Mojahed Ibrahim

Flash Research Paper

Mis 2501

Martin Doyle

Data Centers and Networking

Our company should switch to a Tier III datacenter because the net benefit would be 13,229,056 within three years of implementation. A Tier III datacenter with improve our availability because of its capability to stay running even while components are being replaced. Upgrading to a Tier III datacenter will decrease downtime by 0.31%.

A Tier III datacenter has the benefits of a Tier I & II as well as having multiple power sources for all IT equipment (DataCave, 2014). This allows the system to stay up and running if any components need to be replaced or are removed. Any unplanned outages will be unlikely to cause any disruption to equipment as well (Coreix). Compare this to a Tier I which would require to be shut down in any case of necessary work because of having no redundancy in power (Colocation America). A Tier III also has multiple power and cooling distribution paths leading to less overheating. This increases the availability from 99.67% to 99.98%.

Switching to a Tier III datacenter will cost us 35,000,000 in the first year. The process of this will save us a total of 48,229,056 over three years. With the implementation of this datacenter our net benefit will be 13,229,056.

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| **Tier 1 Costs** | | | | |
| **Cost per min** | **Minutes** | **Availability** | **Downtime** | **Total cost of downtime a year** |
| **$14,800** | **525,600** | **99.67%** | **1,734.48** | **$25,670,304.00** |

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| --- | --- | --- |
| **1 Year** | **2 years** | **3 years** |
| **25,670,304** | **51,340,608** | **77,010,912** |

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| **Tier III Costs & Benefits** | | | | | | | | | |
| **Minutes** | **Availability** |  | **Year 1** | | **Year 2** | | **Year 3** | **Total** | |
| **525,600** | **99.98%** | **Cost** | **$ 35,000,000** | | **0** | | **0** | **$35,000,000** | |
| **Downtime** | **105.12** | **Benefit** | **0** | | **24,114,528** | | **24,114,528** | **48,229,056** | |
| **Total cost per year** | **14800\*105.12 = 1,555,776** | **Amount saved** | | **25,670,304.00 – 1,555,776.00 = 24,114,528** | | **Total SAVINGS** | | | **$ 13,229,056** |

**Works cited**

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