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Each year, we lose $1.2 million in maintenance costs to manage our servers. Both the cost and the challenges of handling physical hardware have generated a need for virtual machines under VMware. These virtual machines eliminate the necessity for aging hardware, make possible future expansion and increase speed and performance. I propose that we virtualize eighty percent of our servers to both technically advance our company and generate a three-year net benefit of $9.2 million.

“Virtualization is the creation of a [virtual](http://searchservervirtualization.techtarget.com/definition/virtual) -- rather than actual -- version of something” (Tech Target). Utilizing virtualization to consolidate server workload will be technically beneficial to our company. With virtualization machines, we will no longer be required to replace aging and malfunctioning hardware every few years. Future expansion is easily possible with an increased virtual disk size; no physical hardware or downtime is required. Also, studies have shown that virtualized performance can be even faster when compared to native hardware. And, in keeping twenty percent of the physical servers, we protect the workloads and legacy systems that can’t be virtualized.

The cost to purchase the VMware will total $1.28 million and the cost to purchase the new, physical servers will total $1.6 million. In each year following, the maintenance costs for the VMware and physical servers will total $240,000 and $400,000 respectively. The benefit each year will be the money saved from no longer relying fully on one thousand servers, totaling $14 million. The three-year net benefit will be $9.2 million.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | Total |
| **COSTS** |  |  |  |  |
| 200 Traditional Physical Servers | $1,600,000 | $0 | $0 | $1,600,000 |
| 80 VMware Servers | $1,280,000 | $0 | $0 | $1,280,000 |
| Maintenance 200 Traditional Servers | $400,000 | $400,000 | $400,000 | $1,200,000 |
| Maintenance 80 VMware Servers | $240,000 | $240,000 | $240,000 | $720,000 |
| **TOTAL COSTS** |  |  |  | *$4,800,000* |
|  |  |  |  |  |
| **BENEFITS** |  |  |  |  |
| Eliminate 1000 New, Traditional Servers | $8,000,000 | $0 | $0 | $8,000,000 |
| Eliminate Maintenance on 1000 Traditional Servers | $2,000,000 | $2,000,000 | $2,000,000 | $6,000,000 |
| **TOTAL BENEFITS** |  |  |  | *$14,000,000* |
|  |  |  |  |  |
| **NET BENEFITS** |  |  |  | **$9,200,000** |

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