# anodot

# Go beyond Datadog's infrastructure and application monitoring with Autonomous Business Monitoring

Anodot's Deep 360™ technology monitors 100% of your application, infrastructure, revenue, partner and customer experience data to provide fast, accurate, and meaningful alerts

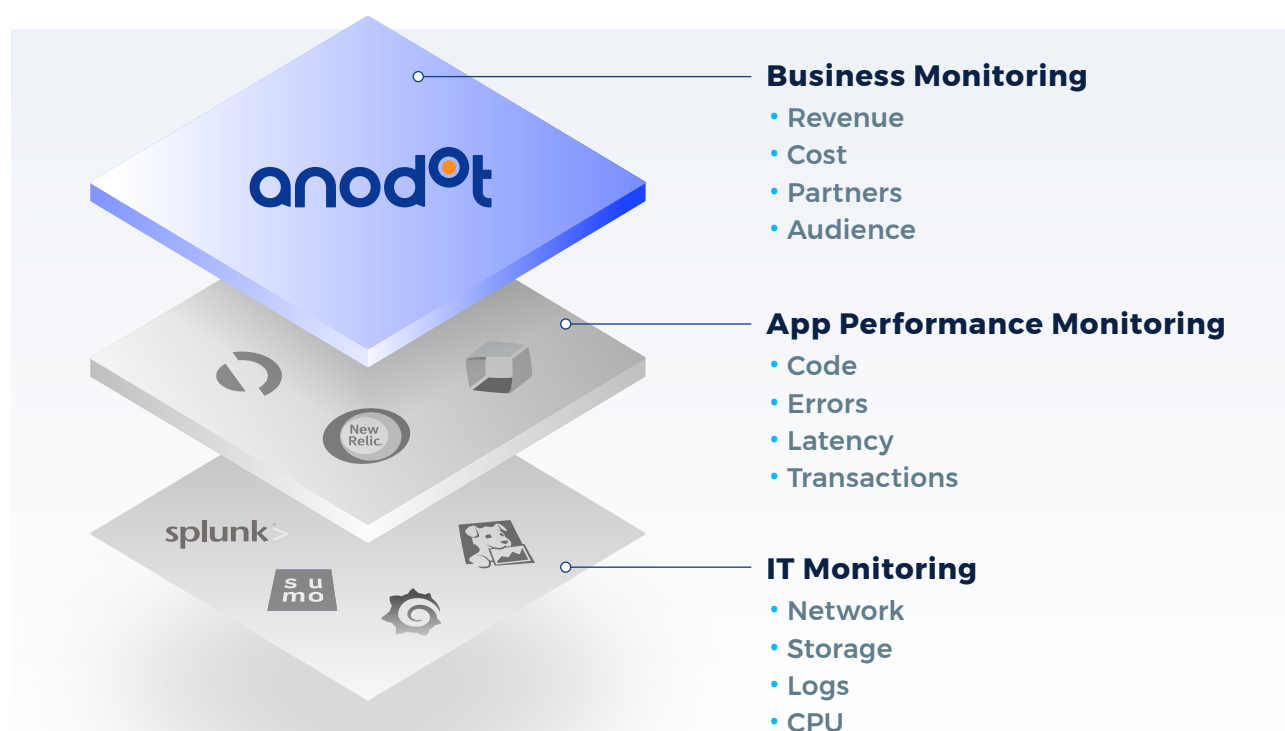| Monitoring Scorecard | DATADOG | anodot |
|---|---|---|
| Scope of data coverage | ★★★☆ | ★★★★ |
| Level of monitoring automation | ★☆☆☆ | ★★★★ |
| Scale of monitored metrics | ★★☆☆ | ★★★★ |

# Why only monitor infrastructure and applications—when you can monitor your entire business?

Anodot's Deep 360™ technology is a business-wide monitoring solution that ensures fast and accurate monitoring of the organization's most revenue-critical metrics. Backed by four patents, Anodot leverages AI to both learn the behavior of every single metric in HD quality and map the network of correlations between metrics in the data. Anodot then mines the stream of incoming data to rapidly identify and score anomalies.

