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Project One: Executive Summary of Possible Benefits of Virtualization of Server Infrastructure

Consolidation Ratio: This is the number of virtual servers the company can run on each physical host machine. We will arrive at the exact figure through trial and error by stacking virtual machines on top of each other until performance slows to a crawl.

Benefits of Server Consolidation

- Reduce hardware and operating cost by almost 50% and energy costs savings could be as much as 80%, this would lead to $3,000 in saving per year for each virtualized server workload.
- Reduce the time for deployment of new servers by 70%.
- Decrease downtime, improve availability, better reliability, stronger business continuity and built-in disaster recovery.
- Ability to deliver IT services on demand as needed, independent hardware, operating systems, applications or infrastructure providers.

Benefits the organization might gain through the virtualization of servers

Reducing Server Costs with Desktop/Server Virtualization:

By consolidating the organization's server hardware with vSphere with Operations Management, we can increase existing hardware utilization from as low as 5% all they up to 80%. Reduced cost in energy by reducing the number of servers in the organizations data center. VMware server virtualization offers a reduction of hardware requirements by a 15:1 ratio, making the organization a more environmentally friendly without sacrificing reliability or service levels. Server and desktop hardware consolidation can also help the organization achieve a 20%-30% lower cost per application, as well as defer data center construction costs by $1,000 per square foot. vSphere with Operations Management allows a 50%-70% higher virtual machine density per host.

Centralize Management of Your Virtual Data Center:

VMware virtualization allows the organization to manage the entire virtual data center from a single point of control. With vSphere Operations Management, the organization can monitor health, manage resources, and plan for the data center growth all from one interface.

Automation of the Virtual Data Center:

Through automation we can simplify the management while simultaneously delivering scalability, performance and availably for an improvement in business continuity that with physical infrastructure approach would make it impossible to improve in all the areas mentioned. The vSphere platform will be used to enable the organization to minimize downtime, policy-based allocation of it resources and eliminate repetitive configuration and maintenance tasks.

Disadvantages of the Virtualization of Servers

- The biggest disadvantage of virtual servers is that if the server goes offline, all the websites/services hosted by it will go down. To avoid this the organization should set redundancy by setting up multiple servers.
- The are no current ways to consolidate methods to measure performance of virtualized environments.
- Huge RAM consumption for each virtual machine.
- It requires multiple links in a chain that must work together cohesively.
- A lot of usage for disk space, since it takes all the files for each operating system installed on each virtual machine.

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