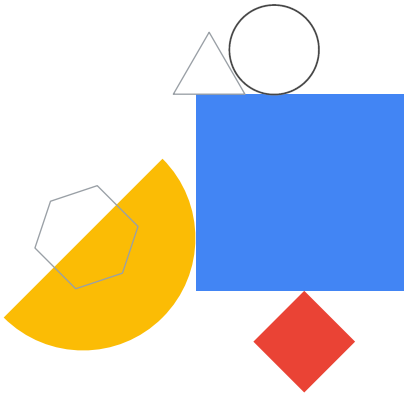
Google Cloud

Preparing for Your Associate Cloud Engineer Journey

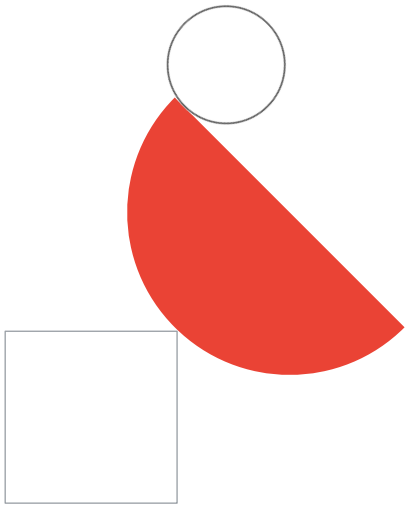


Course Workbook

Certification Exam Guide Sections

1	Setting up a cloud solution environment
2	Planning and configuring a cloud solution
3	Deploying and implementing a cloud solution
4	Ensuring successful operation of a cloud solution
5	Configuring access and security

Section 1:
Setting up a cloud solution environment



1.1 Diagnostic Question 01

Stella is a new member of a team in your company who has been put in charge of monitoring VM instances in the organization. Stella will need the required permissions to perform this role.

How should you grant her those permissions?

A. Assign Stella a roles/compute.viewer role.

B. Assign Stella compute.instances.get permissions on all of the projects she needs to monitor.

C. Add Stella to a Google Group in your organization. Bind that group to roles/compute.viewer.

D. Assign the “viewer” policy to Stella.

1.1 Diagnostic Question 02

How are resource hierarchies organized in Google Cloud?

A. Organization, Project, Resource, Folder.
B. Organization, Folder, Project, Resource.
C. Project, Organization, Folder, Resource.
D. Resource, Folder, Organization, Project.

1.1 Diagnostic Question 03

What Google Cloud project attributes can be changed?

A. The Project ID.
B. The Project Name.
C. The Project Number.
D. The Project Category.

1.1 Diagnostic Question 04

Jane will manage objects in Cloud Storage for the Cymbal Superstore. She needs to have access to the proper permissions for every project across the organization.

What should you do?

A. Assign Jane the roles/storage.objectCreator on every project.

B. Assign Jane the roles/viewer on each project and the roles/storage.objectCreator for each bucket.

C. Assign Jane the roles/editor at the organizational level.

D. Add Jane to a group that has the roles/storage.objectAdmin role assigned at the organizational level.

1.1 Diagnostic Question 05

You need to add new groups of employees in Cymbal Superstore's production environment. You need to consider Google's recommendation of using least privilege.

What should you do?

A. Grant the most restrictive basic role to most services, grant predefined or custom roles as necessary.

B. Grant predefined and custom roles that provide necessary permissions and grant basic roles only where needed.

C. Grant the least restrictive basic roles to most services and grant predefined and custom roles only when necessary.

D. Grant custom roles to individual users and implement basic roles at the resource level.

1.1 Diagnostic Question 06

The Operations Department at Cymbal Superstore wants to provide managers access to information about VM usage without allowing them to make changes that would affect the state. You assign them the Compute Engine Viewer role.

Which two permissions will they receive?

