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Enterprise IT Architecture

Flash Research Paper #1 - Data Centers and Networking

 Our company can save $24 million by investing in the “Tier III” datacenter. This data center will not require any shutdowns for equipment replacement and maintenance. Tier III is perfect for our company whose operations are high-priority and suffer from financial losses during outages. Implementing this data center will give us a three-year net benefit of $13 million.

Tier III data center has multiple active power and cooling distribution paths and a separate path active to serve computer equipment at any moment. That separate path essentially allows any changes to be made to the system without any interruptions to our daily operations. This data center has a guaranteed 99.98% availability, on-site fuel systems that supplies 12 hours of redundant power, and dual power sources for important equipment. Implementing this data center will lower our current downtime rate from 28.9 hours per year to 1.7 hours per year.

 Investing in the Tier III would be a great financial decision for the company. It was cost us $35 million to implement, but we would gain a benefit of $48 million. In three-years time, our overall net benefit will total to $13,229,056 (See table below for more information). Ultimately, this data center will save the company money that can be used on elsewhere and decrease any future operational problems.

Work Cited

Beal, By Vangie. "Data Center Tiers." *What Is Data Center Tiers? Webopedia Definition*. nnnnnnnWebopedia, n.d. Web. 20 Sept. 2016.

Gupta, Rishika. "Why to Prefer a Tier 3 Data Center?" *RackBank*. N.p., 05 Jan. 2015. Web. 20 nnnnnnnSept. 2016.

Stansberry, Matt. "Explaining the Uptime Institute's Tier Classification System." *Uptime Institute vvvvvvvvJournal*. Matt Stansberry https://journal.uptimeinstitute.com/wp-content/ uploads/ 2013 / nnnnnnn04/UI\_Lo-go.png, 30 Sept. 2014. Web. 20 Sept. 2016.

**Finance Breakdown**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Min/Yr.** | **Availability**  | **Downtime (min/yr)** | **Downtime Cost**  |
| **Tier 1**  | 525,600 min | 99.67% | 1,734.48 min | $25,670,304 |
| **Tier III** | 525,600 min | 99.98% | 105.12 min | $1,555,776 |
|   |   |  | **Savings** | **$24,114,528** |
|   |   |   |   |   |
|   | **Yr. 1** | **Yr. 2** | **Yr. 3** | **Total Cost**  |
| **Costs** | $35,000,000 | $0 | $0 | $35,000,000 |
| **Benefits**  | $0 | $24,114,528 | $24,114,528 | $48,229,056 |
|   |   |   | **3 Yr. Net Benefits** | **$13,229,056** |