Stackdriver

Try Stackdriver free (https://console.cloud.google.com/freetrial)
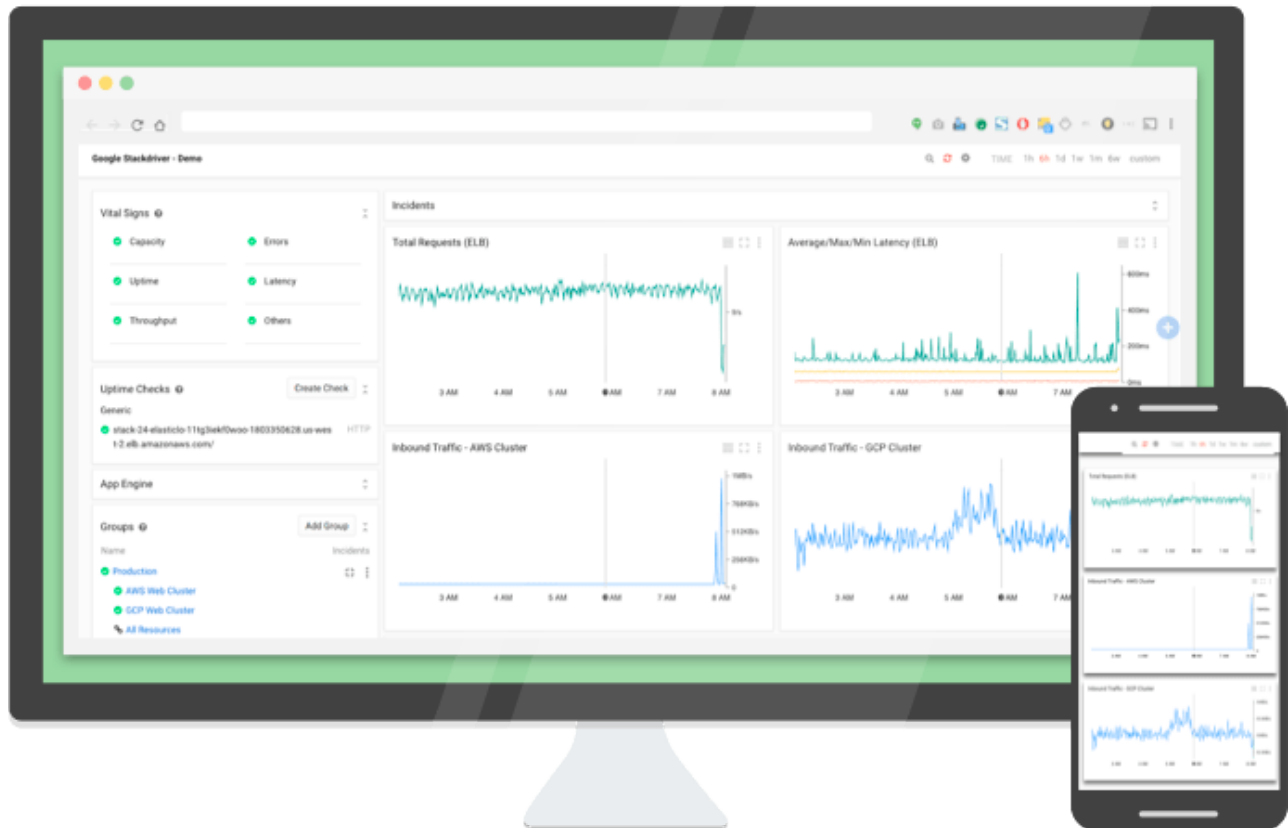
Monitor, troubleshoot, and improve infrastructure and application performance

Stackdriver is Google Cloud's embedded observability suite designed to monitor, troubleshoot, and improve cloud infrastructure, software, and application performance. Stackdriver enables you to efficiently build and run workloads, keeping applications performant and available.

✔ Collect signals across Google Cloud internal and external apps, platforms, and services

✔ Analyze and monitor your operational telemetry

✔ Set up appropriate performance and availability indicators

✔ Use built-in observability to troubleshoot and improve your applications

✔ Automate ops using both out-of-the-box tools and tools customized through programmatic interfaces

Key features

FOR OPS, SECOPS, SRE, DEVOPS

Real-time log management and analysis

Stackdriver Logging (https://cloud.google.com/logging/) is a fully managed service that performs at scale and can ingest application and system log data, as well as custom log data from thousands of VMs. Stackdriver Logging allows you to analyze and export selected logs to long-term storage in real time.

