Case Study on one Cloud monitoring and Management Tool

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CMA Practical IX

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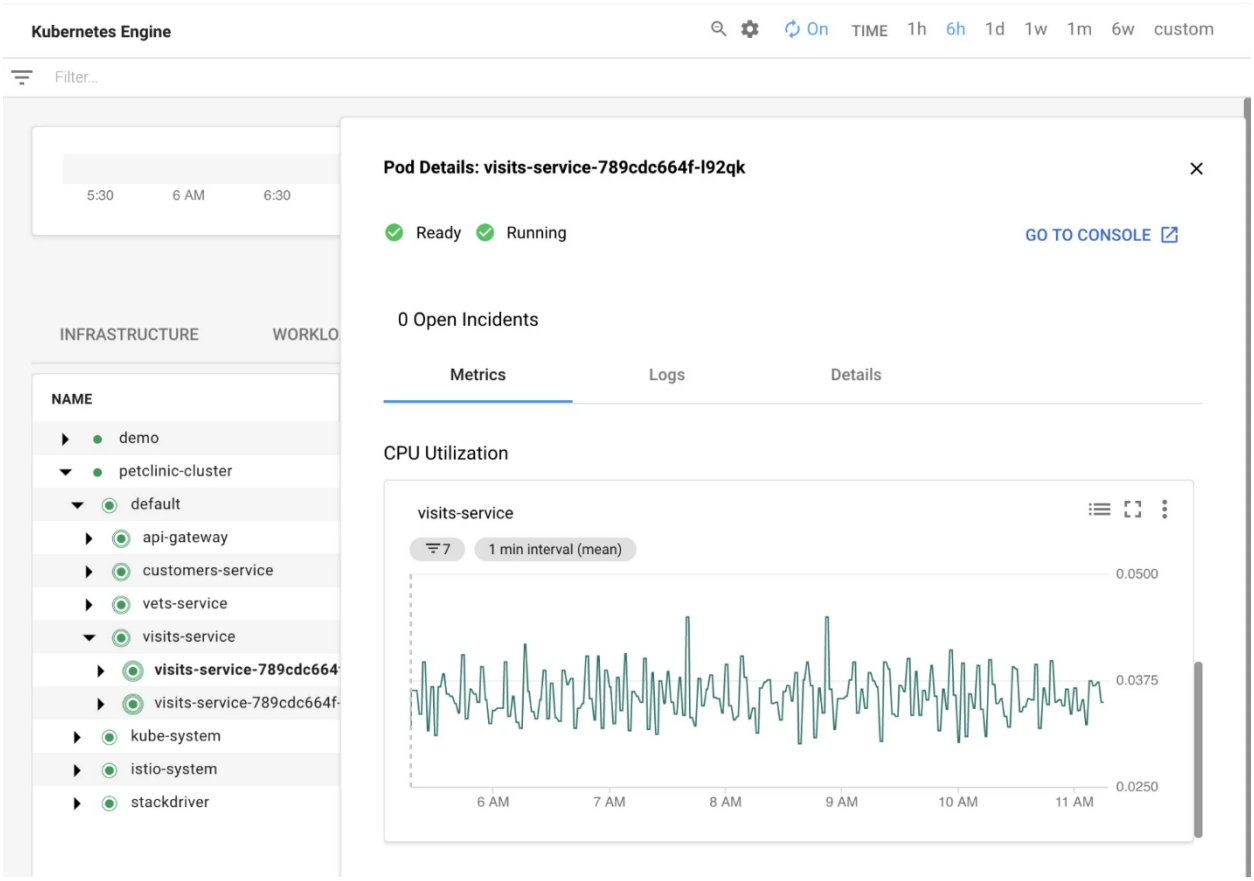
In this case Study we will doing it on **Google Operations** as a Cloud Monitoring tool and **IBM Cloud orchestrator** as a Cloud Management Tool.

Google Operations

Formerly **Stackdriver**, Operations suite is designed to monitor Google Cloud Platform infrastructure resources usage and application performance, but it also supports custom metrics and monitoring of other cloud service providers like AWS. The platform provides metrics, logs, and trace support along with the visibility into Google Cloud platform audit logs giving you the full visibility of what is happening inside your GCP account.



Features

Real-time log management and analysis

Cloud Logging is a fully managed service that performs at scale and can ingest application and platform log data, as well as custom log data from GKE environments, VMs, and other services inside and outside of Google Cloud. Get advanced performance, troubleshooting, security, and business insights with Log Analytics, integrating the power of BigQuery into Cloud Logging.

