

INFOSOFT IT SOLUTIONS

Training | Projects | Placements

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GCP Security

Introduction to GCP Security

1. Overview of Google Cloud Platform (GCP)
2. Importance of Security in Cloud Computing
3. Shared Responsibility Model in GCP

Identity and Access Management (IAM)

1. IAM Overview and Fundamentals
2. IAM Roles and Permissions Management
3. IAM Best Practices and Use Cases
4. Hands-on: IAM Configuration and Role Assignment

Network Security on GCP

1. Virtual Private Cloud (VPC) Fundamentals
2. VPC Networks and Subnets Configuration
3. Firewall Rules and Network Security Policies
4. Cloud NAT and Bastion Hosts
5. Hands-on: VPC Setup and Firewall Rules

Data Security on GCP

1. Data Encryption in Transit and at Rest
2. Key Management Service (KMS) Overview

3. Secrets Management with Secret Manager
4. Data Loss Prevention (DLP) Overview and Best Practices
5. Hands-on: Encryption Configuration and Secret Management

GCP Security Services

1. Security Command Center (SCC) Overview
2. Identity-Aware Proxy (IAP) for Access Control
3. Cloud Armor for DDoS Protection
4. Cloud Security Scanner for Web Application Security
5. Hands-on: Configuring SCC and IAP

Secure Deployment and Operations

1. Secure Development Lifecycle (SDL) on GCP
2. Security Best Practices for Compute Engine and Kubernetes Engine
3. Container Security with Google Kubernetes Engine (GKE)
4. Service Accounts and Service Networking
5. Hands-on: Securing GKE Deployments

Compliance and Governance

1. Overview of Compliance Standards (e.g., GDPR, HIPAA)
2. Compliance on GCP: Tools and Resources
3. Governance Best Practices and Policies
4. Auditing and Monitoring with Stackdriver
5. Hands-on: Audit Logging and Monitoring Setup

Incident Response and Management

1. Security Incident Response Process on GCP
2. Incident Detection and Notification Mechanisms
3. Remediation and Post-Incident Analysis
4. Hands-on: Simulated Incident Response Exercise

Advanced Security Topics

1. Multi-factor Authentication (MFA) Implementation
2. Advanced Threat Detection and Security Analytics

3. API Security and Management on GCP
4. Hands-on: Implementing Advanced Security Measures

Case Studies and Best Practices

1. Real-world Case Studies of GCP Security Implementations
2. Best Practices for Securing GCP Workloads
3. Lessons Learned and Recommendations

Hands-on Labs and Practical Exercises

1. Interactive Labs Covering Key Security Concepts
2. Scenario-based Exercises for Practical Application
3. Q&A Sessions and Troubleshooting Labs