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MIS2501- Doyle

Flash Paper 1

Our company has the opportunity to save \$48,000,000 over the next three years by replacing our Tier I data center with a Tier III data center. A Tier III data center has everything a Tier I has but adds redundant components, multiple power and cooling sources, and a utilization rate of 99.97 percent (Jonathan). A Tier III data center will significantly reduce the amount of downtime our company experiences and thus decreasing the amount of money we lose due to downtime.

A Tier I data center, has non-redundant capacity components and a single, non-redundant distribution path to server the computer equipment (Turner). A Tier I data center is susceptible to disruption from both planned and unplanned activities. A Tier III data center is a concurrently maintainable data center with redundant capacity components and multiple independent distribution paths serving the computer equipment but only one distribution path is required to serve the computer equipment at any time (Fontecchio). All IT equipment is dual power and installed properly to be compatible with the topology of the site's architecture. Every single capacity component and element in the distribution paths can be removed for service without having an impact on any of the computer equipment (Turner).

A Tier III data center will save the company money, due to the fact that it has a utilization rate of 99.98 percent. A Tier I data center has over 1700 minutes of downtime each year, which translates to a loss of \$25,670,304 per year. Because a Tier III data center has a 99.98 percent utilization rate, there is only 105 minutes of downtime, which means we only lose \$1,555,776. That is a saving of over \$24 million per year. In the first year, we would spend 35,000,000 dollars to build the Tier III data center but by the end of year three, the benefits would surpass the cost. Over a three year period, the benefits in terms of dollars would be \$48,229,056 while the total cost is \$35,000,000. This means that our return on investment is 38 percent. After analyzing the facts and figures, this is a great investment to make.

		Minute per year	Minutes lost	Cost per minute
		525600		14,800
Tier I	99.67	523865.52	1734.48	25670304
Tier III	99.98	525494.88	105.12	1555776
			Cost	Benefit
		Year I	35,000,000	0
		Year II	0	24114528
		Year III	0	24114528
		Total	35,000,000	48229056
				13,229,056
		ROI		0.377973029

Reference

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Jonathan, "what the heck is a Tier 3 data center?" Who is hosting this, 2010 July. 2013 Feb

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