

The Business Value of **Observability**

Five business outcomes you can achieve with Datadog



DATADOG

Introduction

Datadog is the monitoring and security platform for cloud applications.

Born in the cloud, the Datadog platform provides real-time visibility into an organization's entire technology stack through essential log management and unified infrastructure, security, and application performance monitoring. Organizations of all sizes and across a wide range of industries leverage Datadog to help lower their computing and monitoring costs, increase IT uptimes, and accelerate time to market. These benefits ultimately enable customers to improve the performance of their cloud applications and prevent costly outages in business-critical services.

To get a better understanding of how the different products within the Datadog platform help organizations drive their unique business goals, the Datadog Business Value team partnered with customers to quantify the value of the platform in their environments through **Business Value Assessments (BVAs)**. BVAs help organizations optimize their monitoring strategies by focusing on ways to reduce costs and improve overall productivity. Assessments consist of the following steps:

1

Interview teams to gather “current state” and “future state” business value metrics associated with a company's monitoring stack

2

Leverage findings to create a financial business case and calculate financial metrics, such as Total Cost of Ownership (TCO), Return on Investment (ROI), and Payback Period

3

Review the final results with the customer and provide recommendations based on our findings

The common themes from these assessments have been synthesized into five key business outcomes from leveraging the Datadog platform. In this eBook, we'll look at each one—and what they mean for your organization—in more detail.

The five business outcomes we will cover in this eBook are:

- **Reduce IT costs**
Leverage a unified platform to reduce the costs of monitoring cloud infrastructure **1**
- **Increase IT uptime**
Proactively identify performance issues before they cause a severe outage and lead to a loss of revenue **2**
- **Accelerate time to market**
Maintain a competitive edge by increasing visibility into deployments and their effect on application performance **3**
- **Increase customer conversion**
Drive higher customer satisfaction by delivering responsive applications with a seamless user experience **4**
- **Reduce security risks**
Leverage existing observability data for a complete view of application threats and vulnerabilities **5**

OUTCOME 1

Reduce IT costs

Leverage a unified platform to
reduce the costs of monitoring
cloud infrastructure

OUTCOME 1: REDUCE IT COSTS

Modern cloud environments experience consistent and rapid growth as organizations adopt more innovative technologies to meet customer demand. But each additional platform, tool, and framework introduces a new set of observability challenges. For instance, organizations deploying multi-cloud applications need visibility across Google Cloud, Azure, and AWS, while those supporting hybrid environments need the ability to monitor on-premise infrastructure alongside their cloud resources.

Organizations often attempt to overcome these hurdles by investing in multiple observability tools for their environments. According to a [recent microsurvey¹](https://www.itopstimes.com/softwaredev/report-majority-of-companies-use-up-to-nine-different-tools-for-observability) by the Cloud Native Computing Foundation (CNCF), 72 percent of surveyed organizations use up to nine

different tools for monitoring logs, metrics, and traces. Each tool has its own initial investment, licensing, and maintenance costs, and these expenses can quickly become unsustainable.

Datadog provides a unified monitoring environment for your cloud applications, so you only need to invest in and maintain one solution. You can easily pivot between metrics, traces, and logs for greater context when troubleshooting a performance issue. Additionally, Datadog offers greater visibility and control over data ingestion and management, so your teams can more accurately monitor overall usage and costs. These capabilities enable you to make informed decisions on how you allocate spending and ensure teams stay within budget.

1. <https://www.itopstimes.com/softwaredev/report-majority-of-companies-use-up-to-nine-different-tools-for-observability>

CUSTOMER STORY



Lifion by ADP is a Next Gen HCM solution that combines advanced cloud-based technology, data-driven insights, and deep HCM expertise to create a flexible platform that empowers businesses to evolve as they grow. They previously leveraged multiple monitoring tools for alerting, tracing, and more, totalling \$2.1 million in annual maintenance costs. Datadog enabled Lifion by ADP to consolidate their monitoring solutions and reduce the time spent in managing disparate tools. These changes resulted in a net savings of \$647,000 annually, representing a 30 percent decrease in their overall IT costs.

\$647K

NET ANNUAL SAVINGS

30%

DECREASE IN OVERALL IT COSTS

OUTCOME 2

Increase IT uptime

Proactively identify performance issues before they cause a severe outage and lead to a loss of revenue

CHAPTER 2: INCREASE IT UPTIME

Organizations need to ensure that their applications remain highly available to preserve customer trust and avoid lost revenue. According to a report from [Ponemon Institute](https://www.vertiv.com/globalassets/documents/reports/2016-cost-of-data-center-outages-11-11_51190_1.pdf)², the average cost of downtime is approximately \$9,000 per minute, though that number increases significantly for high-risk industries like retail, banking, and healthcare. [One survey](https://techchannel.com/IT-Strategy/09/2021/cost-enterprise-downtime)³ estimated that downtime costs for these companies can reach upward of \$83,000 per minute.

