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MIS2501 – Flash Research Paper 1: Data Center and Networking

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By using a Tier III datacenter instead of Tier I, our company can save as much as $24,114,528 per year. The Tier I data center that we are running now, is becoming unsuitable since the downtime costs our organization $14,800 per minutes. We need undated data center, which can provide better redundancy and system availability. The Tier III datacenter will be a good choice for us due to its redundancy capacities.

The Tier III datacenter not only provides better availability, but also composes multiple active power, and cooling distribution paths. Different from the Tier I datacenter, Tier III datacenter has the ability to maintain and replace each and every capacity or distribution component without impacting the IT environment. Moreover, with the availability of 99.98% instead of 99.68% like Tier I datacenter, using the Tier III datacenter can help our organization reduce the downtime from 1734.48 minutes per year to only 105.12 minutes per year.

Implementing the Tier III datacenter will cost an initial payment of approximately $35,000,000 and one year to be build. However, after three years of running this datacenter, our organization will get the net benefit of $13,229,056. We will result in this net benefit because after one year building the Tier III datacenter, our downtime cost falls to $1,555,776 annually. Compared to the Tier I datacenter’s downtime cost of $25,670,304 per year, our organization will save $24,114,528 downtime cost by using the Tier III datacenter. This is certainly a worth datacenter for us to invest on.

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| --- | --- | --- | --- | --- |
|  | Minutes per year | Availability | Downtime  (min/year) | Downtime Cost |
| Tier I | 525,600 | 99.67% | 1734.48 | $25,670,304 |
| Tier III | 525,600 | 99.98% | 105.12 | $1,555,776 |
|  |  |  | Savings per year | $24,114,528 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | Total |
| Benefit | $0 | $24,114,528 | $24,114,528 | $48,229,056 |
| Cost | $35,000,000 | $0 | $0 | $35,000,000 |
|  |  |  | 3-year Net Benefit | $13,229,056 |

**Work Cited**

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