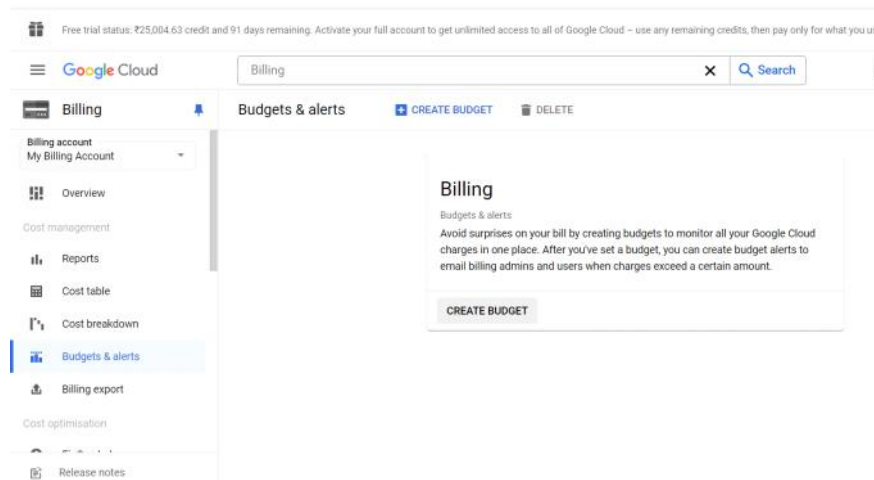


GCP account and Resource hierarchy

Demo: Setting up Billing alert in GCP



GCP Compute Part 1

Overview: Compute in GCP

Understanding compute, Persistent disk, and Firewall

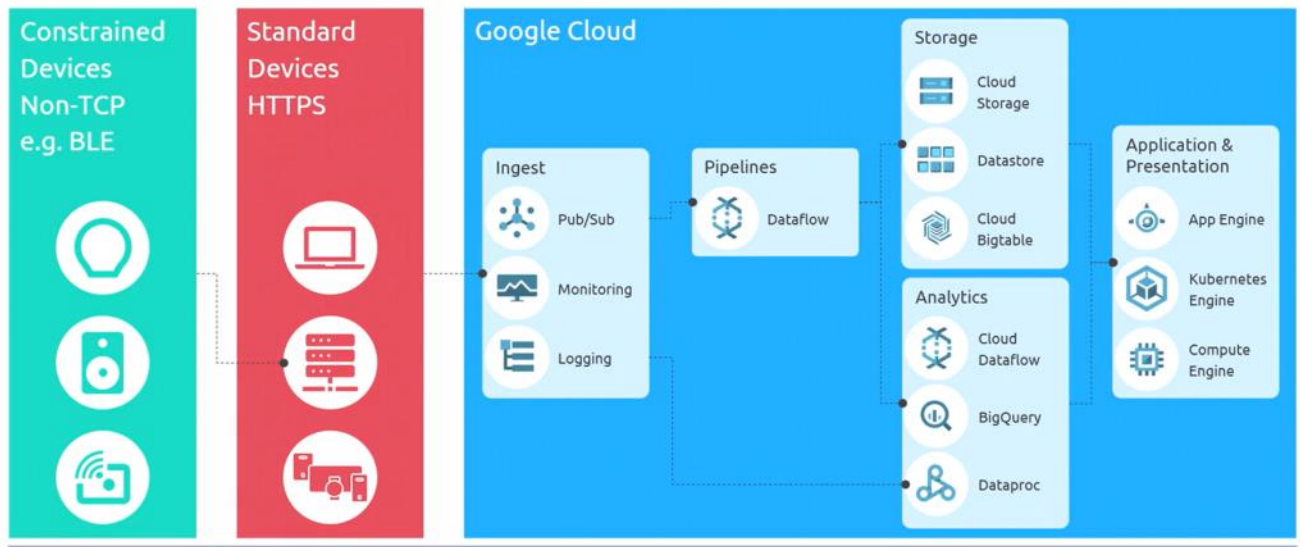
Demo: Compute-01

GCP Compute Part 2

UNDERSTANDING GCP ARCHITECTURE

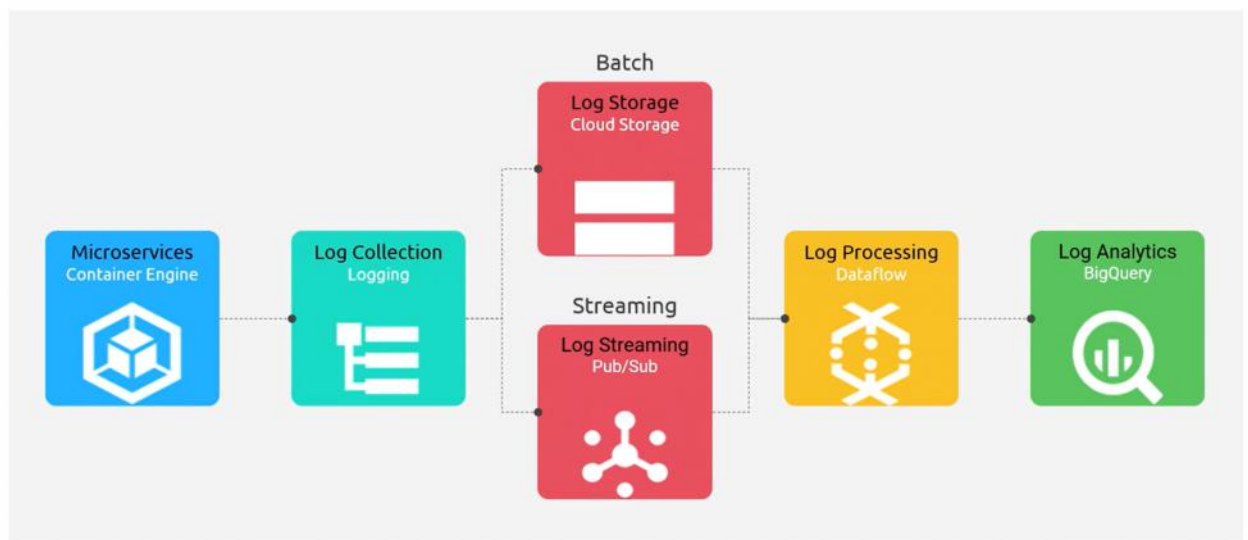
Sample GCP Architecture Part 1

Architecture: Internet of Things > Sensor stream ingest and processing



Sample GCP Architecture Part 2

Architecture: Big Data > Log Processing



What is data warehouse service in GCP?

BigQuery

What would be the best way to connect to a GCP compute instance?

Connect via serial console

In Cloud Storage, which storage class is ideal for files you access rarely, say, once every five years?

Archive

What type of firewall rule(s) does Google Cloud's networking support?

allow and deny

Which GCP services can be used for flat-structured object storage?

Cloud Storage

Which of the following GCP services can be used to securely connect compute instance in GCP to on-premise database service?

Cloud Interconnect

You have a billing application that runs only during the month end. This application has a very high SLA, and a failure will delay the commission paid out to sales employees. Which deployment setup would be best for such a use case?

Deploy the application on compute engine and choose preemptible instances

We need a NoSQL database to be used for client-side web and mobile apps. Which DB would best suit the use case?

Cloud Firestore

Which GCP service helps you to monitor and log access to your cloud resources?

- A. Google Cloud Trace
- B. Google Cloud Logging
- C. Google Cloud Monitoring
- D. Google Cloud Audit Logs

Answer: D. Google Cloud Audit Logs

Which GCP service can be used to run managed serverless code in response to events?

- A. Google Compute Engine
- B. Google App Engine
- C. Google Cloud Functions
- D. Google Cloud Run

Answer: C. Google Cloud Functions

Which GCP service is used for scalable storage of structured data and can be queried with SQL?

- A. Google Cloud Storage
- B. Google BigQuery
- C. Google Cloud Spanner
- D. Google Cloud SQL

Answer: B. Google BigQuery

• Cloud storage class--

- Standard: For data that is accessed frequently.
- Nearline: For data that is accessed less than once a month.
- Coldline: For data that is accessed less than once a year.
- Archive: For data that is accessed less than once every year and is suitable for data you expect to access infrequently, such as once every five years.

Private Cloud

Definition: A private cloud is a computing environment that provides hosted services to a specific organization. It can be managed internally or by a third party and can be hosted on-premises or at a data center.

Key Characteristics:

