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### Flash Research Assignment: Data Centers and Networking

Without a Tier III data center gives our company loses \$25,670,304 annually. This investment decreases downtimes by allowing maintenance while the data center is still running. In turn, this investment will give the company a net benefit of \$13,229,056 in just a three-year period.

The key capability of a Tier III data center, unlike the Tier I, is that it is concurrently maintainable as it has redundant capacities that allow distribution paths to remain accessible in case of emergencies. While there are redundant capacities, only one distribution path is active in Tier III allowing the other repetitive portions to act as backup. This enables each capacity component in the distribution path to be removed for maintenance without critically affecting the data center's environment. For example, if one part of the data center breaks, the rest of the center will continue running efficiently and IT will be able to replace the part with downtime. Tier III also provides 99.98% availability, providing an increase of .31% availability in comparison to Tier I, which increases the data center's efficiency.

Each year our Tier I data center costs us \$25,670,304 for system downtimes. By increasing the data center availability by .31%, our company can save \$24,114,528 over 3 years. While the initial investment will cost the company \$35,000,000, by year three we will see a net benefit of \$13,229,056.

	Minutes per Year	Availability	Downtime (m/y)	Cost of Downtime
Tier I	525,600	99.67%	1,734.48	\$25,670,304
Tier III	525,600	99.98%	105.12	\$1,555,776
			Total Savings:	\$24,114,528

	Year 1	Year 2	Year 3	Totals
Cost	\$35,000,000	0	0	\$35,000,000
Return	0	\$24,114,528	\$24,114,528	\$48,229,056
			Benefit after 3 Years:	\$13,229,056

Work Cited

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