

PRACTICAL: -4

AIM: -To configure and use Cloud storage services like Amazon S3.

➤ Amazon S3 provides following services along with its specification.

1. Object Storage:



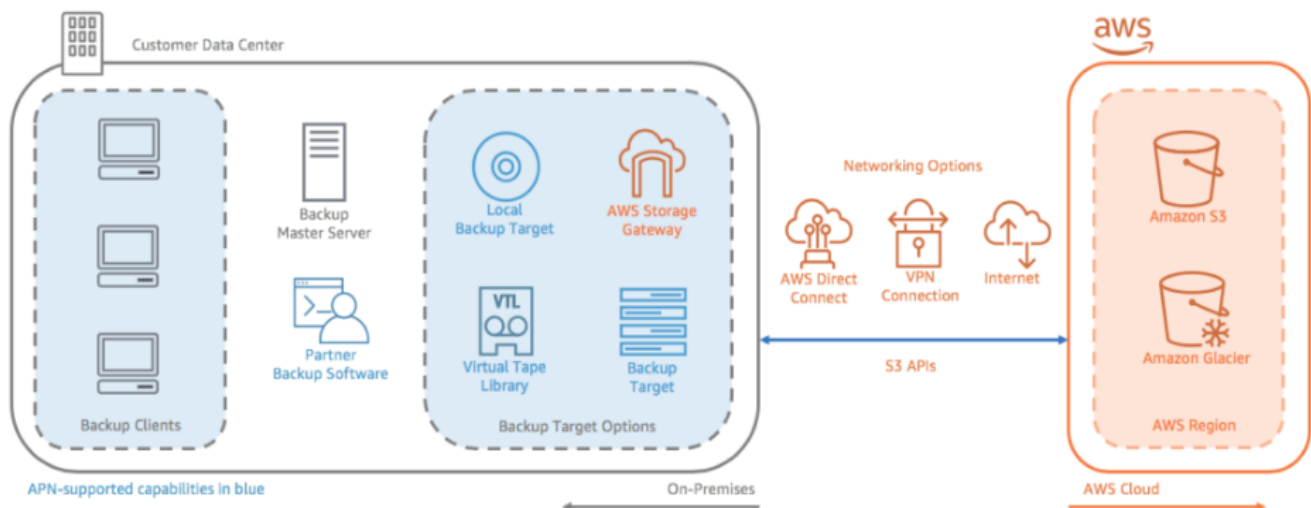
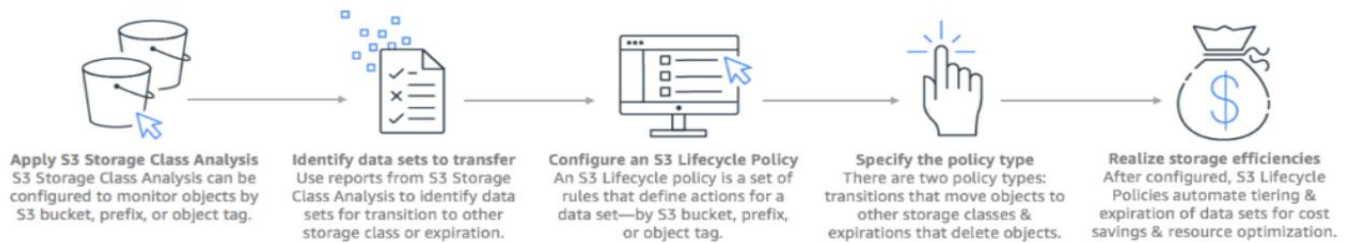
- Stores data as objects within buckets.
- Unlimited storage with different access tiers.

