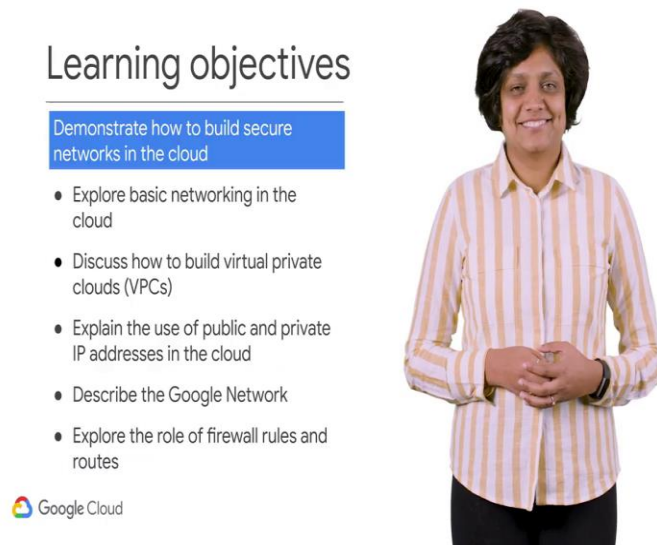


Google Cloud Computing Foundation Course
Priyanka Vergardia
Google Cloud

Lecture-51
Module introduction

Hi I am Priyanka and welcome to the module it helps to network. In this module you will be learning about networking in the Google cloud platform. So, far in this course you have learned for TCP is how GCP supports the building of apps different storage options the use of API's and cloud security. In this module of the Google cloud computing foundations course you find out how networking in GCP works and what you need to consider before setting up those networks.

(Refer Slide Time: 00:31)



Learning objectives

Demonstrate how to build secure networks in the cloud

- Explore basic networking in the cloud
- Discuss how to build virtual private clouds (VPCs)
- Explain the use of public and private IP addresses in the cloud
- Describe the Google Network
- Explore the role of firewall rules and routes

Google Cloud

The slide features a woman, Priyanka Vergardia, standing on the right side. She is wearing a light-colored, vertically striped button-down shirt and dark pants. The slide content is on the left, with a blue header for the title and a blue box for the main objective. The Google Cloud logo is at the bottom left.

The main objective of this module is to be able to demonstrate how to build secure networks in the cloud. To achieve this goal you will need to meet the following learning objectives provide an overview of networking in the cloud, discuss how to build virtual private clouds, explain the use of public and private IP addresses, describe the Google Network including regions zones cache nodes point of presence and fibre architecture and explore the role of firewall rules and routes.

(Refer Slide Time: 01:02)

Learning objectives

- Explore hybrid cloud networking options including virtual private networks (VPNs), interconnect, and direct peering
- Differentiate between load balancing options in the cloud



You will also explore various hybrid cloud networking options and differentiate between load balancing options.

(Refer Slide Time: 01:09)

Agenda

Introduction to Networking in the Cloud	Lab: VPC Networks - Controlling Access
Defining a Virtual Private Cloud	Building Hybrid Clouds using VPNs, Interconnecting, and Direct Peering
Public and Private IP Address Basics	Different Options for Load Balancing
Google's Network Architecture	Lab: HTTP Load Balancer with Cloud Armor
Routes and Firewall Rules in the Cloud	Lab: Create an Internal Load Balancer
Lab: VPC Networking Fundamentals	Quiz
Multiple VPC Networks	Summary
Lab: Multiple VPC Networks	



These are the topics that make up the module. First you will be introduced to networking in the cloud, then you will learn what a virtual cloud is followed by an introduction to public and private IP addresses. And a review of Google's network architecture, you will then learn about routes and firewall rules in the cloud before completing a hands-on lab to discover the fundamentals of VPC networking.

The next topic will explore how multiple VPC networks can be used which is supported by two labs. In the first you will create VPC networks and VM instances and in the other you will create a web server and explore Identity and Access Management roles and service accounts. You will then learn how to build hybrid clouds using VPNs interconnecting and direct peering. Next you think about the different options for load balancing followed by another two labs.

The first lab you will configure the HTTP load balancer and perform a stress test using cloud armor. In the second lab you will configure and test an internal load balancer. The module will end with a short quiz to help you check your understanding followed by a recap of the key learning points covered in the module.