

Dante Bieri

Professor Doyle

MIS 2501

September 22nd, 2016

Flash Research Assignment 1 – Data Centers and Networking

Over the next three years our company has the ability to save over \$13 million by upgrading our current data center from Tier I to Tier III. The ten outages we have had this past year have not only affected how our company functions but also costs us millions of dollars each year. Through upgrading the data center, we can dramatically decrease our unscheduled downtime and the costs associated with it.

Our business is growing at a rapid pace; our data centers need to be able to handle this new demand. By upgrading to a Tier III data center, we will implement a fault system that will allow us to have dual-power and cooling systems for our most critical machines. Having dual power for every critical machine gives us the advantage of having a second power source in case of emergency. With the addition of redundant systems, our company can now perform maintenance on available components without disrupting day-to-day functions. Tier I gave us 99.67% availability throughout the year or 1,734.8 minutes of downtime. Upgrading to a Tier III increases availability to 99.98%, or downtime of only 105.12 minutes per year.

Upgrading from Tier I to Tier III helps our business not only technologically but also financially. After our initial \$35,000,000 investment and one year building frame, we can start to build our saving. Currently we face 1,734.8 minutes of downtime per year at a cost of \$14,800/minute. In one year alone, we waste \$25,670,304 in downtime costs. With Tier III, we face only 105.12 minutes per year and our downtime costs would be \$1,555,776, a savings of \$24,114,528 per year. After the third year of Tier III, and deducted costs our company will save a total of \$13,229,056. By spending more money, we will be saving our rapidly growing company millions of dollars in the long term.

Works Cited

Beal, Vangie. *data center tiers*. n.d. Print. 21 September 2016.

<http://www.webopedia.com/TERM/D/data_center_tiers.html>.

Stansberry, Matt. *Explaining the Uptime Institute's Tier Classification System*. n.d. Print. 21 September

2016. <<https://journal.uptimeinstitute.com/explaining-uptime-institutes-tier-classification-system/>>.

Uptime Institute. "Data Center Site Infrastructure Tier Standard – Topology." (n.d.): i-8. Print.

	Minutes in a year	Availability	Downtime (min/year)	Downtime Cost
Tier I	525,600	99.67%	1,734.48	\$ 25,670,304.00
Tier III	525,600	99.98%	105.12	\$ 1,555,776.00
			Savings	\$ 24,114,528.00

	Year 1	Year 2	Year3	Total
Cost	\$ 35,000,000.00	0	\$0	\$ 35,000,000.00
Benefit	0	\$ 24,114,528.00	\$ 24,114,528.00	\$ 48,229,056.00
			3-Yr Net Benefit	\$ 13,229,056.00

