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Virtualization and cloud computing

It is important for our company to implement virtualization because it can reduce server cost and maintenance cost significantly. Virtualization reduces the cost of our data center by consolidating 800 physical servers onto 80 virtual machine servers. By implementing this new technology, we realize a net benefit of $9.2M over three-year period.

The key feature of Virtualization is that the “software makes it possible to run multiple operating systems and multiple applications on the same server at the same time" (Adams, 2014). This will enable us to reduce the number of servers in our data center from 1000 servers to 280 servers. This results to use time efficiently with less number of servers. Although it costs more to purchase and maintain per server, each virtual server can work 10 times more than our current server can handle, and it will significantly decrease our company expense.

Benefit we can receive for removing 1000 servers is $14M, which comes from a $6M maintenance fee and $8M purchase fee. Once we implement the new technology, it will cost us $4.8M to implement 280 new servers and the net benefit of $9.2M in three years.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Before | | |  |  | | | | |  | |  | |  | | | |
|  | Cost | Maintenance | | | |  | |  | | |  | | | |
| Year1 | 8m | 2m | | | |  | |  | | |  | | | |  | |
| Year2 |  | 2m | | | |  | |  | | |  | | | |  | |
| Year3 |  | 2m | | | |  | |  | | |  | | | |  | |
| Total | 8m | 6m | | | | 14m | |  | | |  | | | |  | |
|  | After | | |  |  | | | | |  | |  | |  | | | |
|  | Cost for old server | | Maintenance  For old server | | | | new server cost | | new server maintenance | | | |
| year1 | 1.6m | | 0.4m | | | | 1.28m | | 0.24m | | | |  | | |
| year 2 |  | | 0.4m | | | |  | | 0.24m | | | |  | | |
| year3 |  | | 0.4m | | | |  | | 0.24m | | | |  | | |
| total | 1.6m | | 1.2m | | | | 1.28m | | 0.72m | | | | 4.8m | | |
|  |  | | |  |  | | | | |  | |  | |  | | | |
| 3 year net benefit | 9.2M | | |  |  | | | | |  | |
| Benefit | 11.2M | | |  |  | | | | |  | |

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