A. compute.images.list
B. compute.images.get
C. compute.images.create
D. compute.images.setIAM
E. computer.images.update

1.1 Setting up cloud projects and accounts

Courses

Google Cloud Fundamentals: Core Infrastructure

- M2 Resources and Access in the Cloud

Architecting with Google Compute Engine

- M4 Identity and Access Management (IAM)

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Essential Google Cloud Infrastructure: Core Services

- M1 Identity and Access Management (IAM)

Skill Badges

Google Cloud

Implement Load Balancing on Compute Engine

Google Cloud

Set Up an App Dev Environment on Google Cloud

Documentation

Overview | IAM Documentation

Resource hierarchy | Resource Manager Documentation

Understanding roles | IAM Documentation

1.2 Diagnostic Question 07

How are billing accounts applied to projects in Google Cloud? (Pick two.)

A. Set up Cloud Billing to pay for usage costs in Google Cloud projects and Google Workspace accounts.

B. A project and its resources can be tied to more than one billing account.

C. A billing account can be linked to one or more projects.

D. A project and its resources can only be tied to one billing account.

E. If your project only uses free resources you don't need a link to an active billing account.

1.2 Diagnostic Question 08

Fiona is the billing administrator for the project associated with Cymbal Superstore's eCommerce application. Jeffrey, the marketing department lead, wants to receive emails related to budget alerts. Jeffrey should have access to no additional billing information.

What should you do?

A. Change the budget alert default threshold rules to include Jeffrey as a recipient.

B. Use Cloud Monitoring notification channels to send Jeffrey an email alert.

C. Add Jeffrey and Fiona to the budget scope custom email delivery dialog.

D. Send alerts to a Pub/Sub topic that Jeffrey is subscribed to.

1.2 Managing billing configuration

Courses

Google Cloud Fundamentals: Core Infrastructure

- M2 Resources and Access in the Cloud

Architecting with Google Compute Engine

- M6 Resource Management

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Essential Google Cloud Infrastructure: Core Services

- M3 Resource Management

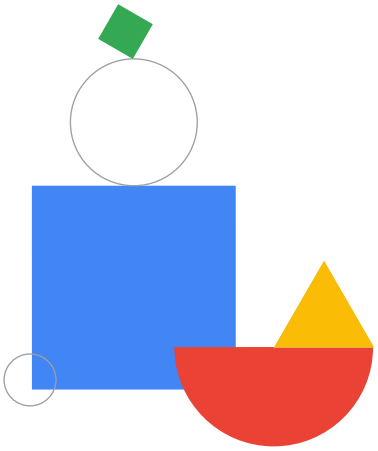
Documentation

Create, modify, or close your self-serve

Cloud Billing account

Create, edit, or delete budgets and budget alerts | Cloud Billing

Google Cloud



Section 2:
Planning and configuring a cloud solution

2.1 Diagnostic Question 01

Cymbal Superstore decides to migrate their supply chain application to Google Cloud. You need to configure specific operating system dependencies.

What should you do?

A. Implement an application using containers on Cloud Run.
B. Implement an application using code on App Engine.
C. Implement an application using containers on Google Kubernetes Engine.
D. Implement an application using virtual machines on Compute Engine.

2.1 Diagnostic Question 02

Cymbal Superstore decides to pilot a cloud application for their point of sale system in their flagship store. You want to focus on code and develop your solution quickly, and you want your code to be portable.

How do you proceed?

A. SSH into a Compute Engine VM and execute your code.

B. Package your code to a container image and post it to Cloud Run.

C. Implement a deployment manifest and run kubectl apply on it in Google Kubernetes Engine.

D. Code your solution in Cloud Run functions.

2.1 Diagnostic Question 03

An application running on a highly-customized version of Ubuntu needs to be migrated to Google Cloud. You need to do this in the least amount of time with minimal code changes.

How should you proceed?

A. Create Compute Engine Virtual Machines and migrate the app to that infrastructure.

B. Deploy the existing application to App Engine.

C. Deploy your application in a container image to Cloud Run.

D. Implement a Kubernetes cluster and create pods to enable your app.

2.1 Diagnostic Question 04

You want to deploy a microservices application. You need full control of how you manage containers, reliability, and autoscaling, but don't want or need to manage the control plane.

Which compute option should you use?

