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Enterprise IT

Virtualization flash research

Our company can gain a net benefit of $9.2 MM over three years by migrating 80% of our physical servers to virtual servers. One physical server can house multiple virtual servers, reducing the amount of physical equipment we need to run the same applications. We can save $5.12 MM in hardware costs by purchasing a mixture of Virtualization-capable servers and traditional servers now, as our company is at the start of our hardware refresh cycle.

 The key capability of virtual servers is being virtualized or the ability to “make software look and behave like hardware” (Mathias, 2017) . Each software-based server, or virtual machine, shares resources with any other virtual machine housed in the physical server but acts as its own unit. In our case each VMware server can house approximately 10 virtual servers, reduce our current 1000 servers to 200 physical servers and 80 VMware servers while getting the same productivity.

Purchasing and maintaining those 280 physical servers will cost $4.8 MM over 3 years and gain $14 million in cost-saving benefits as we reduce the number of servers we need. This consolidation creates a $9.2 MM net benefit over three years.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | Year 1 | Year 2 | Year 3 | Total |
| **Traditional servers** |   |   |   |   |
| Cost | $1,600,000.00  |   |   | $1,600,000.00  |
| maintenance | $400,000.00  | $400,000.00  | $400,000.00  | $1,200,000.00  |
|   |   |   |   |   |
|  **Virtual Servers** |   |   |   |   |
| Cost | $1,280,000.00  |   |   | $1,280,000.00  |
| maintenance | $240,000.00  | $240,000.00  | $240,000.00  | $720,000.00  |
| **Total Costs** |  |  |  |  **$ 4,800,000.00**  |
|  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Cost Avoidence benefits of replacing current data center** |   |   |   |
| eliminate 1000 new traditional servers | $8,000,000.00 | $0.00 | $0.00 | $8,000,000.00 |
| Eliminate maintainence on 1000 traditional servers | $2,000,000.00 | $2,000,000.00 | $2,000,000.00 | $6,000,000.00 |
| **Total Benefits** |  |  |  | **$14,000,000.00** |
| **Total Net Benefits** |  |  |  | **$9,200,000.00** |