Mojahed Ibrahim

Flash Research Paper

Mis 2501

Martin Doyle

Virtualization and Cloud Computing

Our company will save $9.2 million after 3 years by utilizing virtualization to consolidate server workloads. Virtualization could consolidate 10 servers into a single virtual machine allowing us to use fewer physical servers. This will in turn lower costs and increase efficiency.

By consolidating your server hardware with vSphere with Operations Management, your organization can increase existing hardware utilization from as low as 5 percent to as much as 80 percent. We are currently running 1,000 physical servers which have high maintenance cost without being used to their full capacity. This causes a large inefficiency because we must deploy multiple servers just to keep pace. Virtual machines can run multiple machines on a single server allowing us to cut costs. You can also reduce energy consumption by decreasing the number of servers in your data center.

Given the current state our server cost us $14 million. Utilizing virtualization will only cost us $4.8 million. Our net benefit will be $9.2 million.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Current Vs New | Year 1 | Year 2 | Year 3 | Total |
| Current |  |  |  |  |
| Server | 8,000,000.00 | - | - | 8,000,000.00 |
| Maintenance | 2,000,000.00 | 2,000,000.00 | 2,000,000.00 | 6,000,000.00 |
| Total | 10,000,000.00 | 2,000,000.00 | 2,000,000.00 | 14,000,000.00 |
|  |  |  |  |  |
| New | Year 1 | Year 2 | Year 3 | Total |
| 80% of Servers | 1,280,000.00 |  |  | 1,280,000.00 |
| Physical 200 | 1,600,000.00 |  |  | 1,600,000.00 |
| Maintenance of virtual | 240,000.00 | 240,000.00 | 240,000.00 | 720,000.00 |
| Maintenance of Physical | 400,000.00 | 400,000.00 | 400,000.00 | 1,200,000.00 |
| Total | 3,520,000.00 | 640,000.00 | 640,000.00 | 4,800,000.00 |
| Net Benefits | 6,480,000.00 | 1,360,000.00 | 1,360,000.00 | 9,200,000.00 |

Works Cited

Marshall, David. “Top 10 Ways Server Virtualization Changed the Data Center.” *Network World*, Network World, 2 Nov. 2011, www.infoworld.com/article/2621446/server-virtualization/server-virtualization-top-10-benefits-of-server-virtualization.html.

“Server Virtualization & Consolidation.” *VMWare*, 2 Apr. 2018, www.vmware.com/solutions/consolidation.html.

“Virtualization Technology & Virtual Machine Software: What Is Virtualization?” *VMWare*, 2 Apr. 2018, www.vmware.com/solutions/virtualization.html.