A. Cloud Run
B. App Engine
C. Google Kubernetes Engine
D. Compute Engine

2.1 Planning and configuring compute resources

Courses

[Google Cloud Fundamentals: Core Infrastructure](#)

- M3 Virtual Machines and Networks in the Cloud
- M5 Containers in the Cloud
- M6 Applications in the Cloud

[Getting Started with Google Kubernetes Engine](#)

- M2 Introduction to Containers and Kubernetes

[Architecting with Google Compute Engine](#)

- M3 Virtual Machines

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[Essential Google Cloud Infrastructure: Foundation](#)

- M3 Virtual Machines

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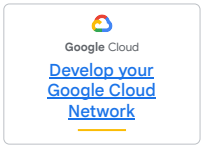

Documentation

[Choosing the right compute option in GCP: a decision tree](#)

[Application Hosting Options](#)

[Tutorials | Compute Engine Documentation](#)

2.2 Diagnostic Question 05

Cymbal Superstore needs to analyze whether they met quarterly sales projections. Analysts assigned to run this query are familiar with SQL.

A. BigQuery
B. Cloud SQL
C. Spanner
D. Firestore

What data solution should they implement?

2.2 Diagnostic Question 06

Cymbal Superstore's supply chain application frequently analyzes large amounts of data to inform business processes and operational dashboards.

What storage class would make sense for this use case?

A. Archive
B. Coldline
C. Nearline
D. Standard

2.2 Diagnostic Question 07

Cymbal Superstore has a need to populate visual dashboards with historical time-based data. This is an analytical use-case.

Which two storage solutions could they use?

A. BigQuery
B. Cloud Storage
C. Firestore
D. Cloud SQL
E. Bigtable

2.2 Planning and configuring data storage options

Courses

[Google Cloud Fundamentals: Core Infrastructure](#)

- M4 Storage in the Cloud

[Architecting with Google Compute Engine](#)

- M5 Storage and Database Services

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[Essential Google Cloud Infrastructure: Core Services](#)

- M2 Storage and Database Services

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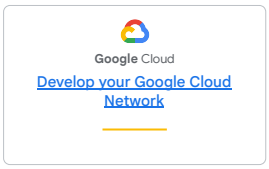

Documentation

[Cloud Storage Options](#)

[Storage classes](#)

[Data lifecycle | Cloud Architecture Center](#)

2.3 Diagnostic Question 08

Cymbal Superstore is piloting an update to its ecommerce app for the flagship store in Minneapolis, Minnesota. The app is implemented as a three-tier web service with traffic originating from the local area and resources dedicated for it in us-central1. You need to configure a secure, low-cost network load-balancing architecture for it.

How do you proceed?

A. Implement a premium tier global external Application Load Balancer connected to the web tier as the frontend, and a regional internal Application Load Balancer between the web tier and backend.

B. Implement a global external proxy Network Load Balancer connected to the web tier as the frontend, and a premium tier passthrough Network Load Balancer between the web tier and the backend.

C. Configure a standard tier regional external Application Load Balancer connected to the web tier as a frontend and a regional internal Application Load Balancer between the web tier and the backend.

D. Configure a regional internal proxy Network Load Balancer connected to the web tier as the frontend and a standard tier internal proxy Network Load Balancer between the web tier and the backend.

2.3 Diagnostic Question 09

What Google Cloud load balancing option runs at Layer 7 of the TCP stack?

A. Global Application Load Balancer
B. Global proxy Network Load Balancer
C. Regional passthrough Network Load Balancer
D. Regional internal proxy Network Load Balancer

2.3 Planning and configuring network resources

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- M4 Storage in the Cloud

[Architecting with Google Compute Engine](#)

- M2 Virtual Networks
- M5 Storage and Database Services
- M9 Load Balancing and Autoscaling

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[Essential Google Cloud Infrastructure: Foundation](#)

- M2 Virtual Networks

[Essential Google Cloud Infrastructure: Core Services](#)

- M2 Storage and Database Services

[Elastic Google Cloud Infrastructure: Scaling and Automation](#)

