Anthony Wong

Professor Doyle

MIS 2501 - Enterprise IT Architecture

28 February, 2017

Datacenters and Networking

Our company is spending $25.6 million annually on downtime with our current Tier I datacenter. Upgrading from a Tier I datacenter to a Tier III datacenter will decrease annual downtime, eliminating costs by increasing availability from 99.67% to 99.98%. Over the next three years, we will have a net benefit of $13.2 million.

Unlike a Tier I datacenter, a Tier III datacenter has redundant and dual-powered servers, storage, backup generators and other components. Redundant components allow hardware to be shut down for maintenance without affecting the company’s operations. Backup generators allow our company to operate our datacenters for a minimum of twelve hours if our main source of power is cut off. This increases availability by .31% and our company will experience less than two hours of downtime a year. With an availability of 99.98%, our company will experience 106 minutes of downtime per year with a Tier III datacenter compared to 1,735 minutes of downtime per year with a Tier I datacenter, reducing downtime by 1,629 minutes a year.

Implementing a Tier III datacenter will have an implementation cost of $35 million. There will be a three year benefit of approximately $48 million by increasing availability to 99.98%. Annually $24 million will be saved on cost of downtime. This investment will have a net benefit of $13.2 million.

|  |  |  |
| --- | --- | --- |
| Cost | Downtime(min)/yr | Cost of downtime/yr |
| Tier I | 1734.48 | $25,670,304 |
| Tier III | 105.12 | $1,555,776 |
| Benefit |  | $24,114,528 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | Total |
| Costs | $ 35,000,000.00 | - | - | $ 35,000,000.00 |
| Benefit | - | $ 24,114,528.00 | $ 24,114,528.00 | $ 48,229,056.00 |
| Net Benefits | |  |  | $ 13,229,056.00 |

Works Cited

Beal, Vangie. "Data Center Tiers." *What Is Data Center Tiers? Webopedia Definition*. N.p., n.d. Web. 28 Feb. 2017.

Data Center Site Infrastructure Tier Standard: Topology. Rep. Uptime Institute, 2009. Web. 21 Sept. 2016.

Ramasamy, Mahalingam. "Tier 3 Data Center Specifications Checklist." ComputerWeekly. N.p., n.d. Web. 01 Mar. 2017.

"What Is a Tier 3 Data Center? - Definition from Techopedia." *Techopedia.com*. N.p., n.d. Web. 28 Feb. 2017.