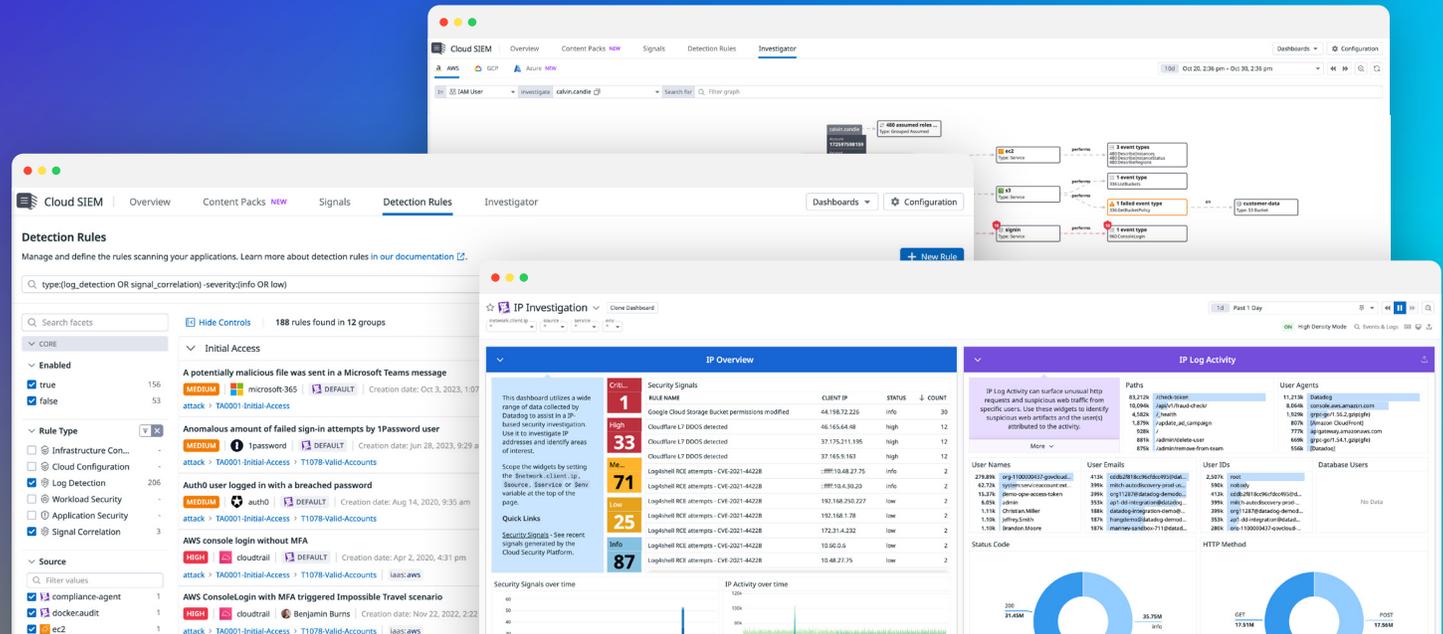


# Datadog Cloud SIEM



Detect, investigate, and respond to threats across your applications, networks, and infrastructure.



## Introduction

As dynamic, cloud-native environments face increasingly sophisticated security threats, the boundaries between security, development, and operations teams are beginning to fade. Security teams need visibility into their applications, infrastructure, and network, while development and operations teams need the ability to secure the services they own. Entire engineering organizations therefore need access to a unified platform for their monitoring and security data so they can protect their environments from breaches and attacks.

## Limitations of threat detection tools in the cloud

Businesses face mounting pressure with each new breach or attack, so it's essential that they have the tools they need to proactively detect potential threats before they escalate. But legacy SIEM solutions often are not equipped to handle the inherent complexity of cloud-native environments, posing several challenges for teams that are trying to fortify their security posture:

### SILOED TOOLS LIMIT VISIBILITY

- Cloud-native environments are fast-paced, and it's important to capture all activity in order to identify security threats and remain compliant. Historically, teams have relied on multiple siloed tools to monitor these dynamic systems, but this process creates blind spots and slows down the investigation process.