- M2 Load Balancing and Autoscaling

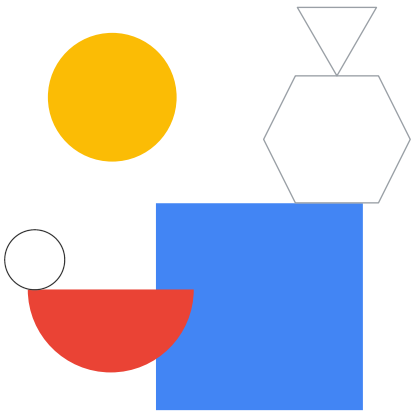
Documentation

[Cloud Load Balancing overview](#)

[Cloud Load Balancing](#)

Google Cloud

Section 3: Deploying and implementing a cloud solution



3.1 Diagnostic Question 01

Cymbal Superstore's sales department has a medium-sized MySQL database. This database includes user-defined functions and is used internally by the marketing department at Cymbal Superstore HQ. The sales department asks you to migrate the database to Google Cloud in the most timely and economical way.

What should you do?

A. Find a MySQL machine image in Cloud Marketplace and configure it to meet your needs.

B. Implement a database instance using Cloud SQL, back up your local data, and restore it to the new instance.

C. Configure a Compute Engine VM with an N2 machine type, install MySQL, and restore your data to the new instance.

D. Use gcloud to implement a Compute Engine instance with an E2-standard-8 machine type, install, and configure MySQL.

3.1 Diagnostic Question 02

The backend of Cymbal Superstore's e-commerce system consists of managed instance groups. You need to update the operating system of the instances in an automated way using minimal resources.

What should you do?

A. Create a new instance template. Click **Update VMs**. Set the update type to Opportunistic. Click **Start**.

B. Create a new instance template, then click **Update VMs**. Set the update type to PROACTIVE. Click **Start**.

C. Create a new instance template. Click **Update VMs**. Set max surge to 5. Click **Start**.

D. Abandon each of the instances in the managed instance group. Delete the instance template, replace it with a new one, and recreate the instances in the managed group.

3.1 Deploying and implementing Compute Engine resources

Courses

Google Cloud Fundamentals: Core Infrastructure

- M3 Virtual Machines and Networks in the Cloud

Architecting with Google Compute Engine

- M3 Virtual Machines
- M9 Load Balancing and Autoscaling
- M10 Infrastructure Automation

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- M3 Virtual Machines

Elastic Google Cloud Infrastructure: Scaling and Automation

- M2 Load Balancing and Autoscaling
- M3 Infrastructure Automation

Documentation

Compute Engine documentation | Compute Engine Documentation

Creating managed instance groups | Compute Engine Documentation

3.2 Diagnostic Question 03

The development team for the supply chain project is ready to start building their new cloud app using a small Kubernetes cluster for the pilot. The cluster should only be available to team members and does not need to be highly available. The developers also need the ability to change the cluster architecture as they deploy new capabilities.

How would you implement this?

A. Implement an autopilot cluster in us-central1-a with a default pool and an Ubuntu image.

B. Implement a private standard zonal cluster in us-central1-a with a default pool and an Ubuntu image.

C. Implement a private standard regional cluster in us-central1 with a default pool and container-optimized image type.

D. Implement an autopilot cluster in us-central1 with an Ubuntu image type.

3.2 Deploying and Implementing Google Kubernetes Engine resources

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- M5 Containers in the Cloud

Getting Started with Google Kubernetes Engine

- M2 Introduction to Containers and Kubernetes
- M3 Kubernetes Architecture

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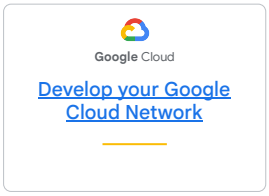

Documentation

Types of clusters | Kubernetes Engine Documentation

3.3 Diagnostic Question 04

You need to quickly deploy a containerized web application on Google Cloud. You know the services you want to be exposed. You do not want to manage infrastructure. You only want to pay when requests are being handled and need support for custom packages.

What technology meets these needs?

A. App Engine flexible environment
B. App Engine standard environment
C. Cloud Run
D. Cloud Run functions

3.3 Diagnostic Question 05

You need to analyze and act on files being added to a Cloud Storage bucket. Your programming team is proficient in Python. The analysis you need to do takes at most 5 minutes. You implement a Cloud Run function to accomplish your processing and specify a trigger resource pointing to your bucket.

How should you configure the --trigger-event parameter using gcloud?

