Kurtis Konrad

MIS 2501

Flash Research Assignment

February 13, 2018

Data Center and Networking

Over three years there will be a net benefit of $13,229,056 if we invest in upgrading our data center from Tier I to Tier III. A Tier III data center will reduce downtime and therefore reduce our costs.

The key capabilities of A Tier III Data center are redundant capacity components and 99.98% uptime. The redundancy within a Tier III data center reduces downtime by 15x versus our current Tier I system. A Tier III data center has N+1 redundancy which means the number of power sources plus one. This allows us to remove every capacity component while doing routine maintenance without impacting the critical environment. With the upgraded Tier III site we can eliminate both routine maintenance downtime and also potentially avoid unexpected downtime and reduce our costs with the redundant hardware provided.

The cost of a Tier III system is $35,000,000 to build. Over three years a Tier III data center will have a cost benefit of $48,228,056 because downtime is reduced by 1,629 minutes at a price of $14,800 per minute. The net benefit for a Tier III data center is $13,229,056.

Current Servers / cost avoidance benefit				
	Minutes Per year	Availability	Downtime	Cost
Tier I	525,600	99.67%	1,734.48	25,670,304
Tier III	52,600	1	105	1,555,776
Total Savings				24,114,528
Benefits				
	Year 1	Year 2	Year 3	Total
Cost	$35,000,000			$35,000,000
Benefits		$24,114,528	$24,114,528	$482,229,056
Net Benefit				$13,229,056

Works Cited

Finally! Data Center Tiers Defined. (2017, October 06). from http://www.peak10.com/data-center-tiers-behind-the-numbers/

Explain: Tier 1 / Tier 2 / Tier 3 / Tier 4 Data Center. (2011, January 29). from https://www.cyberciti.biz/faq/data-center-standard-overview/

Staff, C. A. (2017, November 28). Data Center Tier Rating Breakdown - Tier 1, 2, 3, 4 - CLA. Retrieved from https://www.colocationamerica.com/data-center/tier-standards-overview.htm