FOR OPS, SRE, DEVOPS

Built-in observability at scale

Stackdriver Monitoring (https://cloud.google.com/monitoring/) provides visibility into the performance, uptime, and overall health of cloud-powered applications. Stackdriver collects metrics, events, and metadata from Google Cloud Services, hosted uptime

probes, application instrumentation, and a variety of common application components.

FOR DEVOPS

Application performance management tools

Stackdriver Application Performance Management (APM) includes tools to help you reduce latency and cost, so you can run more efficient applications. With Trace (https://cloud.google.com/trace/), Debugger (https://cloud.google.com/debugger/), and Profiler (https://cloud.google.com/profiler/), you gain insight into how your code and services are functioning and troubleshoot if needed.

View all features (#)

Featured use cases

MANAGE CLOUD OPERATIONS

Centralize your logging and operations
 (#centralize-your-logging-and-operations)

MANAGE CLOUD OPERATIONS

Build observability into applications and infrastructure
 (#build-observability-into-applications-and-infrastructure)

MANAGE CLOUD OPERATIONS

Reduce latency and inefficiency with Application Performance Management
 (#reduce-latency-and-inefficiency-with-application-performance-management)

Customer stories

Dacsee: Disrupting the ride-hailing business with Google Kubernetes Engine.
(https://cloud.google.com/customers/dacsee/)

Read the story (https://cloud.google.com/customers/dacsee/)

Highlights

- Reduced time spent on infrastructure management using Stackdriver Monitoring

- Enabled Stackdriver to help catch any problems before they happened

- Drove insights with Stackdriver, such as identifying if databases were consuming too much RAM or if a disk was filling up faster than usual

Partner

Matrix Connexion

(https://www.matrixc.com/)

See more customers (https://cloud.google.com/customers/)

What's new

Stackdriver release notes

Read about the latest features and updates to Stackdriver.

(https://cloud.google.com/stackdriver/docs/release-notes)

See more (https://cloud.google.com/stackdriver/docs/release-notes)

Stackdriver tips and tricks

Understanding metrics and building charts.
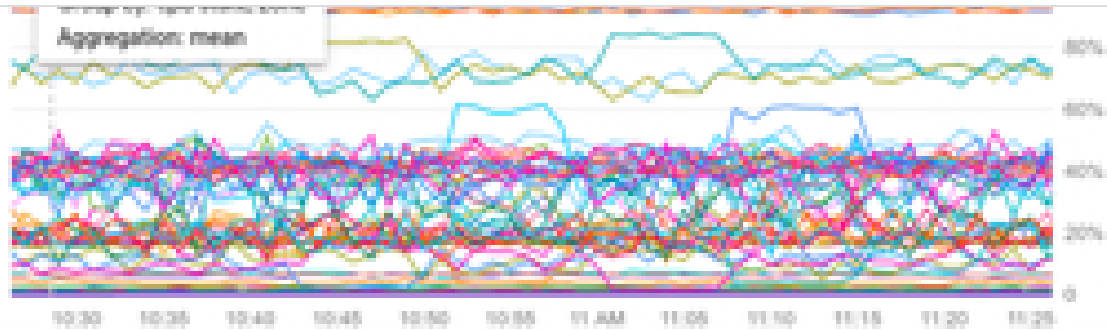
(https://cloud.google.com/blog/products/management-tools/stackdriver-tips-and-tricks-understanding-metrics-and-building-charts)

Read blog (https://cloud.google.com/blog/products/management-tools/stackdriver-tips-and-tricks-understanding-metrics-and-building-charts)

post

5 favorite tools for improved log analytics

Tips for log analysis and troubleshooting.

(https://cloud.google.com/blog/products/management-tools/cloud-monitoring-and-logging-analytics-
tips-and-tools)

Read   (https://cloud.google.com/blog/products/management-tools/cloud-
blog post   monitoring-and-logging-analytics-tips-and-tools)

Documentation

TUTORIAL

Get started with Stackdriver Logging

Learn how to get started with Stackdriver Logging.

View how-to (https://cloud.google.com/logging/docs/how-to)

TUTORIAL

Cloud Audit Logs

Learn more about how Cloud Audit Logs maintains three audit logs: admin activity, data access, and system event.

