total Cost** |
| 100 | $1,600,000 | $400,000 | $400,000 | $400,000 | $2,800,000 |
| 80 | $1,280,000 | $240,000 | $240,000 | $240,000 | $2,000,000 |
|  | **Total Cost** | **$4,800,000** |

Work Citied:

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