As opposed to infrastructure and application monitoring solutions like Datadog, Anodot sits higher up in the stack and provides real-time detection of incidents across the entire business to proactively detect revenue/cost impacting issues.



**Business Monitoring**
- Revenue
- Cost
- Partners
- Audience

**App Performance Monitoring**
- Code
- Errors
- Latency
- Transactions

**IT Monitoring**
- Network
- Storage
- Logs
- CPU

## Revenue & Cost Monitoring

Revenue and cost streams are complex and fragmented—acute incidents or chronic glitches can quickly result in massive bleeds to your bottom line. Anodot monitors your cost and payment data ecosystems to surface potential issues and catch missing revenue or runaway costs in real time.

## Partner Monitoring

Third party applications support critical infrastructure and sensitive systems such as CRM, payments, ordering, marketing, and advertising. All these systems operate independently and are siloed out of monitoring reach. Anodot monitors and analyzes the 3rd party tools and systems that support and enable your business, surfacing mission-critical issues immediately.
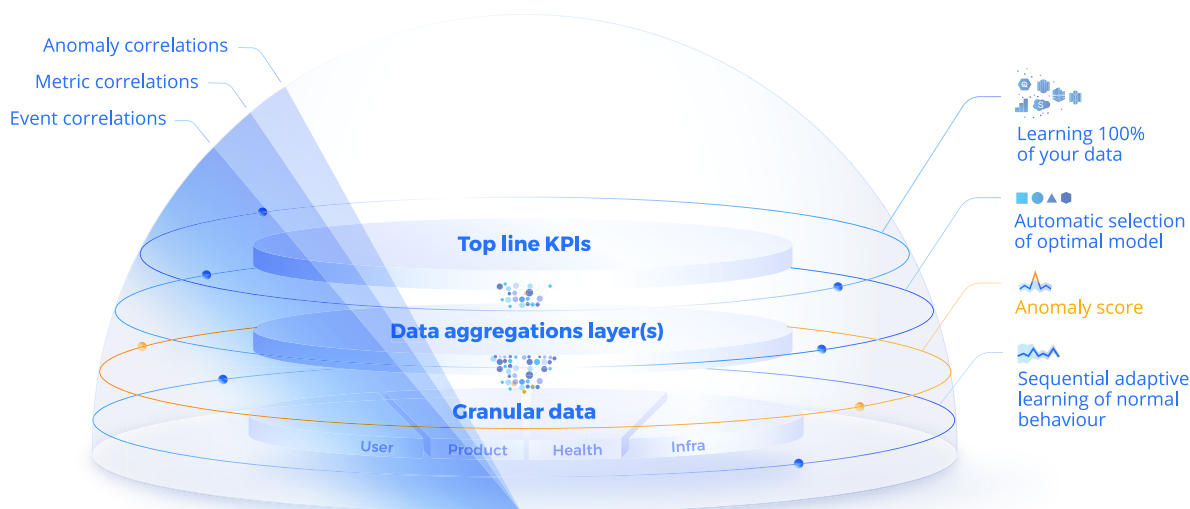
## Customer Experience Monitoring

Anodot monitors your logins, active users, conversion rates, retention rates, subscribers, churn and other critical customer experience KPIs. Anodot helps you find and fix customer experience issues before they impact your usage, conversions, retention and revenues.

## Infrastructure & App Monitoring

Anodot continuously monitors vast streams of infrastructure and application data, including servers, databases, networks, microservices, SaaS and cloud providers, data processes, APIs and automation tools. Anodot's solution is built to identify and diagnose high-impact problems faster than is humanly possible.

# Deep 360 Monitoring™

Built for Autonomous Monitoring.