2. Security and Access Control:



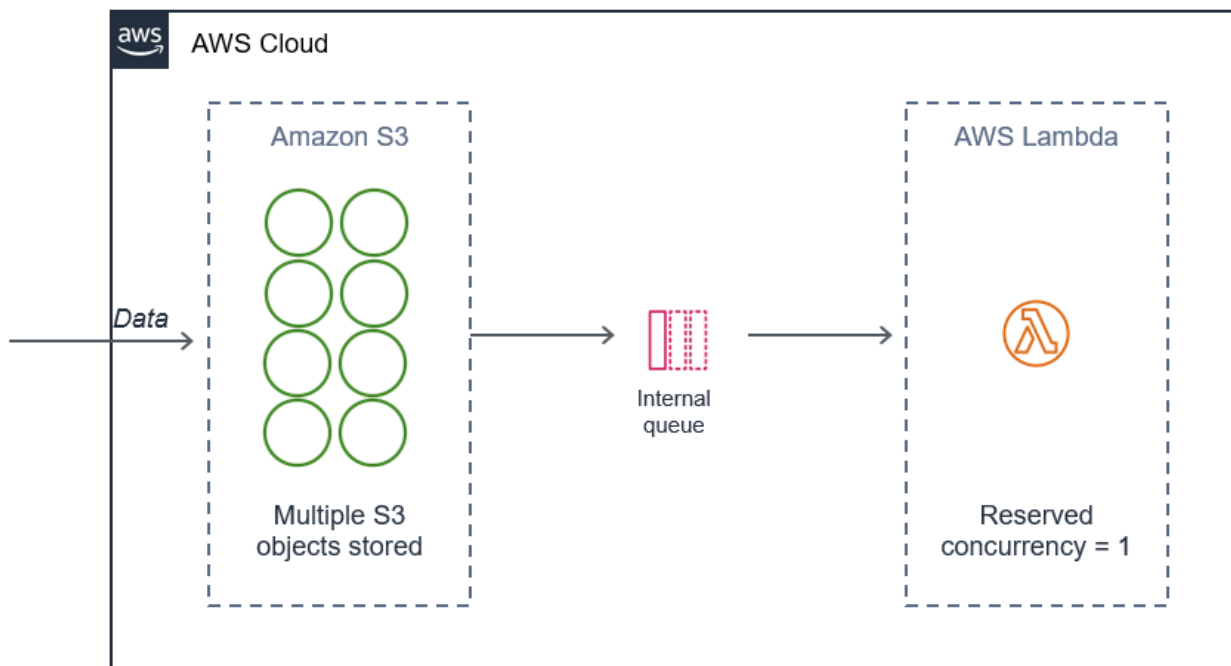
- Provides Identity and Access Management (IAM) policies.
- Supports encryption and bucket policies.

3. Data Management and Backup:



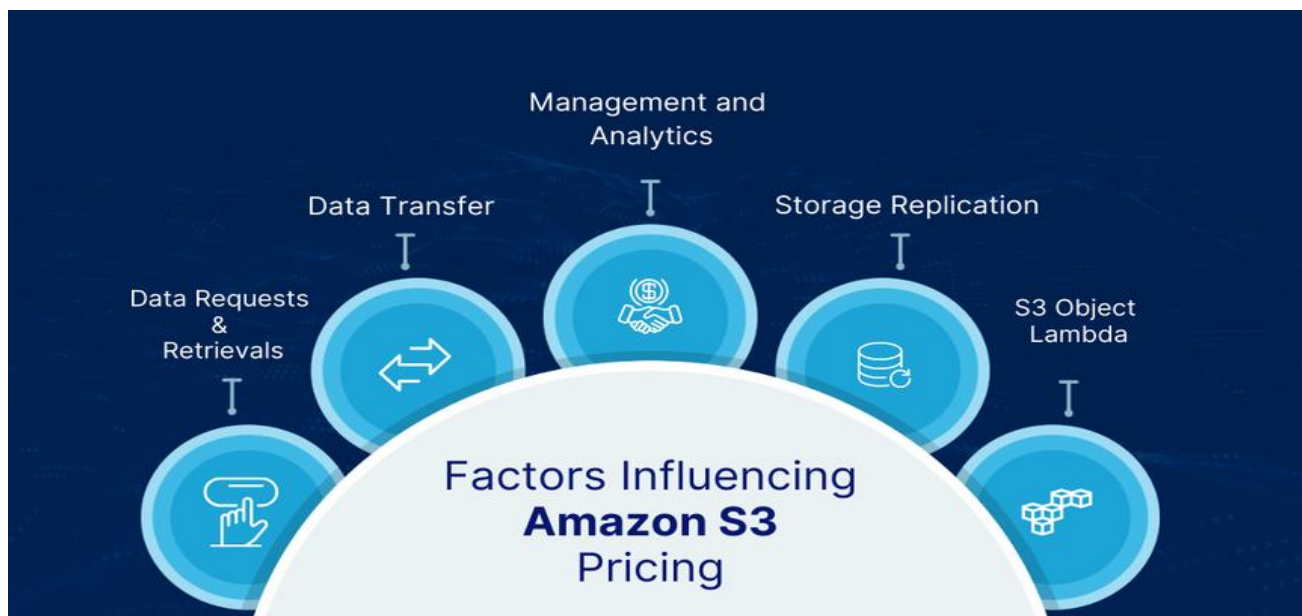
- Versioning to track changes in files.
- Lifecycle policies for automated data archiving.

