



Google Compute Engine (GCE)

Detailed Overview Presentation



Introduction to Google Compute Engine

- Google Compute Engine (GCE) is a part of Google Cloud Platform (GCP).
- Provides Infrastructure as a Service (IaaS).
- Allows users to run Virtual Machines (VMs) on Google's infrastructure.
- Integrated with other GCP services such as Storage, Kubernetes, and more.
- Access via Google Console, REST API, or gcloud CLI.



Features of Google Compute Engine

- Machine Types: Select from predefined or custom CPU & memory configurations.
- Persistent Disk: Durable, high-performance storage with snapshot capabilities.
- Local SSD: High-speed, low-latency storage physically attached to VM.
- GPU Support: Add GPUs for machine learning or graphics-heavy applications.
- Custom Images: Boot from user-created operating system images.



Applications of Google Compute Engine

- Web Hosting: Deploy scalable web applications.
- Big Data Processing: Suitable for scientific simulations, ML, and analytics.
- Gaming Servers: Low-latency hosting for multiplayer games.
- Containerized Apps: Supports Docker and Kubernetes environments.



Virtual Machine Use Cases

- Software Development: Develop and test applications across environments.
- Disaster Recovery: Replicate and backup VMs for failover.
- Cloud Migration: Move on-prem workloads to the cloud.
- Hosting Services: Use VMs for databases, apps, and web servers.



Advantages of Google Compute Engine

- Scalability: Automatically adjusts resources based on load.
- Load Balancing: Efficient traffic distribution across regions.
- Security: Advanced encryption, IAM, and firewall rules.
- Integration: Seamlessly connects with GCP services like BigQuery, Storage.
- OS Flexibility: Supports multiple operating systems including Linux and Windows.