A. --trigger-event google.storage.object.finalize
B. --trigger-event google.storage.object.create
C. --trigger-event google.storage.object.change
D. --trigger-event google.storage.object.add

3.3 Deploying and implementing Cloud Run and Cloud Run functions resources

Courses

Google Cloud Fundamentals: Core Infrastructure

- M6 Applications in the Cloud
- M7 Developing and Deploying in the Cloud

Documentation

Choose an App Engine environment | App Engine Documentation

Application Hosting Options

Cloud Run: What no one tells you about Serverless (and how it's done)

Cloud Run functions

3.4 Diagnostic Question 06

You require a Cloud Storage bucket serving users in New York City and San Francisco. Users in London will not use this bucket. You do not plan on using ACLs.

What CLI command do you use?

A. Run a ***gcloud storage objects*** command and specify --remove-acl-grant.

B. Run a ***gsutil mb*** command specifying a multi-regional location and an option to turn ACL evaluation off.

C. Run a ***gcloud storage buckets create*** command, but do not specify –-location.

D. Run a ***gcloud storage buckets create*** command specifying –-placement us-east1, europe-west2

3.4 Diagnostic Question 07

Cymbal Superstore asks you to implement Cloud SQL as a database backend to their supply chain application. You want to configure automatic failover in case of a zone outage. You decide to use the ***gcloud sql instances create*** command set to accomplish this.

Which gcloud command line argument is required to configure the stated failover capability as you create the required instances?

A. --availability-type
B. --replica-type
C. --secondary-zone
D. --control_plane-instance-name

3.4 Diagnostic Question 08

Cymbal Superstore's marketing department needs to load some slowly changing data into BigQuery. The data arrives hourly in a Cloud Storage bucket. You want to minimize cost and implement this in the fewest steps.

What should you do?

A. Implement a ***bq load*** command in a command line script and schedule it with cron.

B. Read the data from your bucket by using the BigQuery streaming API in a program.

C. Create a Cloud Run function to push data to BigQuery through a Dataflow pipeline.

D. Use the BigQuery Data Transfer Service to schedule a transfer between your bucket and BigQuery.

3.4 Deploying and implementing data solutions

Courses

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- M5 Storage and Database Services

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- M2 Storage and Database Services

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Google Cloud

[Develop your Google Cloud Network](#)

Documentation

[Creating storage buckets | Cloud Storage](#)

[What is Cloud Storage?](#)

[Cloud SQL for MySQL features](#)

[Creating instances | Cloud SQL for MySQL](#)

[How to load, import, or ingest data into BigQuery for analysis](#)

[Introduction to loading data | BigQuery](#)

3.5 Diagnostic Question 09

Which Virtual Private Cloud (VPC) network type allows you to fully control IP ranges and the definition of regional subnets?

A. Default Project network
B. Auto mode network
C. Custom mode network
D. An auto mode network converted to a custom network

3.5 Deploying and implementing networking resources

Courses

Architecting with Google Compute Engine

- M2 Virtual Networks

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Essential Google Cloud Infrastructure: Foundation

- M2 Virtual Networks

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Develop your Google Cloud Network

Documentation

VPC network overview

3.6 Diagnostic Question 10

What action does the ***terraform*** apply command perform?

A. Downloads the latest version of the terraform provider.
B. Verifies syntax of terraform config file.
C. Shows a preview of resources that will be created.
D. Sets up resources requested in the terraform config file.

3.6 Implementing resources through infrastructure as code

Courses

Architecting with Google Compute Engine

- M10 Infrastructure Automation

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Elastic Google Cloud Infrastructure: Scaling and Automation

- M3 Infrastructure Automation

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Build Infrastructure with Terraform on Google Cloud

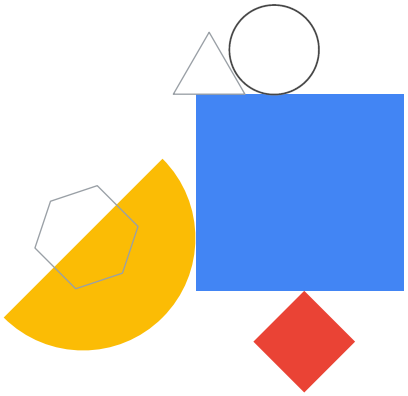
Documentation

Introduction

Using Terraform with Google Cloud

Google Cloud

Section 4: Ensuring successful operation of a cloud solution



4.1 Diagnostic Question 01

You want to view a description of your available snapshots using the command line interface (CLI). What gcloud command should you use?