Anomaly correlations
Metric correlations
Event correlations

Top line KPIs

Data aggregations layer(s)

Granular data

User    Product    Health    Infra

Learning 100% of your data

Automatic selection of optimal model

Anomaly score

Sequential adaptive learning of normal behaviour

# Infrastructure and application monitoring tools fail to detect revenue-impactful issues

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Not all revenue impactful issues can be observed through infrastructure and application metrics. Very often, revenue issues occur without leaving a trace in the app or infrastructure data. For example, a surge in hourly cloud costs because of increased queries, a drop in traffic from a partner that's testing out competitors, or a slump in conversions and purchases due to campaign efficiency issues will not show up on your infrastructure or application monitor — but will directly translate to revenue loss.

Only monitoring and correlating between 100% of your data and metrics can surface these common types of common revenue bleeds.

# Monitoring machines and monitoring business KPIs are completely different tasks

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Many companies today try to feed business metrics into infrastructure and application monitoring systems like Datadog. These solutions track your business in real time based on log or application data – something that would seem to make sense. In practice, however, this strategy fails to produce accurate and effective monitoring or reduce time to detection of revenue-impactful issues. That's because business metrics are fundamentally different to machine data.

### Dynamic Context

Unlike machine data, business metrics derive their significance from their unique context. They cannot be evaluated in absolute terms, but only in relation to a set of changing conditions. In that sense, they are subject to interpretation.

## Unknown Topology

When monitoring machine data, the relationships between the different machines, and between the different operational metrics for each machine, are known. When monitoring business data, the relationships and correlations between the different metrics are too dynamic and volatile.

## Irregular Sampling Rate

When monitoring machines, a new data point is received every x seconds as long as the machine is alive. This is not the case for business KPIs. There are full minutes and even hours without a purchase or a click. Business sampling rate is irregular and poses a unique set of monitoring challenges that can only be mitigated by using a robust ML algorithm library that can adapt to every KPIs unique behavior.

# A look at Datadog vs. Anodot

At the basic operational level, Datadog ingests machine data (logs), indexes them, makes them searchable, and then provides BI tools like alerts, dashboards and reports to monitor them. However, the detection of business incidents as an enterprise-wide self-service solution is not the goal of Datadog. The typical Datadog end-users are IT operations, security, and DevOps teams — and not product, marketing or business owners.

Datadog does offer anomaly detection capabilities. However, it requires that each user decide when to apply anomaly detection, to what KPI and at what conditions. Of course, it is humanly impossible to scan thousands of KPIs in order to decide which KPI is eligible for anomaly detection and how it's best evaluated. Datadog imposes additional restrictions on its anomaly detection, from deviations to roll up intervals, and thresholds for alerting, warning, and recovery for each KPI, to predefined seasonality selection. Anomaly detection with Datadog is executed by three algorithms only, while real-world metrics come in many more shapes and sizes.

With Anodot, 100% of your data is autonomously scanned for anomalies in real time. From its library of algorithms, Anodot picks the most appropriate algorithm to learn the behavior of each metric, and adapts itself to changes in KPI behaviour. Anodot can scale to billions of metrics, with no restrictions to data or hardware. And the simple UI is accessible to all stakeholders, from IT and data scientists to product managers and business owners.

Following is a usability analysis, based on **Datadog's technical documentation**:

# When to enable anomaly detection

### Datadog

Datadog's anomaly detection is well-suited for metrics with strong trends and recurring patterns that are hard to monitor with threshold-based alerting.

### Anodot

Anodot simply monitors all your metrics, all the time. Anodot isn't limited to metrics with strong trends and recurring patterns: it's algorithm library is built to monitor any type of signal.

# Create monitor and set alert conditions

### Datadog

With datadog you need to create a monitor for each metric and set fixed alert options such as deviations, algorithm, seasonality, daylight savings, rollup interval, and thresholds for alerting, warning, and recovery.

