Datacenter Downtime:
How Much Does It Really Cost?

Aberdeen Group's February 2010 research on *Disaster Avoidance and Disaster Recovery: Making your Datacenter Disaster Resilient* analyzed the frequency and associated costs of datacenter downtime for 125 organizations worldwide. Aberdeen's findings indicated that the dream of perfect, or even near-perfect, datacenter uptime is still just a dream for all but a tiny fraction of organizations. This document refreshes the June 2010 research with data collected from 134 organizations in February, 2012.

The focus of this document is to quantify the current cost of IT-induced business downtime. It can often be difficult to justify large investments in solutions designed to protect data and datacenter uptime, as the money spent has no direct tie to the generation of revenue. Furthermore, when such solutions are implemented correctly, the end result is that *nothing happens*. Aberdeen's research looked at lost revenue as a key measure to determine the impact of downtime, and discovered that even above-average organizations were absorbing staggering costs each year.

Business Context: The ROI of Datacenter Resiliency

In the February 2012 survey, Aberdeen conducted an in-depth analysis of a number of factors surrounding datacenter downtime. Survey respondents were asked questions concerning the average number of downtime events per year, the average length of an event, the cost per hour of downtime and the time it took to recover 90% of business operations following a business interruption.

Aberdeen then used the data from the survey to identify the top performers in datacenter management and reduced downtime. To distinguish Best-in-Class (top 20%) companies from Industry Average (middle 50%) and Laggard (bottom 30%) organizations, Aberdeen used the following performance criteria:

- Number of actual business interruptions per year
- The average length of time of business interruptions
- Length of time required to recover 90% of operational functionality

Companies with top performance based on these criteria earned Best-in-Class status (Table 1).

Research Brief

Aberdeen's Research Briefs provide a detailed exploration of a key finding from a primary research study, including key performance indicators, Best-in-Class insight, and vendor insight.

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Table 1: Definition of Maturity Class

Definition of Maturity Class	Mean Class Performance
Best-in-Class: Top 20% of aggregate performance scorers	▪ Recorded fewer than1 business interruption over the last 12 months ▪ Averaged only 6 minutes of downtime per each event ▪ Took less than 1 hour to restore 90% of business operational functionality after the last interruption
Industry Average: Middle 50% of aggregate performance scorers	▪ Recorded 2.3 business interruptions over the last 12 months ▪ Averaged 1 hour of downtime per each event ▪ Took 2 hours to restore 90% of business operational functionality after the last interruption
Laggard: Bottom 30% of aggregate performance scorers	▪ Recorded 4.4 business interruptions over the last 12 months ▪ Averaged 9 hours of downtime per each event ▪ Took 11 hours to restore 90% of business operational functionality after the last interruption

Source: Aberdeen Group, February 2012

"It is difficult to maintain executive sponsorship, prioritization and funding for disaster recovery initiatives when weighed against pressing competitive, revenue or cost-saving initiatives."
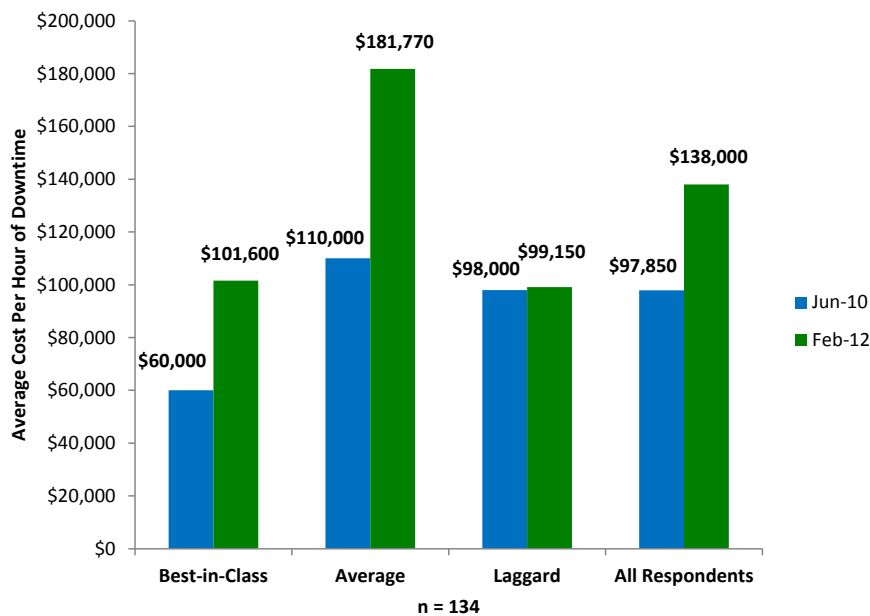
~ CIO, Mid-Sized Medical Equipment Provider, USA

The Cost of Downtime is Increasing Greatly

Aberdeen examined the average cost of an hour of downtime as reported in June, 2010 and February, 2012.

Figure 1: Time to Recover from Business Interruptions

n = 134

Source: Aberdeen Group, February 2012

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Aberdeen found that between June 2010 and February 2012, the cost per hour of downtime increased by 38%. The increase in the cost of downtime is not surprising as more business operations have been automated. Today most, if not all business processes include some type of computing capability and those come to a complete standstill if the server or application goes down.

Average Annual Cost of Downtime

The yearly cost of downtime is calculated by combining the number of yearly events, the average length of downtime event and the average cost per hour of downtime as reported by survey respondents.

Table 1: Cost Savings

Yearly Cost Metrics	Best-in-Class	Industry Average	Laggards
Business interruption events	.3	2.3	4.4
Time per business interruption event (hours)	.1	1	9
Total disruption (hours)	.03	2.3	39.6
Average cost per hour of disruption	$101,600	$181,770	$99,150
Total cost of business interruption events	**$3,048**	**$418,071**	**$3,926,340**

Source: Aberdeen Group, February 2012

In summary, Best-in-Class organizations have been able to increase their datacenter performance to a point where they were losing **virtually nothing to datacenter downtime**. In fact, 42% of Best-in-Class organizations reported having no downtime events in the last 12 months. While many companies might not have the budget or management support to improve their performance all the way to Best-in-Class levels, simply improving from Laggard to Industry Average levels can result in reducing losses over **$3 million USD per year.**

Recommended Actions

The Aberdeen report *Disaster Avoidance and Disaster Recovery: Making your datacenter Disaster Resilient* examines the steps Best-in-Class organizations take to minimize business interruptions. Some of the strategies any organization can use to reduce downtime include:

- **Calculate the cost of downtime in your organization**. Until the organization understands the size and scope of any potential impact it can not define an appropriate Disaster Recovery (DR) plan. Investing tens of thousands of dollars in a DR program may make sense if the cost of a business interruption is measured in the hundreds of thousands of dollars - but *not* if the cost is measured in merely hundreds of dollars.

- **Formalize a plan.** The backbone to any successful DR program starts with a roadmap laid out at the top of an organization, and constantly kept current as the IT infrastructure grows and changes.

- **Test, test, test**. Only 27% of Laggard companies report they regularly test their DR programs. A downtime event is not the time to discover a forgotten application or critical server. This is the single most important thing an organization can do to reduce the severity of downtime.

For more information on this or other research topics, please visit www.aberdeen.com.

Related Research	
Disaster Avoidance and Disaster Recovery; May 2010 Datacenter Downtime; How Much does it Really Cost; June 2010	Best Practices in Protecting Virtualized Applications; November 2011
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