View overview (https://cloud.google.com/logging/docs/audit/)

TUTORIAL

How to get started with Stackdriver Monitoring

Learn how to use Workspaces, monitoring agent, uptime checks, and other features.

View how-to (https://cloud.google.com/monitoring/docs/how-to)

ARCHITECTURE

Google Cloud metrics

Learn more about the metrics Stackdriver Monitoring supports.

View reference (https://cloud.google.com/monitoring/api/metrics_gcp)

GOOGLE CLOUD BASICS

Overview: Stackdriver support for GKE

Learn more about monitoring your Google Kubernetes Engine.

View overview (https://cloud.google.com/monitoring/kubernetes-engine/)

Not seeing what you're looking for?

All Stackdriver documentation (https://cloud.google.com/stackdriver/docs/)

(https://cloud.google.com/monitoring/quickstart-lamp)

QUICKSTARTS

Get a quick intro to using
Compute Engine

(https://cloud.google.com/trace/docs/setup/)

HOW-TO GUIDES

Complete specific tasks in
Stackdriver Trace

(https://google.qwiklabs.com/focuses/857?parent=catalog)

TUTORIALS

Walkthroughs of
common real-world
scenarios

(https://cloud.google.com/logging/docs/apis)

REFERENCE

< >

APIs and other references

(https://cloud.google.com/stackdriver/pricing)

RESOURCES

Pricing, release notes, quotas,
and limits

(https://cloud.google.com/solutions/hybrid-and-multi-cloud-monitoring-
and-logging-patterns)

SOLUTIONS

Hybrid and
multi-cloud
deployments

Common use cases

Manage cloud operations

Build observability into your platform through the use of integrated logging, monitoring, and application performance management tools.

Centralize your logging and operations

Integrated logging provides critical insights into platform events for development, DevOps/SRE, and security teams. Ingest logs from Google Cloud services and external sources for short-term operations and long-term log analysis. Use integrated audit logging to perform detailed forensic analysis. Integrate with your third-party logging systems using real-time log exports.
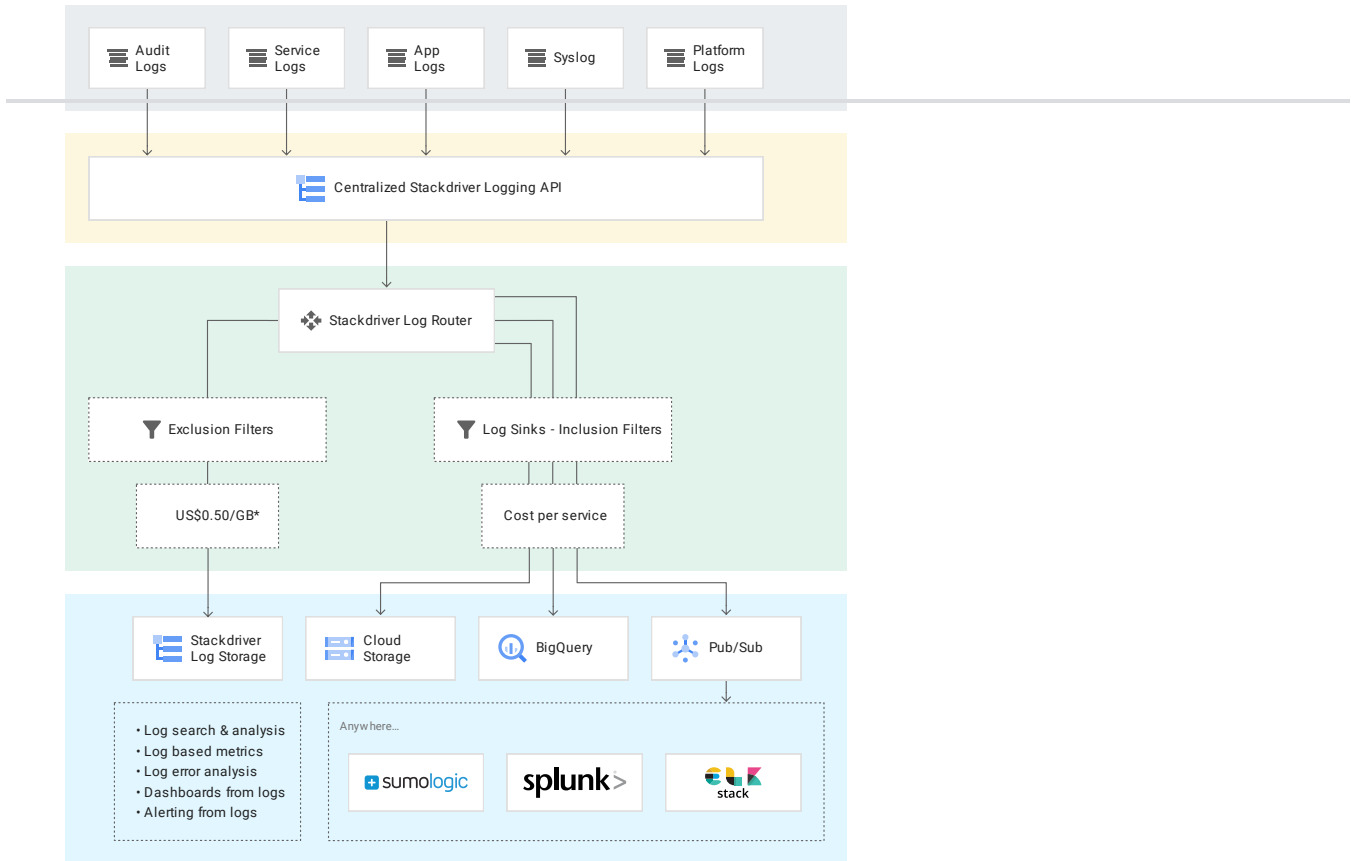
Stackdriver's integrated logging collects all logs, including audit logs, platform logs, user logs, and external logs sent to the API, which are sent to the Stackdriver Logs Router where they are delivered to Stackdriver Logging, BigQuery, or externally via integration with Pub/Sub.

