

MAINTAINING VIRTUAL SYSTEM UPTIME IN TODAY'S TRANSFORMING IT INFRASTRUCTURE

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Report Highlights

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Organizations that have moved to virtualization have cut application deployment time in half.

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The cost of an hour of downtime for all businesses has grown by 60% to \$260,000.

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Virtualization leaders are 35% more likely to take advantage of high availability systems.

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Virtualization Leaders are 2.5 times more likely to track the ROI of virtual applications.

In this report, we look at the evolution of virtualization and the growing need to run virtual servers and applications on high-end, fault-tolerant hardware in order to avoid costly downtime events.

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Many companies are turning to virtualization to improve server utilization and more quickly and efficiently meet the technology needs of the business.

While virtualization isn't exactly new, it is constantly being transformed by new technologies – cloud deployments, software-defined data centers, hyper-converged systems. As a result, the challenges presented by virtualization, and the strategies needed to ensure its success, are also evolving. This is especially true when it comes to maintaining continuity and avoiding downtime in critical virtual systems.

Many businesses have made the move to virtualized servers – as we found in the 2014 Aberdeen report, [*Preventing Virtualized Application Downtime*](#) – and these organizations have seen a range of benefits, including improved agility and faster application deployments.

But some businesses find it difficult to reach all the goals of virtualization, especially when it comes to improved reliability and availability. By not pairing virtualization with the right hardware platforms, they fail to get the most out of their virtualization investment.

In this report, we look at the evolution of virtualization and the growing need to run virtual servers and applications on high-end, fault-tolerant hardware in order to avoid costly downtime events, events that can lead to hundreds of applications being unavailable. With the right business continuity, high availability, and disaster recovery capabilities in place, leading businesses can sustain virtual environments and avoid the costs of downtime.

The Evolving Virtual Data Center

In our recent survey looking into the current state of IT infrastructure, we found considerable evolution in how organizations deploy servers, applications, and the infrastructure that runs their business. Major changes coming

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from software-defined networks, converged systems, and private cloud are providing many benefits, including improved automation and application provisioning. But these same technologies are also increasing the demands on IT infrastructures, especially for those businesses trying to make due with older technologies.

Despite these challenges, many companies are turning to virtualization to improve server utilization and make it possible to more quickly and efficiently meet the technology needs of the business. As noted in the report [Preventing Virtualized Application Downtime](#), close to 70% of all applications are now virtualized.

According to our new data, by making this move, businesses absolutely improve their ability to deliver applications and services. In fact, **organizations that have moved to virtualization have cut the amount of time it takes to deploy applications in half.**

This is a significant improvement for these businesses, resulting in increased productivity, reduced costs, and more satisfied end-users and customers. However, in order to realize these benefits, organizations need to follow the path of businesses identified as leaders in virtualization.

Virtualization leaders work to ensure that they are running the best platforms to avoid downtime that can be a disaster for any business. In fact, the cost of downtime is only increasing, which is no surprise given the rising importance that technology plays in business today.

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Average cost per hour of downtime

- The average cost of an hour of downtime for all businesses has grown to \$260,000.
- For businesses that are followers in IT infrastructure, the cost of an hour of downtime is \$492,000!

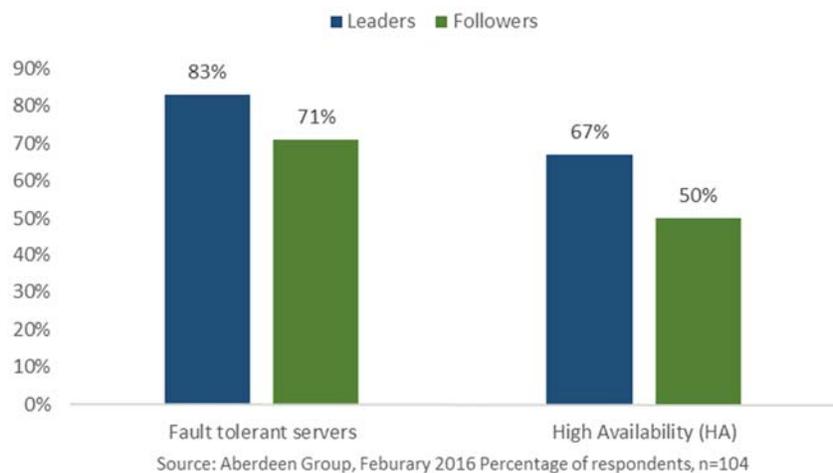
A survey we conducted in 2014 found that the average cost of an hour of downtime for all businesses was \$164,000. Looking at our new data, as shown in the sidebar, the average cost of an hour of downtime has increased 60%, to \$260,000. And for businesses that are “virtualization followers” (the bottom 60% of businesses using virtualization), the average cost of an hour of downtime is now approaching half a million dollars.

Building a Strong Virtualization Platform

How do leading organizations support their virtual environments and ensure that their virtual servers and applications are reliable and performing at their best? To find out, in a recent survey we polled organizations about the technologies and processes that they currently use to build virtual environments.