### LOGGING INCONSISTENCIES COMPLICATE THREAT DETECTION

- Authentication logs come from many different sources in your environment, which results in formatting inconsistencies. They may also be managed by different teams and implemented with different third-party services, such as Google, Okta, and Auth0. This can make it difficult to perform meaningful analysis of all authentication activity.

## INVESTIGATIONS ARE MISTAKE-PRONE

- Organizations often struggle to assess the impact of security attacks across ephemeral entities and unknown users, and undetected attacks can lead to major security breaches. It's therefore critical that the teams responsible for securing cloud services can identify and respond to threats as soon as they occur.

## MISCONFIGURATIONS CAN HAVE SEVERE CONSEQUENCES

- A single misconfigured security group in a cloud environment can have cascading consequences and lead to a serious data breach. This puts a lot of pressure on development and operations teams to properly secure their services.

## INCOMPLETE CONTEXT DUE TO COSTLY LOG RETENTION

- Frequently, companies opt for shorter data retention periods due to cost constraints, infrastructure limitations, risk tolerance, and other factors. However, limiting log retention can result in blind spots and a lack of the necessary context required to comprehensively assess potential threats and expedite security investigations.

## SLOW QUERIES FROM MULTIPLE INDEXES

- Many traditional SIEM systems use multiple indexes for search and analysis. For example, one index may handle daily activities (detections, investigations, user analytics, threat hunting) with a 3-month retention period, while another index might retain data for 3 to 12 months for intermittent needs like regulatory compliance and investigations, and require periodic rehydration. But using multiple indexes can lead to slower queries and disjointed investigations, especially when running scheduled queries with differing response times across indexes.

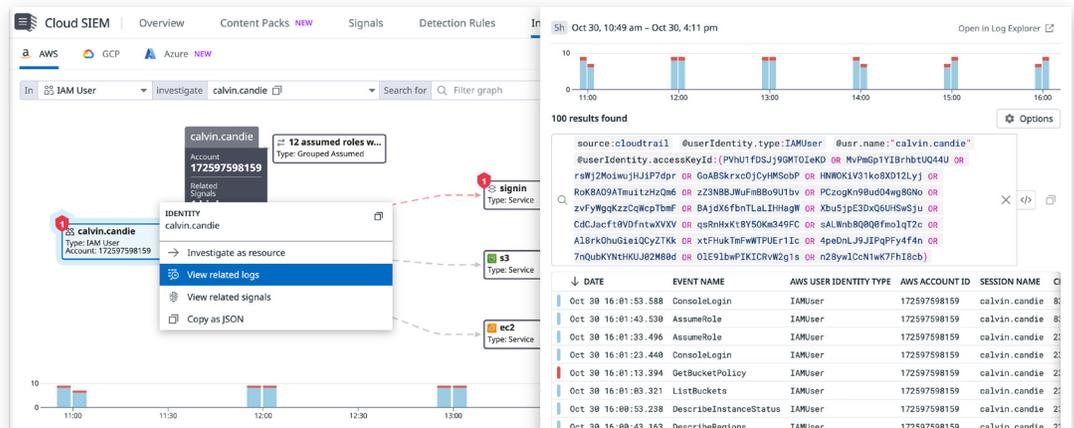
## Detect and analyze security threats anywhere in your stack

Datadog Cloud SIEM provides end-to-end security coverage of dynamic, distributed systems in a unified platform. This enables DevOps, SecOps, and GRC teams to work together to detect and respond to threats and misconfigurations in real time, without having to switch contexts. Cloud SIEM is fully integrated with all of Datadog's application and infrastructure monitoring products, which allows users to seamlessly pivot from a potential threat to associated monitoring data in order to quickly triage security alerts.

