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Virtualization and Cloud Computing

Over the next three years our company has the opportunity to have a net benefit of $9.2 million by implementing virtual machine technology such as VMware. Under our current system, we are spending $1.4 million more on maintenance than needed. Consolidating 80 percent of our 1,000 traditional servers will decrease the total amount of hardware in our datacenters, needing 80 traditional machines and 200 virtual machines.

A key capability of virtualization is server consolidation; it reduces the number of physical servers in our datacenter by 80 percent. Virtualization will reduce the amount of physical hardware and eliminate the maintenance cost of 1000 physical machines to 200 physical machines. We can consolidate 10 physical servers and run multiple applications and operating systems onto one virtual server. We will save energy and resources by reduce hardware, maintenance, power, and air conditioning costs with less physical machines in our datacenters.

Virtual machine technology will initially cost approximately $3.6 million but this implementation will save us a total of $14 million over the next three years by eliminating the costs of 1000 traditional servers and the maintenance for them. We will save $1.4 million a year on maintenance alone. The company’s three year net benefit is $9.2 million.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cost | Year 1 | Year 2 | Year 3 | Total |
| 80 Virtual Machines | 1,280,000 | - | - | 1,280,000 |
| 200 Tradition Servers | 1,600,000 | - | - | 1,600,000 |
| Virtual Machine maintenance | 240,000 | 240,000 | 240,000 | 720,000 |
| Traditional Maintenance | 400,000 | 400,000 | 400,000 | 1,200,000 |
| Total Costs | 3,520,000 | 640,000 | 640,000 | 4,800,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Benefit | Year 1 | Year 2 | Year 3 | Total |
| Elimination of 1000 Traditional Servers | 8,000,000 | - | - | 8,000,000 |
| Maintenance | 2,000,000 | 2,000,000 | 2,000,000 | 6,000,000 |
| Total Benefits | 10,000,000 | 2,000,000 | 2,000,000 | 14,000,000 |
|  |  |  |  |  |
| Net Benefits | 6,480,000 | 1,360,000 | 1,360,000 | 9,200,000 |

Works Cited

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