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Flash Research Paper 2- Virtualization and Cloud Computing

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We currently have the opportunity to save 9.2 million dollars over the next three years by switching 80% of our servers to virtual machines. By using virtual machines, our company will be able to better utilize our hardware while increasing workload productivity. Because we must replace our servers regardless, now is the prime opportunity to make this change, ultimately saving us millions.

By switching 80% of our servers to virtual machines, our company will be able to better utilize hardware. Virtualization does this by allowing one virtual machine to host many different servers. In our company, one virtual machine will be able to host ten servers, giving us 80 consolidated virtual machines. Additionally, this server consolidation means that we will be able to work on operating systems simultaneously using the virtual machine, allowing us to share data between servers, increasing our business productivity.

It will cost 4.8 million dollars to implement the virtual machines, including maintenance costs. However, because we would be purchasing 80 virtual machines and 200 normal servers, we would have a 14 million dollar benefit from the savings from not implementing 1,000 new traditional servers. By utilizing virtualization, our company will ultimately receive a net benefit from savings of 9.2 million dollars over the next three years.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Traditional Servers | Year 1 | Year 2 | Year 3 | Total |
| Implementation | 1,000\*8,000  =8,000,000 | 0 | 0 | 8,000,000 |
| Maintenance | 2,000,000 | 2,000,000 | 2,000,000 | 6,000,000 |
| Totals | 10,000,000 | 2,000,000 | 2,000,000 | 14,000,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 80 VMware and 200 Traditional | Year 1 | Year 2 | Year 3 | Total |
| 80 VM implementation | 80\*16,000= 1,280,000 | 0 | 0 | 1,280,000 |
| 200 Traditional | 200\*8,000= 1,600,000 | 0 | 0 | 1,600,000 |
| VM maintenance | 240,000 | 240,000 | 240,000 | 720,000 |
| Traditional maintenance | 400,000 | 400,000 | 400,000 | 1,200,000 |
| Totals | 3,520,000 | 640,000 | 640,000 | 4,800,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Benefits | 6,480,000 | 1,360,000 | 1,360,000 | **Net Benefit:**  9,200,000 |

References

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