With Datadog Cloud SIEM, you can:

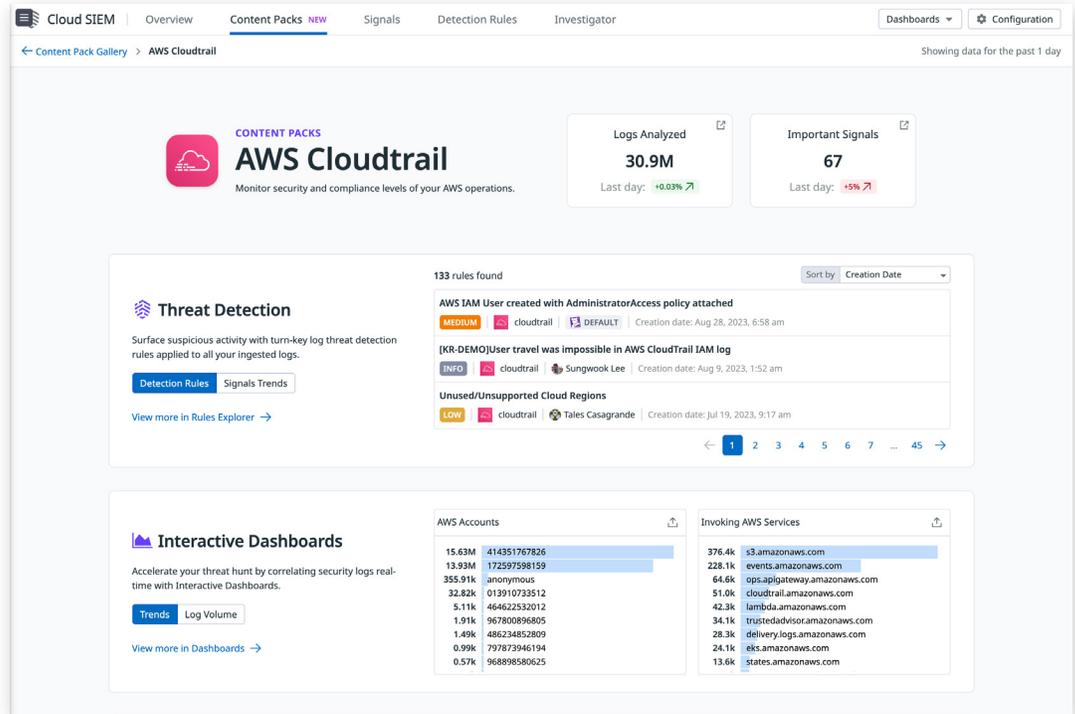
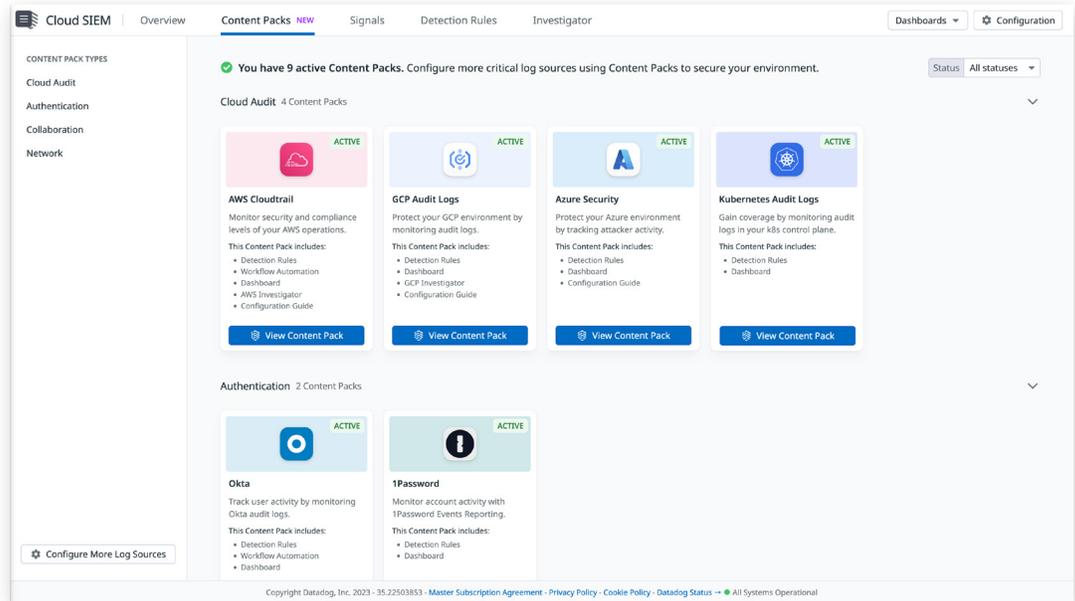
## UNIFY YOUR OBSERVABILITY AND SECURITY EFFORTS

- **See all of your data in one place.** Easily correlate security data with runtime events, application and service logs, and more.
- **Break down silos between teams.** Development, security, and operations teams can access the same observability data and drive security investigations in a single, unified platform.