A. gcloud compute snapshots list
B. gcloud snapshots list
C. gcloud compute snapshots get
D. gcloud compute list snapshots

4.1 Diagnostic Question 02

You have a scheduled snapshot you are trying to delete, but the operation returns an error.

What should you do to resolve this problem?

A. Delete the downstream incremental snapshots before deleting the main reference.

B. Delete the object the snapshot was created from.

C. Detach the snapshot schedule before deleting it.

D. Restore the snapshot to a persistent disk before deleting it.

4.1 Managing Compute Engine resources

Courses

Google Cloud Fundamentals: Core Infrastructure

- M3 Virtual Machines and Networks in the Cloud

Architecting with Google Compute Engine

- M3 Virtual Machines
- M9 Load Balancing and Autoscaling

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- M3 Virtual Machines

Elastic Google Cloud Infrastructure: Scaling and Automation

- M2 Load Balancing and Autoscaling

Documentation

Working with persistent disk snapshots | Compute Engine Documentation

Working with persistent disk snapshots | Compute Engine Documentation

Persistent disk snapshots | Compute Engine Documentation

4.2 Diagnostic Question 03

Cymbal Superstore's GKE cluster requires an internal Application Load Balancer. You are creating the configuration files required for this resource.

What is the proper setting for this scenario?

A. Annotate your ingress object with an ingress.class of "gce."
B. Configure your service object with a type: LoadBalancer.
C. Annotate your service object with a "neg" reference.
D. Implement custom static routes in your VPC.

4.2 Diagnostic Question 04

What Kubernetes object provides access to logic running in your cluster via endpoints that you define?

A. Pod templates
B. Pods
C. Services
D. Deployments

4.2 Diagnostic Question 05

What is the declarative way to initialize and update Kubernetes objects?

A. kubectl apply
B. kubectl create
C. kubectl replace
D. kubectl run

4.2 Managing Google Kubernetes Engine resources

Courses

Google Cloud Fundamentals: Core Infrastructure

- M5 Containers in the Cloud

Getting Started with Google Kubernetes Engine

- M3 Kubernetes Architecture
- M4 Kubernetes Operations

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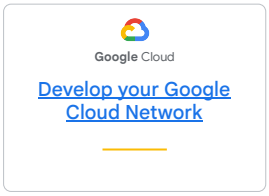

Documentation

- Ingress for internal Application Load Balancers
- Ingress for external Application Load Balancers
- Configure Ingress for external Application Load Balancers
- Configuring Ingress for internal Application Load Balancers
- GKE overview | Kubernetes Engine Documentation
- Pod | Kubernetes Engine Documentation
- Deployment | Kubernetes Engine Documentation
- Services | Kubernetes Engine Documentation
- Overview of deploying workloads | Kubernetes Engine Documentation
- Kubernetes Object Management

4.3 Diagnostic Question 06

You have a Cloud Run service with a database backend. You want to limit the number of connections to your database.

What should you do?

A. Set Min instances.
B. Set Max instances.
C. Set CPU Utilization.
D. Set Concurrency settings.

4.3 Managing Cloud Run resources

Courses

Google Cloud Fundamentals: Core Infrastructure

- M6 Applications in the Cloud

Documentation

About container instance autoscaling | Cloud Run Documentation

4.4 Diagnostic Question 07

You want to implement a lifecycle rule that changes your storage type from Standard to Nearline after a specific date.

What conditions should you use? (Pick two.)

