

Flash Research Assignment: Data Centers and Networking

Our company can save \$13,229,056 in downtime costs within three years by upgrading from our current Tier I datacenter to a Tier III datacenter. This upgrade will increase system availability to 99.98% (.31% increase), which will be responsible for savings of \$72,343,584 over the three year period. After enduring ten power outages to our ERP System in the last year, it is crucial that we upgrade to a Tier III datacenter in order to compete at our best.

A Tier III datacenter is a concurrently maintainable system which possesses multiple distribution paths for power and cooling, as well as redundancy for critical components. By being concurrently maintainable, we can perform scheduled maintenance on our system without affecting unrelated areas, decreasing overall downtime. Multiple distribution paths and N+1 redundancy ensure that even with a power outage our system remains online and operating.

In reference to Table 1 (attached), you will see that by upgrading to a Tier III system we will be saving \$13,229,056 in downtime costs over three years, which includes the one year installation period of the Tier III system. We see a drastic decrease in downtime costs during the second year (a difference of \$24,114,528) due to the increase in uptime for which our new concurrently maintainable system will be responsible (Table 1). After its installation, you will see that over the next three years upgrading to a Tier III datacenter will save us \$72,343,584 in downtime costs (Table 2).

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Works Cited

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Tang, Helen. "Three Signs It's Time to Transform Your Data Center | Data Center Knowledge." *Data Center Knowledge*. Industry Perspectives, 03 Aug. 2010. Web. 06 Sept. 2015.

Uptime Institute Professional Services, LLC. *Data Center Site Infrastructure Tier Standard Topology*. New York: Uptime Institute, LLC, 2010.

T1 vs. TIII including Upgrade Year (TABLE 1)					
Data Center System Tier	Cost of Upgrade	1st Year Downtime Cost	2nd Year Downtime Cost	3rd Year Downtime Cost	Total Downtime Cost over 3 Years
TIER I	0	25,670,304	25,670,304	25,670,304	77010912
TIER III	\$35,000,000	25,670,304	1,555,776	1,555,776	\$63,781,856
				<u>NET BENEFITS</u>	<u>\$13,229,056</u>
T1 vs. TIII Three years of Downtime Costs (not including Installation) (TABLE 2)					
Data Center System Tier	Total Minutes (3 Years)	Downtime Cost per Min	Data Center Downtime	Total Downtime Costs	
TIER I	1576800	14800	0.33%	77010912	
TIER III	1576800	14800	0.02%	4667328	
			<u>NET BENEFITS</u>	<u>72343584</u>	