BEST PRACTICE

Design patterns for logging exports

Stackdriver Logging provides an operational datastore for logs and rich export capabilities. Export logs for long-term storage, to meet compliance requirements, or to run data analytics.

(https://cloud.google.com/solutions/design-patterns-for-exporting-stackdriver-logging)

Learn   (https://cloud.google.com/solutions/design-patterns-for-exporting-
more   stackdriver-logging)

GOOGLE CLOUD BASIC

Logging on-premises resources with Stackdriver and Blue Medora

Stackdriver provides advanced logging and monitoring services for Google Cloud. Stackdriver also supports logging and monitoring Amazon Web Services (AWS) natively and for hybrid and on-premises resources with BindPlane from Blue Medora.

(https://cloud.google.com/solutions/logging-on-premises-resources-with-stackdriver-and-blue-medora)

Learn   (https://cloud.google.com/solutions/logging-on-premises-resources-with-
more   stackdriver-and-blue-medora)

TUTORIAL

Creating and Alerting on Logs-based Metrics

In this hands-on lab you will learn about the Stackdriver Monitoring tools and some of the concepts that you need to know in order to use Stackdriver Monitoring most effectively.

(https://www.qwiklabs.com/focuses/152?parent=catalog)

Learn more (https://www.qwiklabs.com/focuses/152?parent=catalog)

