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Project Two: Server Virtualization Feasibility Analysis

Consolidation Ratios: This will be the number of virtual servers the proposed plan will run on each new physical server. Trial and error by stacking virtual machines on top of each other until performance starts to get affected, this was the methodology used to arrive to our conclusions in the proposed Virtualization plan. Consolidation Ratios for the infrastructure:

Group	New Physical Servers	Consolidation Ratio for Physical Servers	Virtual Servers	Total number of servers (Physical and Virtual)	Overall Consolidation Ratio
1	250	10:1	2000	2250	1.11:1
2	200	5:1	700	900	1.11:1
3	20	25:1	150	170	5.88:1
4	30	33.33:1	300	330	3.03:1

Benefits of Proposed Plan for Virtualization

- Reducing Hardware, operating cost and energy cost by a significant amount, savings on the proposed plan are evaluated to be at \$3,000 per each virtualized server.
- Deployment time for new servers will be reduced to 80%
- Improve availability, decrease downtime, stronger business continuity and built-in disaster recovery.
- Ability to deploy new IT services on demand.

Benefits for IT4U corporation

Reducing cost in 5-year plan: If the proposed virtualization plan is approved by IT4U it will lead to \$231,757,254.00 in savings for the 5-year plan timeline put in place. We can expect savings to go up after the initial year since the corporation will be making a huge investment in year 1 on the new servers/hardware of \$109,809,500.00 that are able to deploy the virtual machines needed in the proposed plan.

Reducing Backups cost: Physical machines need backups, but virtual machines do not since they are hosted on top of the physical machine once a physical machine is backed up all of the virtual machines hosted inside will also be backed up. It is expected that IT4U will be saving \$461,822,140.00 in just backups.

Adaptability and flexibility: The new environment will require Sys. Admins to spend less time in deployment and maintenance. It is estimated that the new plan will require %50 less work.