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MIS 2501

Flash Research paper -Datacenters and Networking

Our company will receive $13million in profit over the next three years if we upgrade our datacenter from “Tier I” to “Tier III”. A Tier III datacenter has redundant components, which would increase our availability to 99.98%. by increasing our availability by 0.31%, we could save $48 million over 3 years.

Our current “Tier I” datacenter has a 99.67% availability. Upgrading to a “Tier III” would result in a 99.98% availability. Because the “Tier III” is a datacenter which has redundant components and multiple distribution paths serving the computer equipment. One of distribution paths serves the computer equipment at any time. The physical site is concurrently maintainable which means every component and distribution can be repaired and replaced on a planned basis without disturbing the datacenter. This function protects our datacenter against most physical events. Compared with the “Tier I” datacenter, the “Tier III” has significant advantages in reducing the risks of outage and unexpected loss caused by outages.

The “Tier III” has 0.31% higher availability than the “Tier I” datacenter, which means the “Tier III” has 1629.36 minutes in downtime less than the “Tier I” per year. Considering our company’s downtime cost is $14,800 per minutes, we will save more than $24 million each year. If our company invests $35 million and spends one year to install equipment, then the second year our company will benefit from the upgrade. By the end of the third year, our company will have $13 million in profit and will have saved $48 million.

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| --- | --- | --- | --- |
|  | % of availability | downtime per year(min) | $ cost/year |
| Tier I | 99.67% | 1,734.48 | 25,670,304.00 |
| Tier III | 99.98% | 105.12 | 1,555,776.00 |
|  |  | $ save/year | 24,114,528.00 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | total |
| Invest | 35,000,000.00 | 0 | 0 | 35,000,000.00 |
| Benefit | 0 | 24,114,528.00 | 24,114,528.00 | 48,229,056.00 |
|  |  |  | Profit | 13,229,056.00 |
|  |  |  | ROI | 37.8% |

# Works Cited

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