## EASILY INGEST LOG DATA AND CONFIGURE LOG SOURCES

- **Onboard teams quickly with an intuitive platform and a hub for out-of-the-box content.** Content Packs simplify the process of getting started with Datadog Cloud SIEM, providing a centralized hub for accessing security-specific integration content with out-of-the-box detection rules, interactive dashboards, a visual investigator, workflow automation blueprints, and written content such as blogs, configuration guides, and more. This means you can go from zero to operational quickly, with minimal effort to ingest data, configure log sources, and access critical content.



## LEVERAGE THREAT DETECTION RULES THAT DON'T REQUIRE A QUERY LANGUAGE

- **Get started quickly with turnkey detection rules.** Datadog Cloud SIEM comes equipped with out-of-the-box threat detection rules for widespread attacker techniques and misconfigurations that are mapped to the MITRE ATT&CK® framework. This means you can improve your security posture in minutes, without any subject matter expertise. Out-of-the-box rules can also be customized to fit your organization's needs.

The screenshot shows the 'Detection Rules' page in the Datadog Cloud SIEM interface. The page title is 'Detection Rules' and it includes a search bar with the query 'type:(log\_detection OR signal\_correlation) -severity:(info OR low)'. Below the search bar, there are filters for 'Group by' (Tactic) and 'Sort by' (Rule Name). A sidebar on the left shows a tree view of rule categories: CORE, Enabled (155), False (53), Rule Type (Log Detection: 206, Workload Security, Application Security, Signal Correlation: 3), and Source (compliance-agent, dockeraudit, ec2, file-integrity-monit..., internal\_app, java, jumpcloud, lacework, netflow). The main content area displays a list of rules under the 'Initial Access' category. The first rule is 'A potentially malicious file was sent in a Microsoft Teams message' with a severity of MEDIUM. Other rules include 'Anomalous amount of failed sign-in attempts by 1Password user' (MEDIUM), 'Auth0 user logged in with a breached password' (MEDIUM), 'AWS console login without MFA' (HIGH), 'AWS ConsoleLogin with MFA triggered Impossible Travel scenario' (HIGH), 'AWS ConsoleLogin with MFA triggered Impossible Travel scenario -' (HIGH), and 'AWS ConsoleLogin without MFA triggered Impossible Travel scenario' (MEDIUM).

The screenshot shows the configuration page for the rule 'Anomalous amount of failed sign-in attempts by 1Password user'. The rule is currently 'Disabled'. The configuration steps are:

- Select a rule type:** Two options are shown: 'Log Detection' (Analyze all ingested logs in real time) and 'Signal Correlation' (Correlate generated signals to detect advanced threats in real time).
- Define search queries:** The search query is set to 'Anomaly'. The detection method is 'Anomaly'. The search query is: `[source:1password] @evt.type:1password-sign-in-attempts @evt.category:*failed*`. The aggregation is 'Count' grouped by 'User Email'.
- Exclude benign activity with suppression queries:** There are fields for 'Enter query' and 'Add query' to define suppression rules.
- Set rule cases:** The severity is set to 'MEDIUM' and the notification is set to 'optional'.

## VISUALIZE YOUR SECURITY DATA WITH OUT-OF-THE-BOX DASHBOARDS

- **Get a high-level overview of your security posture.** The Security Overview dashboard allows anyone in your company to review system-wide security signals at a glance.
- **Pivot from a bird's-eye view to granular details.** The IP Investigation and User Investigation dashboards enable users to correlate specific IP addresses and users with security signals, events, and logs, so they can quickly hone in on malicious activity patterns.