Looking at the Leaders – identified as the top 40% of businesses using virtualization – we discovered, as shown in Figure 1, a strong use of key technologies such as high availability systems and fault-tolerant servers.

Figure 1: Leaders Leverage HA and Fault-Tolerant Servers



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Looking at the data in Figure 1, we see how both the Leaders and the Followers (bottom 60%) are leveraging High-Availability (HA) software and are taking advantage of fault-tolerant servers. We also see that, while many businesses employ these key technologies, the Leaders are ahead in terms of using them to ensure high performance in their virtual systems.

Specifically, leaders are 18% more likely to utilize fault tolerant servers and an impressive 35% more likely to take advantage of high availability systems. Looking deeper, we can see how these businesses have become leaders in virtual application and server uptime and reliability.

First of all, by utilizing the right technologies and platforms, they ensure that their virtual applications are running on hardware designed to provide the best reliability.

Secondly, they have paired these systems with software and processes that make it possible to reach high availability levels and, in doing so, keep their critical virtual applications running, thus avoiding the high costs of downtime.

Keeping Virtual Systems Up and Running

As we saw above, organizations that are leaders have a clear edge in using high-availability systems and fault-tolerant servers, though both technologies are used by 50% or more of all businesses.

Another way the leaders set themselves apart is by combining these technologies with the right strategies, processes, and technical capabilities that give them visibility into virtual

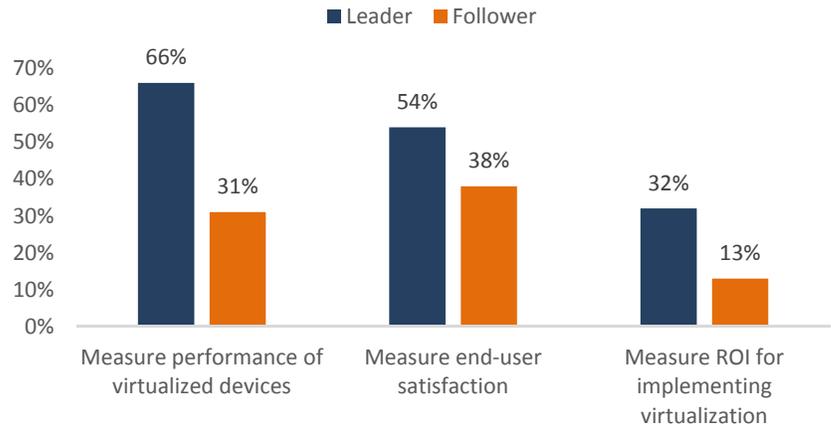
→ [Related Research](#)
"Preventing Virtual Application Downtime"

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application performance as well as an improved ability to find and fix issues that could lead to poor performance or downtime.

Looking at Figure 2 below, we see practices and technologies that help the Leaders understand performance, user satisfaction, and the value of their virtual applications.

Figure 2: Track Virtual Performance Like a Leader



Source: Aberdeen Group, February, 2016 Percentage of respondents, n=100

Avoiding downtime and poor application performance usually means understanding what good performance is and having visibility into problems the second they become apparent. Looking at the data around measuring the performance of virtualized devices, we see that Leaders are more than twice as likely as Followers to follow this practice.

Also, Leaders know that if end-users are unhappy with an application or service, they won't use it and the organization will lose money. That's why, when it comes to tracking end-user satisfaction with virtual applications, 54% of Leaders do so compared to only 38% of Followers.

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And, oh yeah, on that whole thing about losing money, Leaders are 2.5 times more likely than Followers to analyze if their virtual applications are providing a return on investment (ROI).

This is how leaders in virtual infrastructure are made: By combining high availability software and fault-tolerant servers with strong measurement and analysis of performance and virtual application experience.

Key Takeaways

While the use of virtualized servers and applications has become ubiquitous in businesses today, many aren't getting the most out of their investment.

These organizations have adopted virtualization and may even be using fault-tolerant servers and high availability systems. But as the saying goes, "There's doing something, and then there's doing something right."

Aberdeen research has found that the true leaders when it comes to deployment of virtualization pair this approach with the right strategies and supporting technologies, as well as putting in the analysis to make sure that the fault-tolerant servers and high-availability systems they use are best of breed and will meet their needs both today and in the future.

By taking these steps, Leaders are gaining number of benefits, including:

- ➔ **Reducing the overall number of servers they need**
- ➔ **Reducing or eliminating costly downtime**

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→ **Making disaster recovery easier and faster**

→ **Achieving faster application deployments**

With these technologies and practices in place, leading organizations gain a very real and valuable advantage in this increasingly virtualized world.

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

Related Research

[*Leaders in Business Continuity and Disaster Recovery Are Ready to Handle Anything*](#); January 2016

[*There's No Secret Trick to Successful Server Upgrades*](#); January 2016

[*The Rise of Converged Systems and the Evolution of Data Centers*](#); December 2015

[*Construct the Right Architecture for Private Clouds*](#); January 2016

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