Kyle Matusik

MIS 2501

Mart Doyle

21 September 2016

Data Centers

By investing in a Tier 3 data center, our company will save $13 million dollars over the next three years. The key capability of a Tier 3 data center is the limiting of downtime a year through the addition of backup distribution paths and redundant components.

The key capability of a Tier 3 data center is the presence of multiple distribution paths and redundant capacity components. Our current Tier 1 data center is comprised of only a single, non-redundant distribution path. The implementation of redundant capacity and multiple pathways provide a backup path that our data center can fall back on if an issue were to occur with the main pathway. As a result, this will improve the availability of our network by .31%. Increasing our availability to 99.98% will cut our downtime each year by 1,600 minutes.

It would cost us an initial investment of $35 million dollars to implement a Tier 3 data center into our company. By decreasing downtime by .31%, we would have a benefit of $24 million dollars a year. We would also see a net benefit of $13 million over the next three years.

Works Cited

Nigam, Kunal. "Why to Prefer a Tier 3 Data Center?" *RackBank*. N.p., 5 Jan. 2015. Web. 21 Sept. 2016.

Rouse, Margaret. "What Is Uptime Data Center Tier Standards? - Definition from WhatIs.com." *SearchDataCenter*. SearchDataCenter, May 2008. Web. 21 Sept. 2016.

Uptime Institute, LLC. “Data Center Site Infrastructure Tier Standard: Topology.” Uptime Institute, LLC, 2009-2012. Web. 21 Sept. 2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date Center | Minutes / Year | Availability % | Downtime in minutes | Cost of downtime per year |
| Tier 1 | 525,600 | 99.67% | 1,734.48 | $25,670,304 |
| Tier 2 | 525,600 | 99.98% | 105.12 | $1,555,776 |
|  |  |  | Savings per year | $24,114528 |

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