**Security Overview**  
Explore the threats targeting your environment

**Important Signals**

AWS ConsoleLogin with MFA triggered Impo...	1m ago	192.168.1.104	10 signals
AWS S3 Public Access Block removed - User F...	51m ago	Frank.Miller	2 signals
AWS GuardDuty detector deleted	1h ago	Nicholas.Taylor	2 signals
Emerging Vulnerability OSINT IOCs (cobaltstr...	2h ago	alipharya.nedelakantan	2 signals

**Suspicious Actors**

**Impacted Resources**

**Cases Overview**

Account compromised by credential stuffing attack  
CSE-567452 | Created Oct 25, 9:39 am (2 days ago)

Account compromised by credential stuffing attack  
CSE-96045 | Created Oct 17, 10:27 am (13 days ago)

**See what countries you have threats coming from**

IP	LOGS
89.248.165.238	11.5K
89.248.165.243	7.25K
89.248.165.198	7.11K
89.248.165.194	6.22K
83.97.20.30	5.49K
89.248.163.245	2.76K

**Understand signal trends over time**

**Security Coverage**  
Explore the rules monitoring your environment

Sources: MITRE ATT&CK | 405 detection rules found in 13 groups

**Initial Access Rules**

A potentially malicious file was sent in a Microsoft Teams message  
attack - microsoft-365 - DEFAULT | Creation date Oct 3, 2023, 1:07 am

Impossible Travel AuthN login (baseline disabled)  
attack - 10000 Initial Access - 11078 Valid Accounts | Creation date Aug 23, 2023, 11:53 am

Impossible travel event observed from IP address user  
attack - 10000 Initial Access - 11078 Valid Accounts | Creation date Jun 28, 2023, 9:20 am

Impossible travel scenario observed in Cloudflare logs  
cloudflare - DEFAULT | Creation date Jun 19, 2023, 2:45 am

Google App Engine service account used outside of Google Cloud

**IP Investigation** | Core Dashboard

**IP Overview**

This dashboard utilizes a wide range of data collected by Datadog to assist in IP-based security investigation. Use it to investigate IP addresses and identify areas of interest.

Scope the widgets by setting the `Search` (client\_ip), `Severity`, `Service` or `Service` variable at the top of the page.

Quick Links  
Security Signals - See recent signals generated by the Cloud Security Platform.

**Security Signals**

Crit...	High	Me...	Low	Info
1	33	71	25	87

**Security Signals by MITRE Tactic**

305

**IP Activity over time**

**Log Stream**

DATE	CLIENT IP	SOURCE	SERVICE
Jul 20 02:04:33.377	138.208.165.221	ssh	
Jul 20 02:04:28.371	83.27.152.220	ruby	web-store-admin-ports
Jul 20 02:04:28.242	193.59.97.168	ssh	
Jul 20 02:04:27.027	83.27.152.220	ruby	web-store-admin-ports
Jul 20 02:04:27.080	83ert	undefined	
Jul 20 02:04:27.080	83ert	undefined	
Jul 20 02:04:26.821	10.56.19.115	web-store	
Jul 20 02:04:26.894	96.8.184.247	ruby	web-store
Jul 20 02:04:26.725	jitthon	Fraud-prevention-eps	
Jul 20 02:04:26.725	jitthon	Fraud-prevention-eps	
Jul 20 02:04:26.789	58.239.183.19	web-store	

**IP Log Activity**

IP Log Activity can surface unusual http requests and suspicious web traffic from specific users. Use these widgets to identify suspicious web artifacts and the user(s) attributed to the activity.

**Paths**

/check/token	83.212k
/api/v1/audit-check/	16.854k
/health	4.532k
/update_at/campaign	1.979k
/	938k
/admin/delete-user	881k
/admin/renew-from-team	879k

**User Agents**

Datadog	11,213k
amazon.amazonaws.com	5,066k
grpc-gw/1.52.2-grpc/grpc	5,025k
Amazon CloudFront	897k
signteam.amazonaws.com	777k
grpc-gw/1.54.1-grpc/grpc	669k
Datadog	558k

