Module 1 – Intro and fundamentals

## Slide 3:-

Google offers multiple certifications, staring from fundamentals to professionals. Also offers role specific certifications

Open the link and go through course content for this course

## Slide 5 :-

* Trust and Security :- by default cannot communicate between different regions, segregation of resources of different organization.
* Open cloud Platform :- Provides integrations with multiple tools and architectures like Kubernetes environment. Allows onboarding multiple google open source tools instead of cloud native solutions
* Global Network Infrastructure :- Very big network connected directly via high speed optical fibre (Open the link and show connectivity diagram)
* AI Driven Cloud :- Multiple AI services, data science, machine learning modules provided, easy integration with different services

## Slide 8:-

* **Distance**: Choose zones based on the location of your customers and where the data is supposed to live. Store resources in zones that are closer to your point of service in order to keep network latency low.
* **Communication:** It’s important to be mindful that communication across and within regions will incur different costs and happen at different speeds. Typically, communication within a region will be cheaper than communication across different regions.
* **Redundant Systems:** As we mentioned above, Google is big on the fact that you should deploy fault-tolerant systems with high availability in case of unexpected failures. Therefore, you should design any important systems with redundancy across multiple regions and zones. This is to mitigate any possible effects if your instances were to experience an unexpected failure.
* **Resource Distribution:** Zones are designed to be independent of one another so if one zone fails or becomes unavailable, you can transfer traffic to another zone in the same region to keep your services running.
* **Cost/Pricing:** You should always check the pricing to compare the cost between regions.

Module 2 :- Compute VM Instance

Slide 1

**Google Compute Engine** is a virtual machine (VM) service that allows users to create and run VMS on Google’s infrastructure.

 Compute Engine provides a variety of VM types, including standard, high-memory, high-CPU, and custom machine types.

Slide 2

In simple words, virtual machine is a digital version of physical computer.

Each virtual machine consists of a complete operating system and a set of virtualized hardware resources, including CPU, memory, storage, and network interfaces