To, CIO: Mart Doyle  
From, Dylan Casey  
Subject: Virtualization and Cloud Computing  
  
 Our company could replace 800 of our physical servers with just 80 virtual servers and save $11,600,000 over a three-year period. Currently, we have 1000 physical servers that we can reduce to 200. The virtualization of 80% of our physical servers will increase the efficiency of our operations, by moving to cloud based systems we gain financial and operation advantages.

By implementing virtualization, we could get rid of 80% of our physical servers. In addition to this, we could consolidate those 800 physical servers into just 80 virtual servers. Virtualization also allows for data redundancy to ensure we never lose anything important and increases efficiency by allowing our employees to all collaborate together and access docs.

Over a three-year period, we could save $5,120,000 in costs of servers and $6,480,000 in maintenance costs. Implementing virtualization on 80% of our servers will have a net benefit of $11,600,000 over a three-year period.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | Total |
| **Virtualization** |  |  |  |  |
| Cost of Virtualization of 80% of servers |  |  |  | $1,280,000 |
| Cost of Virtual Maintenance | $240,000 | $240,000 | $240,000 | $720,000 |
| Cost of remaining 200 physical servers |  |  |  | $1,600,000 |
| Cost of maintenance of 200 physical servers | $600,000 | $600,000 | $600,000 | $1,800,000 |
| **Total Cost of Virtualization** |  |  |  | **$5,400,000** |
|  |  |  |  |  |
| **Physical Servers (Original setup)** |  |  |  |  |
| Cost of Physical Servers |  |  |  | $8,000,000 |
| Cost of Maintenance | $3,000,000 | $3,000,000 | $3,000,000 | $9,000,000 |
| **Total Cost of Original Setup** |  |  |  | **$17,000,000** |
|  |  |  |  |  |
| **Net Benefit** |  |  |  | ***$11,600,000*** |

Net Benefit = $17,000,000 - $5,400,000

Cost of Virtualization of 80% of Servers = $16,000 \* 80

Cost of Virtual Maintenance = $3,000/year \* 80 = $240,000/year

Cost of Remaining 200 physical Servers = $8000/server \* 200

Cost of 200 Physical Server Maintainance = 200 \* 3000/year = $600,000/year

Cost of 1000 Physical Servers = $8,000 \* $1,000 = $8,000,000

Cost of Maintanance for 1000 Physical Servers = $3000/year \*$1000 = $3,000,000/year

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