Sam Loch

Mart Doyle

Enterprise IT Architecture

12 October 2017

Flash Research Paper: Server Virtualization

Our company is currently spending $2 million per year on server maintenance. This could be reduced to $300,000 per year through the use of virtual servers. If we implement server virtualization this year, we will receive a net benefit of $11.5 million over the next three years by reducing physical servers as well as maximizing the utilization of those servers.

Virtualization is the partitioning of physical servers into virtual servers. The average server only uses 5 – 15% of its capacity. Using server virtualization our company can fit, on average, 10 virtual servers into one physical server. This would increase the utilization of the capacity of the physical server dramatically to around 60-70%. Utilizing virtual servers will also reduce the amount of physical space we would need to store our servers as well as the amount of energy required to keep them running.

Implementing virtual servers will cost the company $1.6 million dollars however, we are at the beginning of a hardware refresh cycle and will be replacing each of our 1,000 physical servers anyway. This means that just by choosing virtual servers over physical ones we will be saving $6.4 million in implementation costs. Implementing virtual servers will also save our company $1.7 million per year in maintenance costs as well as reducing the amount of physical space needed to house servers. This, combined with the $6.4 million we will save on implementation costs, means that server virtualization will provide us a net benefit of $11.5 million over the next three years. That is why our company should take advantage of the fact that we will be replacing all of our servers anyway and jump on this opportunity.

	Year 1	Year 2	Year 3	Total
Benefit	$10,000,000	$2,000,000	$2,000,000	$14,000,000
Cost	$1,900,000	$300,000	$300,000	$2,500,000
Net Benefit	$8,100,000	$1,700,000	$1,700,000	$11,500,000

References

Bittman, Thomas J. "Gartner Retires the Magic Quadrant for x86 Server Virtualization Infrastructure." *Gartner*, 16 Mar. 2017, www.gartner.com/document/3642418?ref=TypeAheadSearch&qid=81d4f4c31afa8d7be08481bfa1. Accessed 20 Sept. 2017.

Rouse, Margaret. "Server Virtualization." *Tech Target*, June 2009, searchservervirtualization.techtarget.com/definition/server-virtualization. Accessed 24 Sept. 2017.

"Virtualization." *VMware*, Sept. 2017, www.vmware.com/solutions/virtualization.html. Accessed 24 Sept. 2017.