Build observability into applications and infrastructure

Integrated observability provides critical insights into platform events for development, DevOps/SRE, and security teams. Stackdriver Monitoring provides centralized dashboards and alerting to efficiently operate services. Use integrated logging to power vulnerability detection and bring proactive intelligent monitoring to your security and operations team. Customize your log monitoring using Cloud Functions and the Data Loss Protection API.
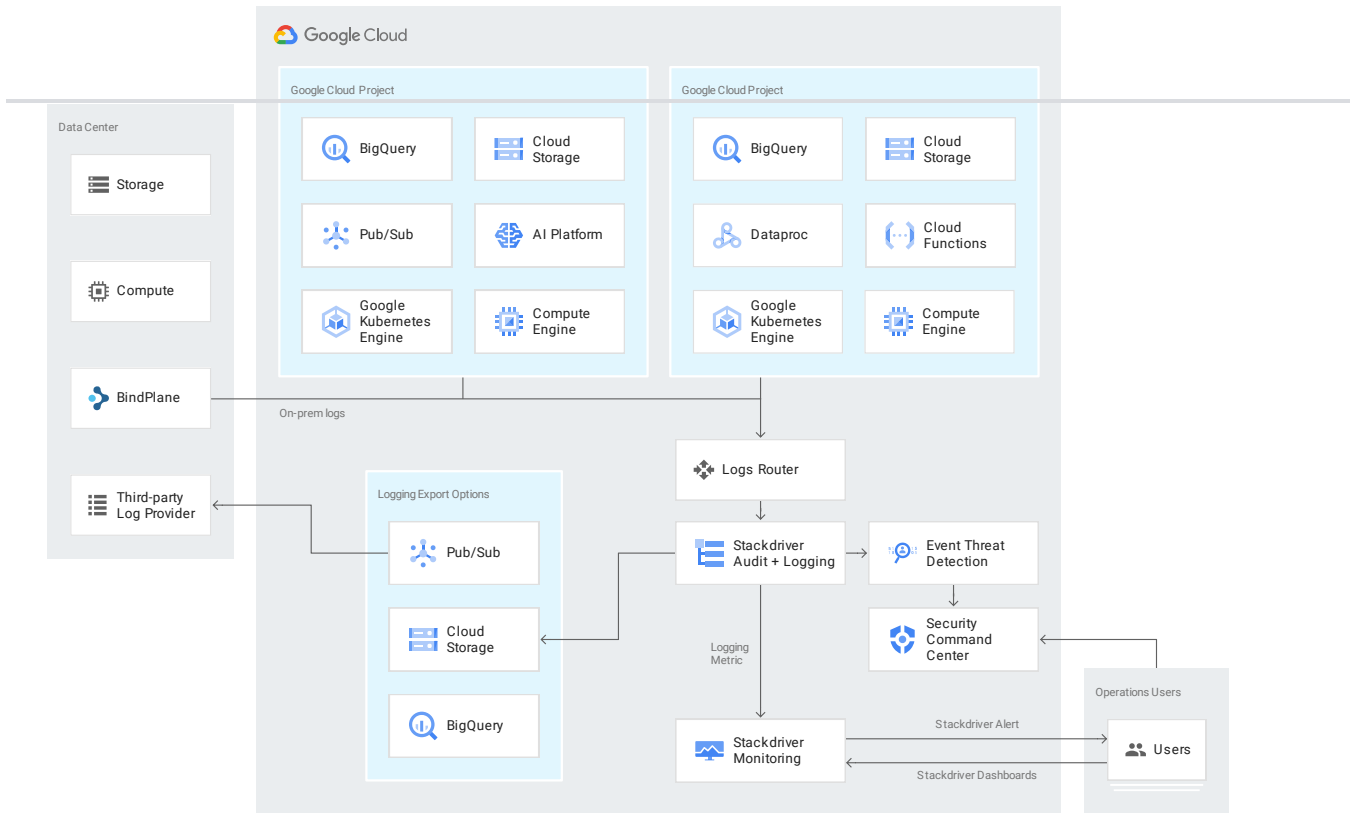
Stackdriver logging and monitoring services provide your SRE/DevOps teams with the observability needed to monitor Google Cloud, on-premises, and third-party providers. Stackdriver is integrated with Security Command Center to provide the security and operations teams the insights they need.

BindPlane is a registered trademark of Blue Medora.

GOOGLE CLOUD BASIC

Stackdriver tips and tricks: Understanding metrics and building charts

In this blog post, you'll learn to effectively use the Stackdriver Monitoring metrics model, how to build the right chart for a metric, and how to create meaningful charts.

(https://cloud.google.com/blog/products/management-tools/stackdriver-tips-and-tricks-understanding-metrics-and-building-charts)

Learn   (https://cloud.google.com/blog/products/management-tools/stackdriver-tips-

more   and-tricks-understanding-metrics-and-building-charts)

TUTORIAL

Increase visibility into your application's health with monitoring and logging

In this codelab, you'll learn how to get started using Stackdriver to monitor and review performance metrics and logs for Google Cloud services and VMs.

(https://codelabs.developers.google.com/codelabs/cloud-stackdriver-getting-started/#0)

Learn   (https://codelabs.developers.google.com/codelabs/cloud-stackdriver-getting-
more   started/#0)

GOOGLE CLOUD BASIC

Logging and monitoring on-premises resources with Stackdriver and Blue Medora

In this reference guide, learn how Stackdriver supports logging and monitoring for Google Cloud and Amazon Web Services (AWS) natively, logging and monitoring for hybrid and on-premises resources with BindPlane from Blue Medora.