A. Age
B. CreatedBefore
C. MatchesStorageClass
D. IsLive
E. NumberofNewerVersions

4.4 Managing storage and database solutions

Courses

Google Cloud Fundamentals: Core Infrastructure

- M4 Storage in the Cloud

Architecting with Google Compute Engine

- M5 Storage and Database Services

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Essential Google Cloud Infrastructure: Core Services

- M2 Storage and Database Services

Documentation

Object Lifecycle Management | Cloud Storage

4.5 Diagnostic Question 08

Cymbal Superstore has a subnetwork called mysubnet with an IP range of 10.1.2.0/24. You need to expand this subnet to include enough IP addresses for at most 2000 users or devices.

What should you do?

A. gcloud compute networks subnets expand-ip-range mysubnet --region us-central1 --prefix-length 20

B. gcloud networks subnets expand-ip-range mysubnet --region us-central1 --prefix-length 21

C. gcloud compute networks subnets expand-ip-range mysubnet --region us-central1 --prefix-length 21

D. gcloud compute networks subnets expand-ip-range mysubnet --region us-cetnral1 --prefix-length 22

4.5 Managing networking resources

Courses

Architecting with Google Compute Engine
- M2 Virtual Networks

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Essential Google Cloud Infrastructure: Foundation
- M2 Virtual Networks

Documentation

gcloud compute networks subnets expand-ip-range

Using VPC networks

4.6 Diagnostic Question 09

Cymbal Superstore's supply chain management system has been deployed and is working well. You are tasked with monitoring the system's resources so you can react quickly to any problems. You want to ensure the CPU usage of each of your Compute Engine instances in us-central1 remains below 60%. You want an incident created if it exceeds this value for 5 minutes. You need to configure the proper alerting policy for this scenario.

What should you do?

A. Choose resource type of VM instance and metric of CPU load, condition trigger if any time series violates, condition is below, threshold is .60, for 5 minutes.

B. Choose resource type of VM instance and metric of CPU utilization, condition trigger all time series violates, condition is above, threshold is .60 for 5 minutes.

C. Choose resource type of VM instance, and metric of CPU utilization, condition trigger if any time series violates, condition is below, threshold is .60 for 5 minutes.

D. Choose resource type of VM instance and metric of CPU utilization, condition trigger if any time series violates, condition is above, threshold is .60 for 5 minutes.

4.6 Monitoring and logging

Courses

Architecting with Google Compute Engine

- M7 Resource Monitoring

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Essential Google Cloud Infrastructure: Core Services

- M4 Resource Monitoring

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Set Up an App Dev Environment on Google Cloud

Google Cloud

Develop your Google Cloud Network

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Managing metric-based alerting policies | Cloud Monitoring

Introduction to alerting | Cloud Monitoring

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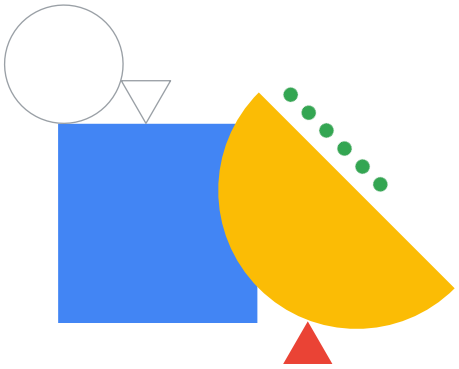

Section 5: Configuring access and security

5.1 Diagnostic Question 01

You need to configure access to Spanner from the GKE cluster that is supporting Cymbal Superstore's ecommerce microservices application. You want to specify an account type to set the proper permissions.

What should you do?

A. Assign permissions to a Google account referenced by the application.

B. Assign permissions through a Google Workspace account referenced by the application.

C. Assign permissions through service account referenced by the application.

D. Assign permissions through a Cloud Identity account referenced by the application.

5.1 Diagnostic Question 02

You are trying to assign roles to the dev and prod projects of Cymbal Superstore's e-commerce app but are receiving an error when you try to run **set-iam policy**. The projects are organized into an ecommerce folder in the Cymbal Superstore organizational hierarchy. You want to follow best practices for the permissions you need while respecting the practice of least privilege.

What should you do?