1. Dedicated Environment: The infrastructure is dedicated to a single organization.
2. Scalability: Can be more easily scaled than on-premises solutions since resources are abstracted and managed through cloud technologies.
3. Management: Can be managed internally by the organization's IT team or outsourced to a third-party provider.

4. Location: Can be hosted on the organization's premises, in a third-party data center, or a combination of both.
5. Control: Offers greater control over security, compliance, and data privacy since it is isolated from other users.

On-Premises Cloud

Definition: An on-premises cloud, also known as a private cloud, refers specifically to cloud computing resources and infrastructure hosted within an organization's own data centers.

Key Characteristics:

6. Physical Location: Infrastructure is located within the organization's own facilities.
7. Ownership and Management: The organization owns and fully manages the infrastructure, hardware, and software.
8. Customization: Highly customizable to meet specific organizational requirements and integrate with existing systems.
9. Capital Expenditure: Requires significant upfront investment in hardware and infrastructure.
10. Control and Security: Offers maximum control over hardware, data, and security policies, often critical for industries with stringent compliance requirements.

Key Differences

11. Deployment Location:
 - Private Cloud: Can be either on-premises or off-premises (hosted by a third party).
 - On-Premises Cloud: Always located within the organization's own data centers.
12. Management:
 - Private Cloud: Can be managed by the organization or a third-party provider.
 - On-Premises Cloud: Managed by the organization's IT staff.
13. Scalability:
 - Private Cloud: Generally more scalable, leveraging cloud technologies and sometimes third-party infrastructure.
 - On-Premises Cloud: Scalability is limited to the capacity of the organization's own data center infrastructure.
14. Cost:
 - Private Cloud: Costs can vary; operational costs might be lower if managed by a third party, but can involve ongoing subscription fees.
 - On-Premises Cloud: High initial capital expenditure with ongoing maintenance costs.
15. Flexibility:
 - Private Cloud: Offers more flexibility in terms of deployment options and resource management.

- On-Premises Cloud: Limited by the physical constraints of the organization's data center infrastructure.

Summary

- Private Cloud: A flexible cloud solution that can be hosted and managed either on-premises or off-premises, offering dedicated resources and greater control over security and compliance.
- On-Premises Cloud: A specific type of private cloud that is fully managed and hosted within the organization's own facilities, providing maximum control but requiring significant investment and management effort.