(https://cloud.google.com/solutions/logging-and-monitoring-on-premises-resources-with-stackdriver-and-blue-medora)

Learn   (https://cloud.google.com/solutions/logging-and-monitoring-on-premises-
more   resources-with-stackdriver-and-blue-medora)

Reduce latency and inefficiency with Application Performance Management

Reduce latency and cost for your applications by using Stackdriver's Application Performance Management tools. By understanding in detail how they behave in

production, you can help make your applications faster and more reliable whether they are hosted on Google Cloud or not. Use Stackdriver Trace's distributed trace to understand how requests propagate through your application. Trace is integrated with OpenCensus, which means if you are already using OpenCensus, using Trace is as simple as selecting the Stackdriver back end. Use Stackdriver Profiler to help identify latency and inefficiency in your code. Troubleshoot your application in production without stopping or slowing down your apps by using Stackdriver Debugger.
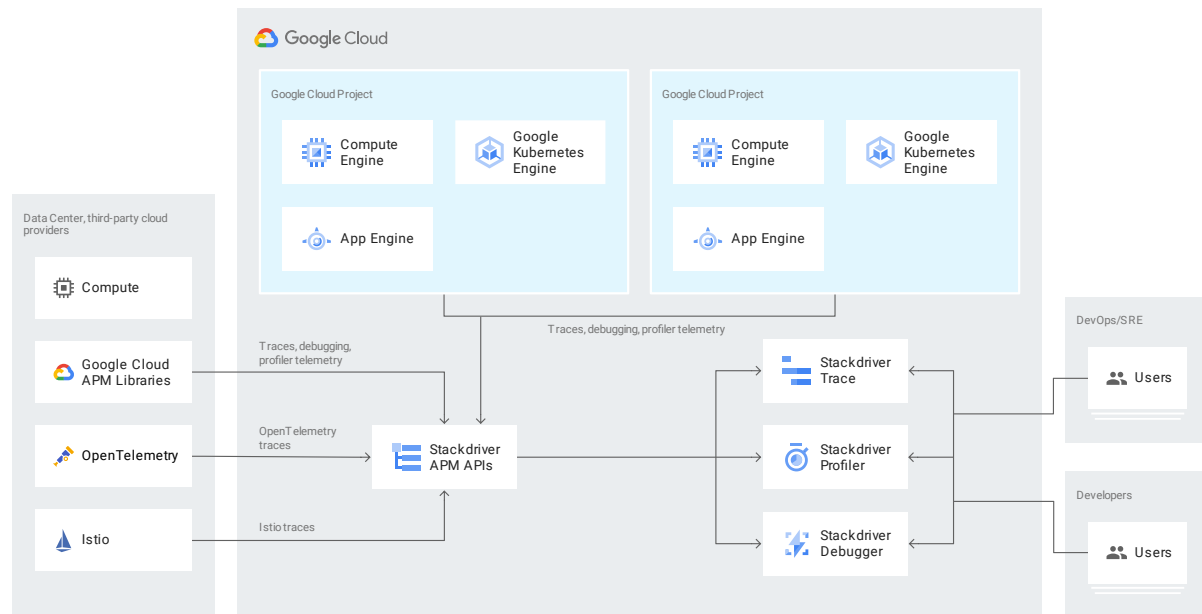
TUTORIAL

Site Reliability Troubleshooting with Stackdriver

In this hands-on lab you will learn how to set up a Stackdriver Workspace, define service level indicators and metrics, configure alerting, and troubleshoot issues.

(https://google.qwiklabs.com/focuses/4185?parent=catalog)
Learn more (https://google.qwiklabs.com/focuses/4185?parent=catalog)

GOOGLE CLOUD BASIC

Identifying causes of app latency with Stackdriver and OpenCensus

Learn to identify the causes of tail latency with OpenCensus and Stackdriver to monitor metrics and distributed tracing for app developers.

(https://cloud.google.com/solutions/identifying-causes-of-app-latency-with-stackdriver-and-opencensus)

Learn more (https://cloud.google.com/solutions/identifying-causes-of-app-latency-with-stackdriver-and-opencensus)

TUTORIAL

Using Stackdriver Debug, Trace, Logging, and Logpoints

In this codelab, you will learn how to debug an application, view the logs, set-up alerting with metrics, and trace your API calls.

