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Flash Research Assignment #1: Data Centers and Networking

By upgrading to a Tier III data center, we will gain a net benefit of $24 million per year. Currently, our Tier I data center downtime costs us $25 million per year. If we choose to upgrade, we will increase our data center's availability from 99.67% to 99.98%, reducing the downtime cost to $1.5 million per year. A Tier III data center will bring us these savings through its concurrent maintainability.

Since Tier III data centers are concurrently maintainable, they have redundant capacity components and multiple distribution paths, meaning only one distribution path is required at a time. This allows for upgrades to happen without causing downtime. Also, any equipment replacement or maintenance will not require shutdowns. We will be able to reduce downtime minutes from 1734 per year to 105 per year, which will prove to be valuable.

The increase from 99.67% availability to 99.98% will save us $24 million per year. With our current data center, we are spending $25 million per year, compared to $1.5 million per year for a Tier III data center. The cost of the upgrade to a Tier III system is $35 million and will take a year to build, but it will provide us with a three-year net benefit of $13.2 million. Since our company is growing so fast, reducing downtime with a Tier III data center will prove to be valuable in the future.

	Year 1	Year 2	Year 3	Total	
Benefit	$ -	$ 24,114,528.00	$ 24,114,528.00	$ 48,229,056.00	
Cost	$ 35,000,000.00	$ -	$ -	$ 35,000,000.00	
Net Benefit				$ 13,229,056.00	
Tier	Minutes per year	Availability	Downtime min	Downtime cost per min	Downtime Cost
I	525600	0.9967	1734.48	$ 14,800.00	$ 25,670,304.00
III	525600	0.9998	105.12	$ 14,800.00	$ 1,555,776.00
Savings per year					$ 24,114,528.00

Works Cited

Stansberry, Matt. "Explaining the Uptime Institute's Tier Classification System." Uptime Institute eJournal. Matt Stansberry https://journal.uptimeinstitute.com/wp-content/uploads/2013/04/UI_Logo.png, 30 Sept. 2014. Web. 01 Mar. 2017.

Uptime Institure. "Data Center Site Infrastructure Tier Standard: Topology". Uptime Institute Professional Services. http://www.onepartner.com/Portals/4/Docs/uptime_institute_standard_tier_topology.pdf, 2009. 01 Mar. 2017.

Broadley, Claire. "What Is a Tier 3 Data Center? at WhoIsHostingThis.com." Who Is Hosting This: The Blog. N.p., 17 Jan. 2017. Web. 01 Mar. 2017.