4. Scalability and Performance:



- High availability and durability.
- Supports integration with other AWS services.

5. Cost Optimization:



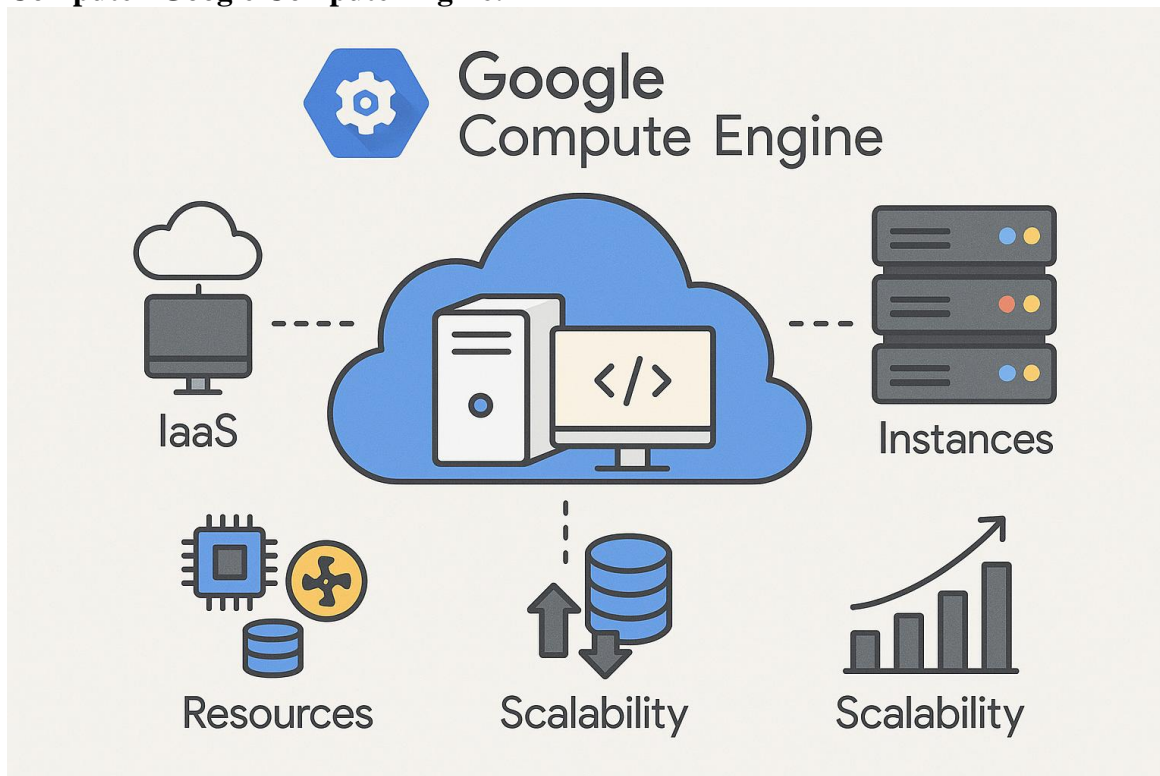
- Different pricing tiers for standard, infrequent access, and archive storage.
- Pay-as-you-go model.

PRACTICAL: -5

AIM: - To explore various Cloud Platforms like Google Cloud and describe its specification.

➤ Major Google Cloud Services and Specification.

1. Compute - Google Compute Engine:



- Provides virtual machines (VMs) for scalable computing.
- Supports custom machine types and auto-scaling.