**User Names**

ip@11000047-gpu@prod...	413k
ip@11000047-gpu@prod...	399k

**User Emails**

ip@11000047-gpu@prod...	2,037k
ip@11000047-gpu@prod...	1,966k

**User IDs**

ip@11000047-gpu@prod...	2,037k
ip@11000047-gpu@prod...	1,966k

**Database Users**

No Data

**Status Code**

200	31.65M
300	2.84M
500	2.84M

**HTTP Method**

GET	17.38M
POST	17.38M
PUT	470.94k

**Request by Status Code & HTTP Method**

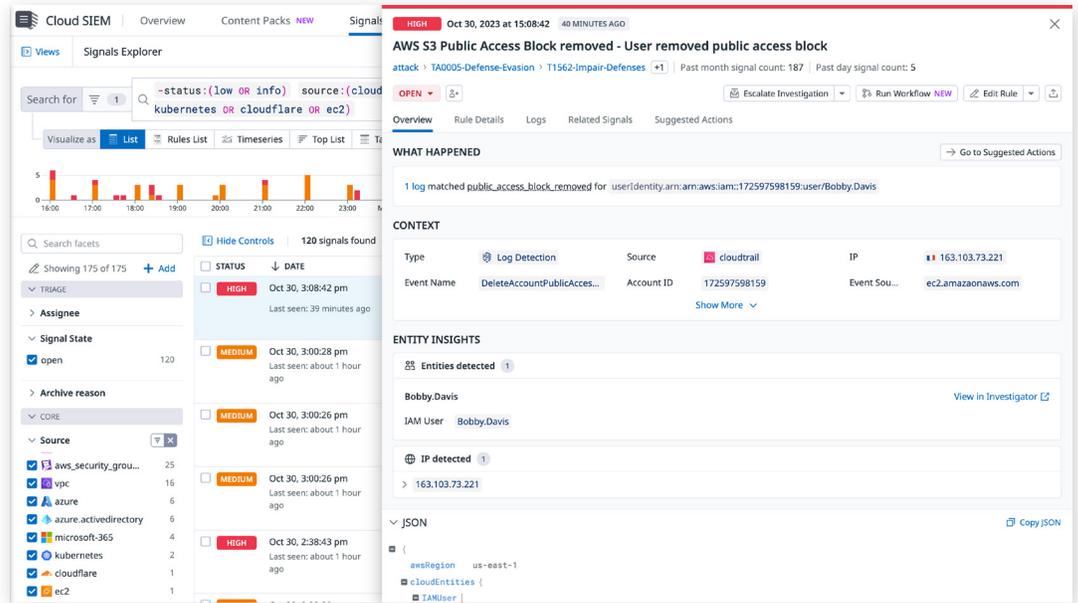
**Rare IP Activity**

Rare Signals by IP	Rare Events by IP	Rare IPs in Logs
1 AWS ConsoleLogin with MFA pl...	1 Add application	1 1.6.0.0.0
		1 1.6.0.0.0
		1 1.6.142.113

IP activity with rare occurrences on the surface.