### Anodot

Anodot works on 100% of your data autonomously. No need to manually create a monitor, set alert conditions or check if a metric is eligible for anomaly detection or not: all metrics and dimensions are monitored all the time with the most appropriate alert conditions and algorithms.

# Seasonality Limitations

### Datadog

With Datadog you need to predefine metric seasonality when setting your alert conditions, with three options to choose from:

- Hourly: The algorithm expects the same minute after the hour behaves like past minutes after the hour
- Daily: The algorithm expects the same time today behaves like past days
- Weekly: The algorithm expects that a given day of the week behaves like past days of the week

### Anodot

Anodot works on 100% of your data autonomously. No need to manually create a monitor, set alert conditions or check if a metric is eligible for anomaly detection or not: all metrics and dimensions are monitored all the time with the most appropriate alert conditions and algorithms.

# Anomaly detection algorithms

## Datadog

Datadog provides three anomaly detection algorithms to manually choose from:

- Basic: Metrics with no repeating seasonal pattern
- Agile: Seasonal metrics expected to shift (the algorithm should quickly adjust to metric level shifts)
- Robust: Seasonal metrics expected to be stable (slow level shifts are considered anomalies)

## Anodot

Anodot uses over 20 anomaly detection algorithms that have been developed and optimized to work at scale, and has **specific patents** in this area. Anodot automatically selects the most appropriate algorithm, adapts to changes in metric behavior, and can switch algorithms in case patterns change. Naturally, this also means that false positives and alert storms are left behind.

# Alert UI

## Datadog
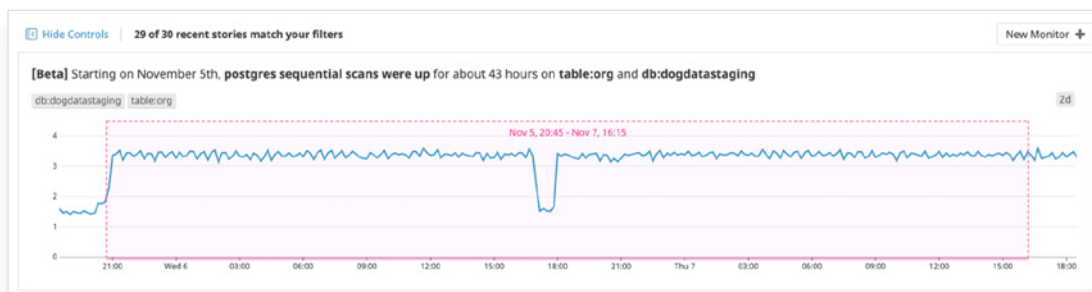


## Anodot

# See how Datadog compares to Anodot, feature by feature

Anodot makes it easy to monitor your entire business and detect incidents before they impact your users and revenue.

| Feature | Datadog | Anodot |
|---|---|---|
| **Scope of data coverage** | | |
| Built-in data collectors | ✓ | ✓ |
| Infrastructure & app monitoring | ✓ | ✓ |
| Revenue & cost monitoring | | ✓ |
| Partner monitoring | | ✓ |
| Customer experience monitoring | | ✓ |
| Detection of small & slow leaks | | ✓ |
| **Level of monitoring automation** | | |
| Anomaly & outlier detection | ✓ | ✓ |
| Auto-learning of seasonality | | ✓ |
| Autonomous learning of metric behavior | | ✓ |
| Automatic selection of optimal model | | ✓ |
| Sequential adaptive learning of normal behavior | | ✓ |
| Comprehensive metric & events correlation | | ✓ |
| Alert scoring and false positive reduction | | ✓ |
| **Scale of monitored metrics** | | |
| Monitoring 100% of your data | | ✓ |
| Real time detection and alerting | | ✓ |
| **Additional features** | | |
| Alert reduction mechanisms | | ✓ |
| Feedback loop | | ✓ |
| Integration with alert channels | ✓ | ✓ |

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