

BS Srinath Amruth (Addressed as Amruth)
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Martin Doyle
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Our company can save exactly \$24,114,528 every year by switching to a Tier III data center. These savings are a direct result of a small, yet impactful 0.31% increase in availability from Tier I to the Tier III data center, which means that we save 1,629.36 minutes of costly downtime per year. Lately, our company has had 10 outages in our ERP system because of inadequate facilities in our current Tier I data center, which caused abrupt halts in several processes within the organization. The best solution to this problem is to upgrade our data center to a Tier III data center which has technically impeccable capabilities.

The Tier III data center is made up of redundant components and multiple active power and cooling distributions pathways, which help improve on-site hardware maintenance in case of any downtime. These features make the Tier III data center concurrently maintainable, meaning that in the event of an interruption, the system continues to function. Also, an additional power source is provided to serve as a backup for up to 72 hours. These key features give the tier III data center 99.98% availability and approximately only 105 minutes of downtime per year.

These enhanced features and capabilities of the Tier III data center definitely serve as prime reasons to invest in it. Upgrading to the Tier III drops the downtime per year from 1734.48 minutes to 105.12 minutes (16.5 times). As shown in figure 2, reduced downtime gives us a total net savings of around \$13.2 million after installation costs, which translates to a return on investment (ROI) of 37.80% over a 3-year period. We will continue to make savings of up to \$24.1 Million after this 3-year period thus making a positive impact on the top and bottom lines of the income statement. In short, moving to the tier III data center will save us a millions of dollars while tremendously reducing downtime.

Appendix

Webopedia.com. "data center tiers" Web. September 17th 2016 < http://www.webopedia.com/TERM/D/data_center_tiers.html >

DPairCorp. "Tier III: Concurrently Maintainable Site Infrastructure." Web. September 17th 2016. < <http://www.dpair.com/design-data-center/data-center-tier/tier-iii> >

OVH. "The Tiers" Web. September 17th 2016. < <https://www.ovh.com/us/dedicated-servers/understanding-t3-t4.xml> >

INTERNAP. "Reduce Data Center Failure with Concurrent Maintainability" Web. September 17th 2016. < <http://www.internap.com/resources/reduce-data-center-failure-concurrent-maintainability/> >

Colocation America Inc. "Data Center Standards (Tier I-IV)" Web. September 17th 2016. < <https://www.colocationamerica.com/data-center/tier-standards-overview.htm> >

FIGURE 1

Minutes in a year =	525,600
Downtime for TIER 1 in minutes =	$(100\% - 99.67\%) * 525,600 = 1734.48$
Downtime for TIER 3 in minutes =	$(100\% - 99.98\%) * 525,600 = 105.12$
Downtime cost (\$) per minute =	14,800
TIER 1 ASSOCIATED COSTS	
	Dollar Amount (\$)
Installation	0
Downtime per year	$1734.48 * 14,800 = 25,670,304.00$
TIER 3 ASSOCIATED COSTS	
	Dollar Amount (\$)
Installation	35,000,000 (Takes up Year 1)
TIER 1 usage in Year 1 during TIER 3 Installation	27,381,657.60 (Added to year 1 cost)
Downtime per year	$105.12 * 14,800 = 1,555,776.00$

FIGURE 2

	Year 1	Year 2	Year 3	Total Cost for 3 years
Tier 1 Costs	\$ 25,670,304.00	\$ 25,670,304.00	\$ 25,670,304.00	\$ 77,010,912.00
Tier 3 Costs	\$ 60,670,304.00	\$ 1,555,776.00	\$ 1,555,776.00	\$ 63,781,856.00
			3 YR NET SAVINGS =	\$ 13,229,056.00
			3 Year ROI =	37.80%

FIGURE 3

	Downtime cost/yr
Tier 1	\$ 25,670,304.00
Tier 3	\$ 1,555,776.00
SAVINGS PER YEAR =	\$ 24,114,528.00