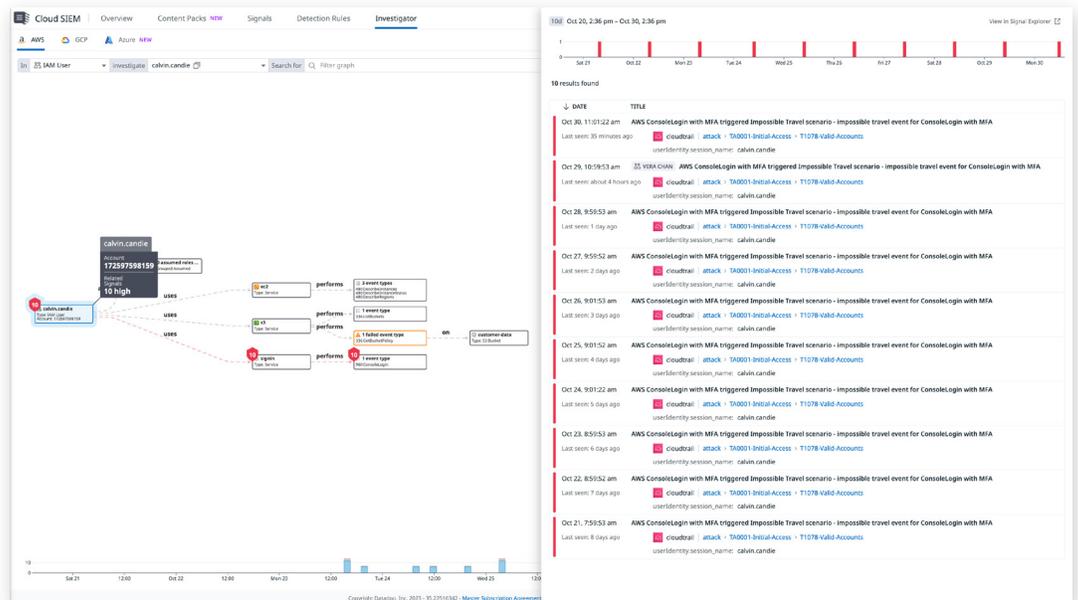
## EXPLORE YOUR SECURITY SIGNALS

- **Access insights that help you correlate and triage security signals.** The Signals Explorer in Datadog Cloud SIEM enables you to easily configure and filter your security signals with facets such as “source” and “status.” Investigate signals further by viewing rich details and context on severity, origination, and more. Modify status or rule settings for specific signals, and share or assign them to teammates to collaborate on investigations.



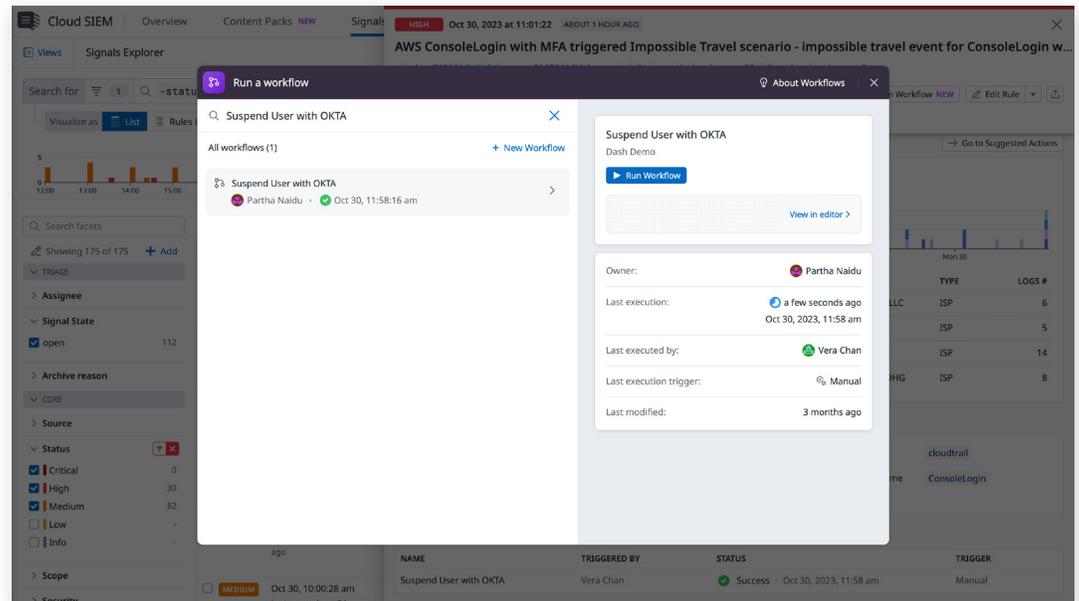
## COST EFFECTIVELY RETAIN DATA FOR INVESTIGATIONS

- **Visually investigate and search across 15 months of log data at a low cost.** With Datadog Cloud SIEM, you can cost-effectively visualize a history of logs from up to 15 months in the past to understand the course of malicious activity and the impact of security breaches to build context for investigations. Use filters to focus on only the most relevant user or account activity during investigations, see which services attackers interacted with, and better understand attackers’ methods.



