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Flash Research Paper #2

**Virtualization and Cloud Computing**

Consolidating 800 of our current physical servers to a cloud based service, such as VMware, will generate a net benefit of nearly $10M for our organization over a three year period. By switching to VMware, maintenance costs will decrease significantly and server utilization will increase.

Using VMware, we can consolidate our current 1000 physical servers into just 80 virtual machine servers and 200 physical servers. Consolidation allows server and hardware maintenance to occur without taking the server offline, which results in less downtime for business operations. Consolidating physical servers to virtual machine servers makes it easier to balance workloads across multiple servers, so that no server gets overloaded.

Moving 80% of our servers to VMware would cost a total of $4.8M, including hardware and maintenance as well as 200 physical servers, over the next three years. If we do not switch to VMware, our current servers will cost the organization $14M over a three year period. This change would result in a $9.2M net benefit for our organization. Table A shows the breakdown for our current system whereas Table B shows the breakdown for the switch to VMware.

***Table A***

|  |  |  |  |
| --- | --- | --- | --- |
|  | Year 1: | Year 2: | Year 3: |
| Initial Cost of 1000 Servers | $8,000,000 | 0 | 0 |
| Yearly Maintenance Cost | $2,000,000 | $2,000,000 | $2,000,000 |
|  |  | Total cost over 3 years: | $14,000,000 |

***Table B***

|  |  |  |  |
| --- | --- | --- | --- |
|  | Year 1: | Year 2: | Year 3: |
| Virtual Machine Server Cost: | $1,280,000 | 0 | 0 |
| Cost of 200 Physical Servers: | $1,600,000 | 0 | 0 |
| Yearly Maintenance Cost | $640,000 | $640,000 | $640,000 |
|  |  | Total Cost over 3 years: | $4,800,000 |

Works Cited:

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