Nick Rivera

Enterprise IT Architecture

Mart Doyle

Flash Research Paper #1

Data Centers & Networking

If our company upgrades to a Tier III data center from a Tier I data center, we will save roughly $24 million per year. As we know, our company suffered from 10 ERP system outages last year alone. The Tier III data center will alleviate this number due to its redundancy capacity components as well as its multiple distribution paths which reach the critical environment. The Tier III data center will bring our downtime per year from its current 1,734.48 minutes (28.8 hours) to a mere 105.12 minutes (1.6 hours). Making the upgrade will protect our company from 27.2 hours of business interruptions per year which translates to over $24 million in savings.

Since the Tier III has multiple distribution paths, as well as the redundant capacity components, it will be able to effectively decrease downtime. The redundant capacity components will protect our critical environment and mission critical applications from inactivity, so that the least amount of possible time is spent in downtime. The Tier III data center is equipped with multiple distribution paths to the critical environment, making the probability of an extensive ERP outage unlikely. Overall, the Tier III data center is far superior to the Tier I in mitigating downtime by keeping the ERP systems active through the use of redundant capacity components and multiple distribution paths.

Although the initial expense for upgrading to the Tier III data center is $35 million, the long term benefits outweigh the short term cost. Our availability will rise from the Tier I (99.67) up to the Tier III (99.98) which is an increase of .31%. Our current cost of downtime per year is roughly $25 million, and the Tier III data center would carry an expense of a mere $1.5 per year. The decrease in the cost of downtime per year will save our company over $13 million in just the first three years after making the initial purchase of $35 million. Within a few short years, we will have already hit breakeven with regards to the initial cost and our savings in downtime. In addition, we will have the luxury of the new and improved data center and its superior functionality.

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(Downtime Cost analysis chart)

Data Center	Minutes Per Year	% Of Time Available	Downtime Per Year (In Minutes)	Cost of Downtime Per Year (In Dollars)*
Tier I Data Center	525,600	99.67%	1,734.48	$25,670,304
Tier III Data Center	525,600	99.98%	105.12	$1,555,776
			Tier III will save:	$24,114,528

*Assuming downtime costs our company $14,800 per minute

(Cost / Benefit Analysis Chart)

	Year 1 2015	Year 2 2016	Year 3 2017	Totals:
Cost:	$35,000,000	$0	$0	$35,000,000
Benefit:	$0	$24,114,528	$24,114,528	$48,229,056
			Net Benefit After 3 year span:	$13,229,056