Built-in metrics observability at scale

Cloud Monitoring provides visibility into the performance, uptime, and overall health of cloud-powered applications. Collect metrics, events, and metadata from Google Cloud services, hosted uptime probes, application instrumentation, and a variety of common application components. Visualize this data on charts and dashboards and create alerts so you are notified when metrics are outside of expected ranges.

Stand-alone managed service for running and scaling Prometheus

Managed Service for Prometheus (in Preview) is a fully managed Prometheus-compatible monitoring solution, built on top of the same globally scalable data store as Cloud Monitoring. Keep your existing visualization, analysis, and alerting services, as this data can be queried with PromQL or Cloud Monitoring.

Monitor and improve your application's performance

Application Performance Management (APM) combines the monitoring and troubleshooting capabilities of Cloud Logging and Cloud Monitoring with Cloud Trace, Cloud Debugger, and Cloud Profiler, to help you reduce latency and cost so you can run more efficient applications.

Pros.

- Rich visualization supports out of the box for Google Cloud platform users.
- Free tier available.
- Support for sending data to third-party providers if they provide an integration.

Cons.

Requires a manual cloud monitoring agent install, before getting visibility into the metrics, compared to AWS CloudWatch where this is not needed.

Pricing.

Like Amazon CloudWatch and Microsoft Azure the pricing is based on the amount of data your services and applications are generating and sending to the platform. The free tier includes 150MB metrics per billing account, 50GB of logs per project, 1 million API calls per project, 2.5 million spans ingested per project and 25 million spans scanned per project. Everything above that falls into the paid tier.

Most of the tools that we've discussed until now provide a form of alerting and reporting. Those are usually limited to several methods, like e-mail or text messages to your mobile, sometimes other common destinations. Usually, we don't see scheduling, automation, and workflow control in the monitoring tools themselves. Because of that, the observability solutions provide integrations with third-party incident alerting and reporting tools filling the communication gap and providing additional features like event automation and triage, noise suppression, alerts, and notifications centralization and lots of destinations where the information can be sent to. Let's see what tools can provide such functionalities.

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IBM Cloud Orchestrator

IBM Cloud Orchestrator provides cloud management for the private, public, and cloud environments. The platform allows the provisioning, configuration, integration, as well as addition of service management. With the use of policy-based tools, it helps in automating the provisions of the clod services.

The cloud management platform reduces the provisioning times and enhances as well as accelerates the service delivery times. The platform offers a self-service interface for monitoring, managing, and securing the cloud environments within minutes. It ensures the automation of the manual workloads that are prone to error. The customizable and advanced functionality features help in the simplified management of cloud services.

Features

- App Development & Testing
- Cloud Configuration Automation
- Tasks Coordination
- Cloud Services Management
- Cloud Use Reporting

- Executive Cost Dashboards
- Change Management Automation
- Customizable Self-Service Portal
- SLA Compliance

Pros

Improved Service Delivery Times

IBM Cloud Orchestrator can help you in accelerating your service delivery by up to 90 percent. On top of that, provisioning is also accelerated so instead of waiting for weeks, all related tasks can be completed in a manner of minutes. The solution enables this through its automation features that put into autopilot various actions such as cloud configuration, setup and deployment of IT tasks, and more.

Coordinated Management

Overseeing multiple clouds do not have to be arduous. With IBM Cloud Orchestrator, you can simplify the process and make it more coordinated because of the solution's unified interface. Through it, you can also view the way your cloud resources are being used across the enterprise and how much it costs the organization. As such, you can have valuable information that can help you in making strategic decisions.

Innovative Interface

Other than affording you with powerful management tools, IBM Cloud Orchestrator also gives you innovation capabilities by enabling you to customize various features. This is especially true for the self-service portal, which you can extend via APIs and augmenting tools. Thus, you can deploy in multi-node applications as well and not just in servers.

Consistent Policy Enforcement

Aside from supporting your innovation, IBM Cloud Orchestrator also assists you in adhering to strict service level agreements. The solution does this by giving you insights on virtual and physical infrastructures and on chargeback costs to ensure that you do not go beyond your set budget.

Pricing

IBM Cloud Orchestrator pricing is available in the following plans:

FREE TRIAL	✖
BASE	Contact vendor
ENTERPRISE EDITION	Contact vendor