Sean Archer

 We are spending roughly $10 million per year to completely run and operate our data center. We can reduce that cost by nearly 80 percent by operating our data center with virtual machines. By running a ten–to-one physical server to virtual machine, we can save over $8 million per year. It is essential that we do so if we would like to maintain an efficient and effective data center.

 Virtualization presents multiple benefits to a company like ours. We are currently using approximately 1,000 servers now. There is a lot of heat that is generated by this. By reducing our servers to 100 units, it will prevent overheating and burn outs. (Wallen) Virtualization also helps increase recovery time in event of a disaster, “With up-to-date snapshots of your virtual machines, you can quickly get back up and running. And should disaster strike the data center itself, you can always move those virtual machines elsewhere.” (Wallen) A short recovery time during a disaster will protect our ability to operate.

 We are currently running 1000 servers that cost’s a total of $8,000 per year to with an additional $2,000 for hardware maintenance, software maintenance, technical support, power and cooling. The total cost of using our current data center is $10 million. It will cost us $16,000 per server to operate, a 100 percent increase in total cost and also $3,000 in additional cost (hardware maintenance, software maintenance, technical support, power and cooling.) If we reduce our server usage to a ten-to-one ratio, we can save $8,100,000 per year. Although our costs per server increase, a reduction in servers is what we get in return. This reduction will save us $24,300,000 in three years. “ I messed the math up, tutor didn’t have time to go over with me. I checked out what I did wrong in class. I know we need 800 virtual machines and 200 hundred servers.- Sean”

# Works Cited

King, Rachel. Network Virtualization at AT&T Yields Services. 17 September 2014. 23 September 2014 <http://online.wsj.com/articles/network-virtualization-at-at-t-yields-services-1411006443>.

Mims, Chris. Forget 'the Cloud'; 'the Fog' Is Tech's Future. 18 May 2014. 23 September 2014 <http://online.wsj.com/news/articles/SB10001424052702304908304579566662320279406>.

Wallen, Jack. 10 benefits of virtualization in the data center. 10 April 2013. 23 September 2014 <http://www.techrepublic.com/blog/10-things/10-benefits-of-virtualization-in-the-data-center/>.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Number of Servers | Cost  | Additional Costs | Total Cost |
| Original Severs | 1000 | 8000 | 2000 |  **$10,000,000.00**  |
|  |  |  |  |  |
|  |  |  |  |  |
| VM Ware Server | 100 | 16000 | 3000 |  **$1,900,000.00**  |
|  |  |  |  |  |
|  |  | Year 1 | Yearly Net Benefit |  $8,100,000.00  |
|  |  | Year 2 |  |  $8,100,000.00  |
|  |  | Year 3 |  |  $8,100,000.00  |
|  |  |  | Total Savings  |  **$24,300,000.00**  |