

## **Flash Research Assignment 1: Data Centers and Networking**

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My team and I have found a new technology worth investing which will decrease the number of operational problems our department has and save our company money. We are currently burning \$25 million annually with the amount of downtime our Tier 1 data center has, but a Tier III data center has the capacity to stay running if there is a single failure in our system. In just three years after replacing our current Tier I data center with a Tier III data center, our company will have a net benefit of \$13 million and reduce downtime by almost 5,000 minutes.

Tier III adds the feature of Concurrent Maintenance to its technology (Gite). As a small company who currently has a Tier I data center, we frequently deal with power outages and disruptions because a single failure shuts down our computer systems. A Tier III data center has an extra active capacity component to support the system (Uptime). Another feature of Concurrent Maintenance is the ability to perform maintenance on infrastructure without disruption (DPAir).

In an average year, Tier I datacenters only runs about 99.67% of the time, leaving approximately 1,734.48 minutes of downtime at a cost of \$14,800 per minute (Uptime) and adding up to a yearly cost of \$25 million just from technology failure. The Tier III data center runs 99.98% of the time, meaning that downtime would only be about 105.12 minutes per year at an annual cost of \$1.5 million. Even with a startup cost of \$35 million, the net benefits simply from the lack of downtime with the new data center alone will provide our company a net benefit of \$13 million within three years.

## Works Cited

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