A. Ask your administrator for resourcemanager.projects.setIamPolicy roles for each project.

B. Ask your administrator for the roles/resourcemanager.folderIamAdmin for the ecommerce folder.

C. Ask your administrator for the roles/resourcemanager.organizationAdmin for Cymbal Superstore.

D. Ask your administrator for the roles/iam.securityAdmin role in IAM.

5.1 Diagnostic Question 03

You have a custom role implemented for administration of the dev/test environment for Cymbal Superstore's transportation management application. You are developing a pilot to use Cloud Run instead of Cloud Run functions. You want to ensure your administrators have the correct access to the new resources.

What should you do?

A. Make the change to the custom role locally and run an update on the custom role.

B. Delete the custom role and recreate a new custom role with required permissions.

C. Copy the existing role, add the new permissions to the copy, and delete the old role.

D. Create a new role with needed permissions and migrate users to it.

5.1 Managing Identity and Access Management (IAM)

Courses

Google Cloud Fundamentals: Core Infrastructure

- M2 Resources and Access in the Cloud

Architecting with Google Compute Engine

- M4 Identity and Access Management (IAM)

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Essential Google Cloud Infrastructure: Core Services

- M1 Identity and Access Management (IAM)

Skill Badge

Google Cloud

Develop your Google Cloud Network

Documentation

Overview | IAM Documentation

Google Kubernetes Engine security overview

5.2 Diagnostic Question 04

Which of the scenarios below is an example of a situation where you should use a service account?

A. To directly access user data
B. For development environments
C. For interactive analysis
D. For individual GKE pods

5.2 Diagnostic Question 05

Cymbal Superstore is developing a new mobile app for end users to track their delivery status in real time. The app needs to securely receive data about truck location from a Pub/Sub topic.

Following Google's recommended security practices for client-side applications accessing private Google Cloud data, how should the mobile app authenticate to obtain this data?

A. API key
B. OAuth 2.0 user credentials
C. Environment provided service account
D. Service account key

5.2 Managing service accounts

Courses

Google Cloud Fundamentals: Core Infrastructure

- M2 Resources and Access in the Cloud

Architecting with Google Compute Engine

- M4 Identity and Access Management (IAM)

=

Essential Google Cloud Infrastructure: Core Services

- M1 Identity and Access Management (IAM)

Documentation

Authenticating as a service account | Authentication

Authentication overview

Plan time to prepare

When will you take the exam?

How many weeks do you have to prepare?

How many hours will you spend preparing for the exam each week?

How many total hours will you prepare?

Example 6-week plan

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Google Cloud Fundamentals: Core Infrastructure Implement Load Balancing on Compute Engine Skill Badge	Architecting with Compute Engine	Getting started with GKE Set Up an App Dev Environment on Google Cloud Skill Badge	Logging, Monitoring and Observability in Google Cloud Develop your Google Cloud Network Skill Badge	Getting Started with Terraform for Google Cloud Build Infrastructure with Terraform on Google Cloud Skill Badge	Sample questions Review documentation

Weekly study plan

Now, consider what you've learned about your knowledge and skills through the diagnostic questions in this course. You should have a better understanding of what areas you need to focus on and what resources are available.

Use the template that follows to plan your study goals for each week. Consider:

- What exam guide section(s) or topic area(s) will you focus on?
- What courses (or specific modules) will help you learn more?
- What Skill Badges or labs will you work on for hands-on practice?
- What documentation links will you review?
- What additional resources will you use - such as sample questions?

You may do some or all of these study activities each week.

Duplicate the weekly template for the number of weeks in your individual preparation journey.

Weekly study template (example)

Area(s) of focus:	Configuring access using IAM
Courses/modules to complete:	Google Cloud Fundamentals: Core Infrastructure, Module 2 Getting Started with Google Cloud Architecting with Google Compute Engine, Module 4 IAM
Skill Badges/labs to complete:	Develop your Google Cloud Network
Documentation to review:	https://cloud.google.com/iam/docs/overview https://cloud.google.com/architecture/prep-kubernetes-engine-for-prod#managing_identity_and_access https://cloud.google.com/iam/docs/creating-custom-roles https://cloud.google.com/docs/authentication/production#automatically https://cloud.google.com/docs/authentication/
Additional study:	Sample questions 1-5

Weekly study template

Area(s) of focus:	
Courses/modules to complete:	
Skill Badges/labs to complete:	
Documentation to review:	
Additional study:	