Teams typically attempt to prevent costly outages by alerting on key performance indicators, but catching performance issues before they affect users can be a major hurdle. Engineers may not always know what to alert on, so they create too many monitors to ensure coverage. The resulting alert activity can quickly lead to fatigue, which puts teams at risk of overlooking signs of a potentially

serious incident. Additionally, engineers are often required to methodically sift through large volumes of data to uncover a performance issue, further slowing down response times.

Datadog features like anomaly detection enable your teams to uncover hard-to-detect problems before they escalate into an incident. Anomaly detection leverages machine learning to monitor trends in service behavior and instantly alert you to any activity that deviates from the norm. Watchdog Root Cause Analysis (RCA) takes anomaly detection a step further by automatically identifying the underlying cause of related performance issues across your services. Your teams can leverage these insights to significantly reduce alert fatigue and troubleshooting time in order to prevent costly outages.

2. https://www.vertiv.com/globalassets/documents/reports/2016-cost-of-data-center-outages-11-11_51190_1.pdf

3. <https://techchannel.com/IT-Strategy/09/2021/cost-enterprise-downtime>

CUSTOMER STORY

The Washington Post

In an average month, the Washington Post receives around 80-90 million unique visitors and can see this number increase to over 110 million during breaking news events. That is what happened in January 2021 as a result of the US capital riots. Their systems are typically capable of handling these traffic spikes, but because of this event they experienced a surge that was significantly larger than normal. With the help of Datadog's anomaly detection monitors, their teams were notified immediately, giving them time to scale their systems in order to handle the load and ensure responsive applications.

“If it hadn't been for Datadog alerting us to the event, we would not have been able to sustain the load. Because of that alert, we were able to scale our systems and handle it appropriately.”

Stephen Erickson
Director of Engineering, Washington Post

OUTCOME 3

Accelerate time to market

Maintain a competitive edge by increasing visibility into deployments and their effect on application performance

CHAPTER 3: ACCELERATE TIME TO MARKET

There is an increasing need for organizations to evolve existing applications and underlying infrastructure in order to maintain a competitive edge in today's fast-moving markets. Most teams increase their velocity by automating their deployment cycles. Automated processes facilitate more efficient collaboration and stable releases, though they can be difficult to monitor at scale. According to Google's [“State of DevOps” report](https://cloud.google.com/blog/products/devops-sre/the-2019-accelerate-state-of-devops-elite-performance-productivity-and-scaling)⁴, high-performing teams deploy 208 times more than those that are considered low performing.

In order to maintain this cadence, teams need a comprehensive view into the status of each deployment, as well as their effect on application performance. For example, they need the ability to

quickly confirm whether a new code version has improved latency in a business-critical service. This visibility allows them to not only identify regressions before they reach customers, but also develop efficient development workflows that accelerate releases.

Datadog enables you to monitor new code at every stage of the development cycle. With Deployment Tracking, your teams can implement modern deployment strategies that ensure stable services for your customers. They can also leverage Datadog APM to identify performance bottlenecks that were introduced as a result of new code. With this level of visibility, your organization can confidently innovate and push new releases to market faster.

4. <https://cloud.google.com/blog/products/devops-sre/the-2019-accelerate-state-of-devops-elite-performance-productivity-and-scaling>

CUSTOMER STORY



Cvent is a market-leading meetings, events, and hospitality SaaS provider, with nearly 4,000 employees and more than 200,000 users worldwide. To support their customers during the global pandemic, Cvent shifted their focus to building a new platform for running virtual, hybrid, and in-person events. They needed a monitoring solution that would allow them to rapidly scale their containerized environment and microservices in order to support higher development speed. With Datadog, Cvent was able to make informed decisions about scaling up their infrastructure and meet their performance goals on a tight timeline.

Throughout development, Datadog APM enabled Cvent to identify areas of their codebase that needed optimization, as well as critical bugs that would have affected their customers at launch. They also leveraged features like Deployment Tracking to implement a rolling deployment strategy for their services and detect when code changes introduced performance regressions.

Datadog's tools allowed Cvent to successfully launch the Cvent Attendee Hub™—from concept to deployment—in less than six months and support over

28,000

attendees for their first event

OUTCOME 4

Increase customer conversion

Drive higher customer satisfaction by delivering responsive applications with a seamless user experience

CHAPTER 4: INCREASE CUSTOMER CONVERSION

An application's performance has a direct effect on customer satisfaction, churn, and an organization's overall conversion rate. Approximately 40 percent of customers abandon applications that take more than [three seconds](https://neilpatel.com/blog/loading-time/)⁵ to load—and that time is reduced to one second on mobile applications, specifically. Load times can also greatly influence search engine rankings, which play a significant role in attracting and keeping new customers.