(https://codelabs.developers.google.com/codelabs/cloud-stackdriver-debug/index.html?index=..%2F..index#0)

Learn more (https://codelabs.developers.google.com/codelabs/cloud-stackdriver-debug/index.html?index=..%2F..index#0)

View all technical guides (https://cloud.google.com/docs/tutorials#stackdriver)

All features

Log management	Stackdriver Logs Router (https://cloud.google.com/logging/docs/routing /overview) allows customers to control where logs are sent. All logs, including audit logs, platform logs, and user logs, are sent to the Stackdriver Logging API where they pass through the log router. The log router checks each log entry against existing rules to determine which log entries to discard, which to ingest, and which to include in exports.
Log insights	Stackdriver Error Reporting (https://cloud.google.com/error-reporting/) analyzes and aggregates the errors in your cloud applications. Notifies you when new errors are detected.
Proactive monitoring	Stackdriver (https://cloud.google.com/monitoring/alerts/) allows you to create alerting policies to notify you when metrics, health check results, and uptime check results meet specified criteria. Integrated with a wide variety of notification channels, including Slack and PagerDuty.
Custom visualization	Stackdriver Monitoring Dashboards provides default out-of-the-box dashboards and allows you to define custom dashboards with powerful visualization tools to suit your needs.

Health check monitoring	**Stackdriver Monitoring (https://cloud.google.com/monitoring/)** provides endpoint checks to web applications and other internet-accessible services running on your cloud environment. You can configure uptime checks associated with URLs, groups, or resources, such as instances and load balancers.
Service monitoring	**Stackdriver Service Monitoring (https://cloud.google.com/service-monitoring/)** provides out-of-the-box telemetry and dashboards that allow troubleshooting in context through topology and context graphs, plus automation of health monitoring through SLOs and error budget management.
Latency management	**Stackdriver Trace (https://cloud.google.com/trace/)** provides latency sampling and reporting for App Engine, including per-URL statistics and latency distributions.
Debugging	**Stackdriver Debugger (https://cloud.google.com/debugger/)** connects your application's production data to your source code by inspecting the state of your application at any code location in production without

stopping or slowing down your requests.

Performance and cost management	Stackdriver Profiler (https://cloud.google.com/profiler/) provides continuous profiling of resource consumption in your production applications, helping you identify and eliminate potential performance issues.

Pricing

Stackdriver pricing gives you control over your usage and spending: you pay only for what you use.

Free usage allotments let you get started with no up-front fees or commitments.

View pricing details (https://cloud.google.com/stackdriver/pricing/)

Partners

Stackdriver supports a rich and growing ecosystem of technology integrations (https://cloud.google.com/stackdriver/integrations) to expand the IT ops, security, and compliance capabilities available to Google Cloud customers.

(https://cloud.withgoogle.com/partners/detail/?id=ACkb94YE9lkB-
FWXz6E3sxEL4N7hSKJ8S_sf5wNaNvG-KdhnO6RoksMkK1FsKb7uXo4ykOxHw2__&hl=en-US)

(https://cloud.withgoogle.com/partners/detail/?
id=ACkb94ZMAYzydUO1s9xboArVaiU3kVctSdFhvk3nQrwFaVRqyc5mUMXdgOhOwjRtRcA3hS-
Nrahc&hl=en-US)

(https://cloud.withgoogle.com/partners/detail/?id=ACkb94aQZpS2Dxn-o6wj0PMhh2ecPO0g8-
q3Zt6KHBbwd6YPW3MrLudGk0ip3IRqZ-3ffYR8S_ux&hl=en-US)

(https://www.sumologic.com/solutions/gcp-management/)

sumologic

(https://docs.opsgenie.com/docs/stackdriver-integration)

OpsGenie

(https://cloud.withgoogle.com/partners/detail/?id=ACkb94a0ed4JCoZp9O271sGT4w93wRY-
HBwFZOXjO5y9jwZQqBuIU9l8PGxigh0gqQXTPN4y6M-4&hl=en-US)

Take the next step

Get $300 in free credits to learn and build on Google Cloud for up to 12 months.

[**Try Stackdriver free** (https://console.cloud.google.com/freetrial)]

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