Anand Kumar
Professor Doyle
MIS 2501 Flash Research #3

Virtualization and Cloud Computing

Over the next three years our company will spend $11,500,000 more than needed just in hardware maintenance, software, technical support, power, and cooling. This can be prevented by investing in less, but higher end servers which support virtualization. VMware Virtualization allows for a reduction of 10 times the standard server requirement. Therefore, by investing in servers that support virtualization, overall hardware requirements can be reduced as well as the running costs associated with them.

Virtualization maximizes server efficiency to a point where it can decrease server requirements 10 times. Instead of 10 individual servers working through their own processor, disks, motherboard, cooling, etc.; one server can run ten "virtual machines". Each virtual machine acts as its own server and is allotted resources based on requirements relating to disk space, RAM, and processing power .They can exceed what a standalone server does and with a significantly lower physical requirement. Virtual machines can be moved to other servers and allotted more or less resources depending on demand compared to individual servers which must be completely replaced when outgrown or fruitlessly running when it isn't using all of the resources. Virtual machine servers will allow for a reduction in hardware requirements while increasing expandability significantly.

The single server that will be the home of ten additional servers, or virtual machines, will be much more powerful, causing the unit price to be higher. Over the next three years, a total of $2,500,000 will be spent on new servers which support virtualization. A conventional server setup would cost $14,000,000 during this same time period. Therefore, a savings of $11,500,000 will be seen in just three years. These financial savings would be incurred due to less physical servers and additional costs associated with them with the use of virtualization technology.