2. Storage - Google Cloud Storage:



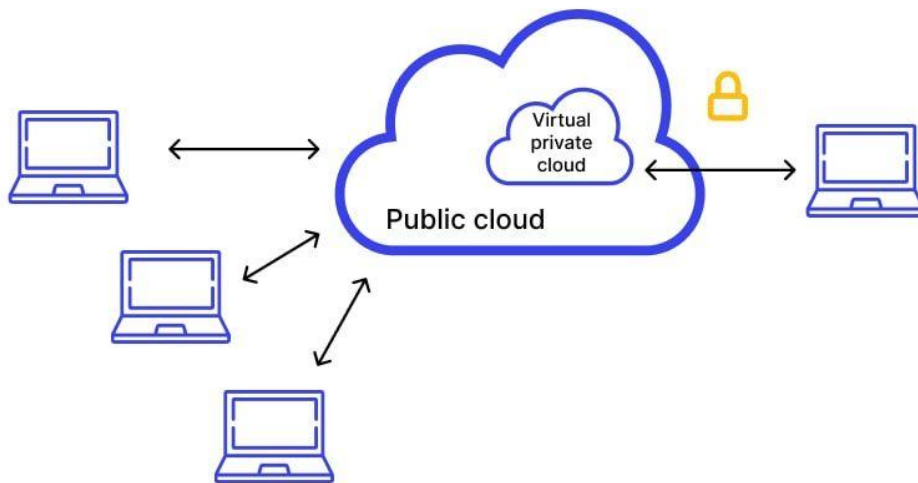
- Offers object storage with different pricing tiers.
- Supports lifecycle management and data encryption.

3. Databases - Cloud Spanner / Firestore:



- Cloud Spanner provides relational database services with horizontal scaling.
- Firestore is a NoSQL document database.

4. Networking - Virtual Private Cloud (VPC):



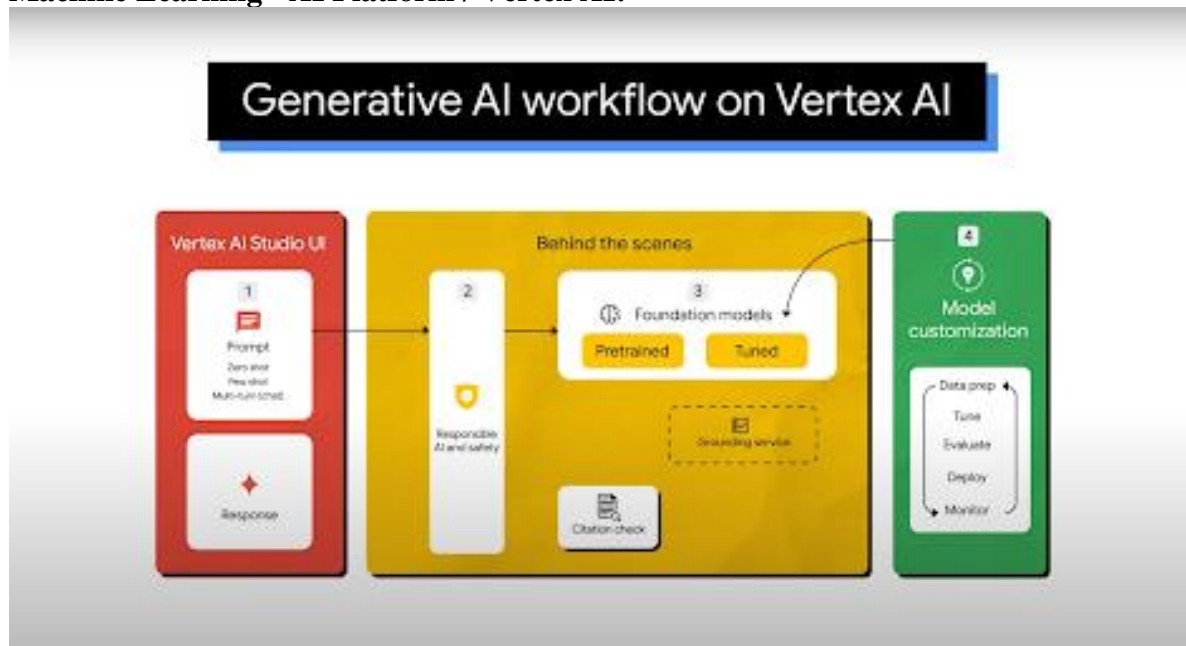
- Allows network segmentation and security control.
- Provides hybrid and multi-cloud networking.