These kinds of performance issues can be especially difficult to resolve for organizations with a global customer base. Each customer may leverage different browsers or devices to navigate an application, each of which can affect a page's performance.

Other issues, such as service latency, can also fluctuate across geographic regions. Because of this variation in activity, teams need complete context for mitigating performance issues and customer churn.

Datadog APM enables you to visualize bottlenecks across your infrastructure by capturing key performance indicators like latency and service errors. You can filter this data by tags, such as device, browser, and region, for better insight into the scope of an issue. You can also leverage APM data to build SLOs for monitoring performance trends over time. This information allows teams to identify and make significant improvements to inefficient services in order to deliver a better user experience.

5. <https://neilpatel.com/blog/loading-time/>

CUSTOMER STORY



Wayfair is an e-commerce site for home goods and furniture that is accessible on any device and from any geographic location. One of their primary goals is delivering a fast, reliable experience to their customers, but in 2019, they noticed that many of their core pages had become slower. They initially did not have adequate visibility into their services, which limited their ability to identify small-scale performance regressions that were growing into more serious problems over time.

Datadog APM enabled Wayfair to track the performance of each of their services and create SLOs for long-term regression monitoring so they could meet their performance improvement goals. Wayfair's business intelligence team also leveraged APM's tracing and visualization capabilities to identify misconfigured services that were generating long timeouts, leading to a 5 to 10 percent decrease in customer checkouts.

**With Datadog,
Wayfair achieved...**

20%

Reduction in load times

600

days of wait time saved

**...providing customers
with a significantly improved
shopping experience**

OUTCOME 5

Reduce security risks

Leverage existing observability data
for a complete view of application threats
and vulnerabilities

CHAPTER 5: REDUCE SECURITY RISKS

The number of cyberattacks has grown significantly⁶ in recent years, and their types can vary in severity and scope. Some of the most common threats to applications target resources that are more vulnerable to costly outages. Additionally, simple misconfigurations in cloud resources were the primary cause of security breaches in 2020, according to a report by Fugue⁷.

Today's modern cloud environments are large and complex, so there is increasing pressure to quickly identify these types of threats before a company or customer is compromised. But doing so can be difficult in environments that deploy thousands of resources and generate even larger volumes of data at any given time. Teams often lack the expertise to find, prioritize,

and mitigate the most critical threats before they compromise an environment. On top of that, they may not have the right tools to keep up with the growing threat landscape.

Datadog's Cloud Security Platform enables your teams to leverage their existing observability data to automatically surface critical vulnerabilities in their workloads and underlying infrastructure. With Datadog's out-of-the-box threat detection rules, security teams can identify the scope and source of an attack in real time, before it escalates. Rules are also mapped to industry-standard compliance and security frameworks like CIS⁸ and MITRE ATT&CK⁹, so you can be confident in your ability to identify a risk before it affects your customers.

6. <https://purplesec.us/resources/cyber-security-statistics/>

7. <https://securityaffairs.co/wordpress/117305/security/cloud-misconfiguration-risks.html>

8. <https://www.cisecurity.org/controls>

9. <https://attack.mitre.org/>

CUSTOMER STORY



Delivery Hero's security team experienced a new challenge when users began creating accounts from different IP addresses in order to receive multiple free food vouchers, which were intended for new customers. The team's threat detection workflow at the time involved manually creating firewall rules for every domain they operated. This manual process was difficult to scale and led to a month-long delay in detection, which was ample time for users to leverage their multiple vouchers and ultimately hurt the company's bottom line.

Datadog's Cloud Security Platform gave Delivery Hero the tools they needed to systematically identify and block malicious IPs. Delivery Hero's security team leveraged Datadog's threat detection rules and security dashboards to monitor traffic across their entire technology stack and quickly surface anomalous behavior. These capabilities enabled them to build a comprehensive and automated threat detection process for all of their domains, with minimal setup and maintenance overhead.

Using Datadog,
Delivery Hero
eliminated their
month-long
detection delay
and uncovered

37,000

fraudulent users in
their application

ABOUT DATADOG



Datadog is the monitoring and security platform for cloud applications.

Our SaaS platform integrates and automates infrastructure monitoring, application performance monitoring and log management to provide unified, real-time observability of our customers' entire technology stack. Datadog is used by organizations of all sizes and across a wide range of industries to enable digital transformation and cloud migration, drive collaboration among development, operations, security and business teams, accelerate time to market for applications, reduce time to problem resolution, secure applications and infrastructure, understand user behavior and track key business metrics.



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