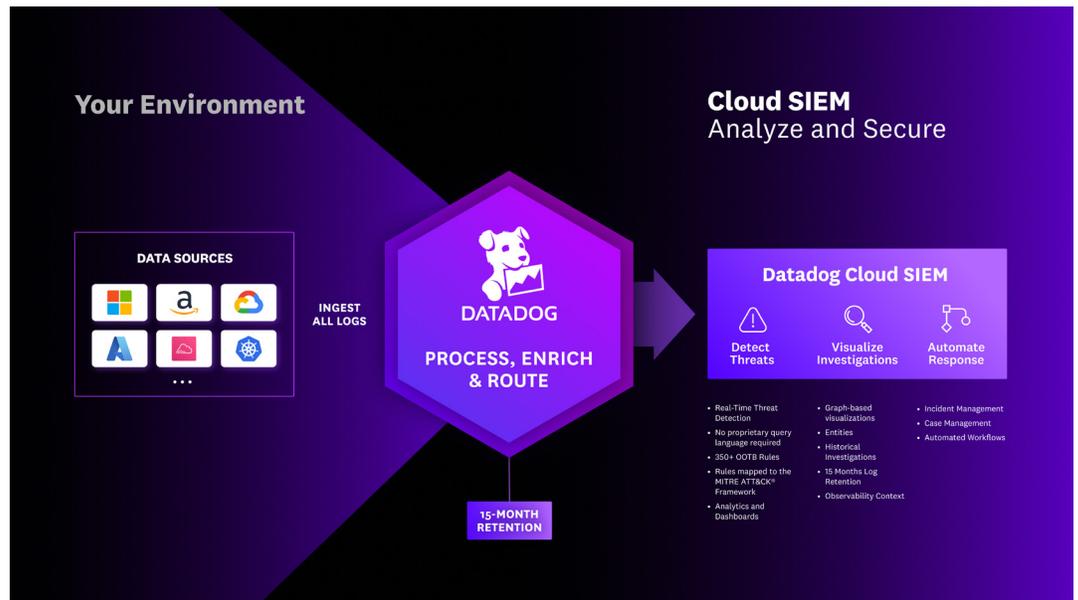
## AUTOMATE SECURITY RESPONSE WITH SECURITY WORKFLOW BLUEPRINTS AND CASE MANAGEMENT

- **Keep up with threats.** Datadog Workflow Automation and Case Management help you reduce the burden on security engineers. Use workflow blueprints to automate security signal triage, perform retro-hunts, create detection rules for emerging vulnerabilities, automatically block a suspicious IP address with Cloudflare, or suspend suspicious Okta users while you automatically open cases for collaborative investigation. String together any of 500+ workflow actions to create custom workflows that can execute with just a single click.



## JUMPSTART YOUR INVESTIGATIONS WITH MORE THAN 650 VENDOR-BACKED INTEGRATIONS

- **Collaborate easily during investigations.** Datadog integrates with Slack and PagerDuty, enabling you to automatically loop in relevant teams when a high-severity rule detects a threat. You can also export security signals to collaboration tools like JIRA or ServiceNow.
- **Security integrations provide additional context.** Built-in security integrations with cloud audit, authentication, collaboration, and network data sources—such as AWS CloudTrail, Azure, Google Cloud, Kubernetes, Okta, 1Password, Cloudflare, Office 365, Google Workspace, and more—enable users to ingest additional security data in minutes, providing deeper context and accelerating investigations.



## Security for dynamic environments

Security threats in cloud-native environments move fast, which means that security, development, and operations teams all need visibility into their infrastructure, network, and applications. Datadog Cloud SIEM is a SaaS solution that provides end-to-end security coverage of dynamic, distributed systems. It enables real-time threat detection across the entire stack, as well as deeper collaboration between teams.

## MITRE | ATT&CK®

## Security teams use Datadog Cloud SIEM daily

“It’s like a Swiss Army Knife for security and observability with so many features available out of the box, which translates to fast time to value. The rules are intuitive and easy to understand, and it’s easy to onboard new team members. The investigator accelerates triage and investigations, and the SOAR-like workflows help automate response.”



**Melanie Masterson**  
GCWIN, Information Security Engineering Manager, 1Password

“The onboarding process with Datadog was a breeze as we were already using their other products. We were up and running in a few days time. We were able to ingest all of our initial set of data sources in a matter of weeks. We reduced the number of account takeover (ATO) attacks to save millions for the company.”



**Kapileshwar Punna**  
Security Operations Manager, Poshmark

“Datadog is by far the easiest and most integrated platform to get all of our disparate data into one spot. Datadog reduces the mean time to respond from hours down to minutes!”



**Constantine Macris**  
CISO, Indigov