5. Security & Identity - Identity and Access Management (IAM):



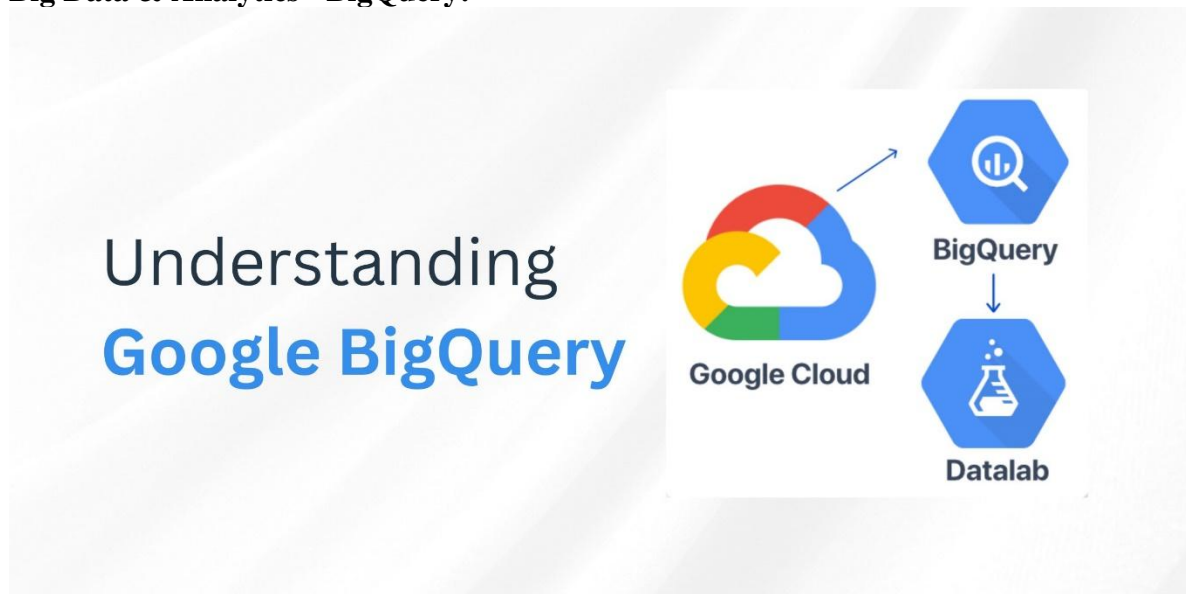
- Manages permissions and authentication.
- Supports role-based access control (RBAC).

6. Machine Learning - AI Platform / Vertex AI:



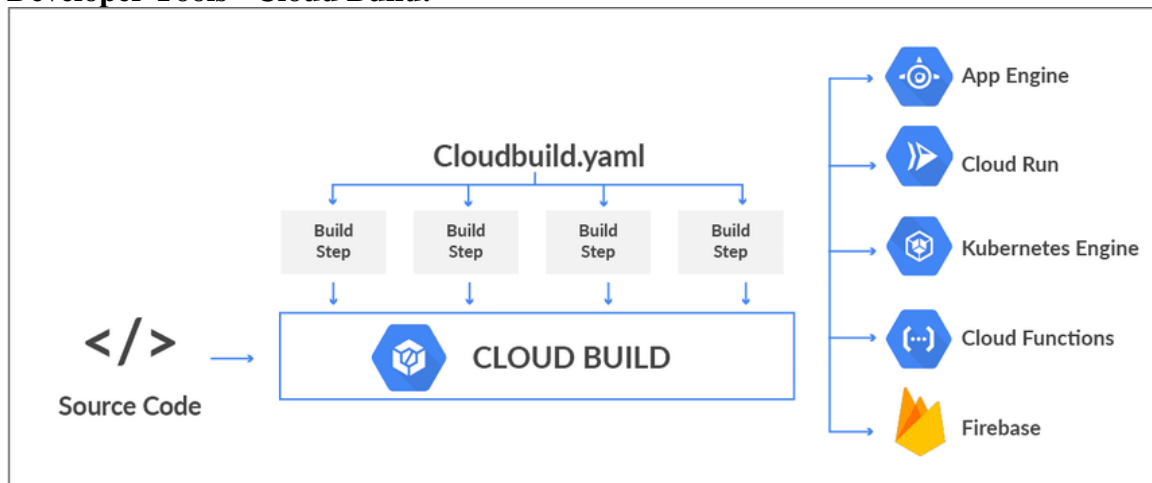
- Supports training and deploying ML models.
- Provides pre-trained models for NLP and vision.

7. Big Data & Analytics - BigQuery:



- Fully managed data warehouse.
- Enables high-speed SQL queries on large datasets.

8. Developer Tools - Cloud Build:



- Supports CI/CD pipeline for automated builds.
- Integrates with Kubernetes and Google Cloud Run.

9. Business Applications - Google Workspace Integration:



- Includes Gmail, Google Drive, and Docs integration.
- Supports cloud-based productivity tools.