

# Exam Questions Professional-Cloud-Developer

Google Certified Professional - Cloud Developer

<https://www.2passeasy.com/dumps/Professional-Cloud-Developer/>



### NEW QUESTION 1

- (Exam Topic 1)

For this question, refer to the HipLocal case study.

HipLocal is expanding into new locations. They must capture additional data each time the application is launched in a new European country. This is causing delays in the development process due to constant schema changes and a lack of environments for conducting testing on the application changes. How should they resolve the issue while meeting the business requirements?

- A. Create new Cloud SQL instances in Europe and North America for testing and deployment
- B. Provide developers with local MySQL instances to conduct testing on the application changes.
- C. Migrate data to Bigtable
- D. Instruct the development teams to use the Cloud SDK to emulate a local Bigtable development environment.
- E. Move from Cloud SQL to MySQL hosted on Compute Engine
- F. Replicate hosts across regions in the Americas and Europe
- G. Provide developers with local MySQL instances to conduct testing on the application changes.
- H. Migrate data to Firestore in Native mode and set up instances

**Answer:** B

### NEW QUESTION 2

- (Exam Topic 1)

For this question refer to the HipLocal case study.

HipLocal wants to reduce the latency of their services for users in global locations. They have created read replicas of their database in locations where their users reside and configured their service to read traffic using those replicas. How should they further reduce latency for all database interactions with the least amount of effort?

- A. Migrate the database to Bigtable and use it to serve all global user traffic.
- B. Migrate the database to Cloud Spanner and use it to serve all global user traffic.
- C. Migrate the database to Firestore in Datastore mode and use it to serve all global user traffic.
- D. Migrate the services to Google Kubernetes Engine and use a load balancer service to better scale the application.

**Answer:** D

### NEW QUESTION 3

- (Exam Topic 1)

HipLocal's data science team wants to analyze user reviews. How should they prepare the data?

- A. Use the Cloud Data Loss Prevention API for redaction of the review dataset.
- B. Use the Cloud Data Loss Prevention API for de-identification of the review dataset.
- C. Use the Cloud Natural Language Processing API for redaction of the review dataset.
- D. Use the Cloud Natural Language Processing API for de-identification of the review dataset.

**Answer:** B

#### Explanation:

<https://cloud.google.com/dlp/docs/deidentify-sensitive-data>

### NEW QUESTION 4

- (Exam Topic 1)

In order for HipLocal to store application state and meet their stated business requirements, which database service should they migrate to?

- A. Cloud Spanner
- B. Cloud Datastore
- C. Cloud Memorystore as a cache
- D. Separate Cloud SQL clusters for each region

**Answer:** D

### NEW QUESTION 5

- (Exam Topic 1)

For this question, refer to the HipLocal case study.

How should HipLocal redesign their architecture to ensure that the application scales to support a large increase in users?

- A. Use Google Kubernetes Engine (GKE) to run the application as a microservice
- B. Run the MySQL database on a dedicated GKE node.
- C. Use multiple Compute Engine instances to run MySQL to store state information
- D. Use a Google Cloud-managed load balancer to distribute the load between instances
- E. Use managed instance groups for scaling.
- F. Use Memorystore to store session information and CloudSQL to store state information
- G. Use a Google Cloud-managed load balancer to distribute the load between instances
- H. Use managed instance groups for scaling.
- I. Use a Cloud Storage bucket to serve the application as a static website, and use another Cloud Storage bucket to store user state information.

**Answer:** D

### NEW QUESTION 6

- (Exam Topic 1)

Which service should HipLocal use to enable access to internal apps?

- A. Cloud VPN
- B. Cloud Armor
- C. Virtual Private Cloud
- D. Cloud Identity-Aware Proxy

**Answer:** D

**Explanation:**

Reference: <https://cloud.google.com/iap/docs/cloud-iap-for-on-prem-apps-overview>

#### NEW QUESTION 7

- (Exam Topic 1)

HipLocal wants to reduce the number of on-call engineers and eliminate manual scaling. Which two services should they choose? (Choose two.)

- A. Use Google App Engine services.
- B. Use serverless Google Cloud Functions.
- C. Use Knative to build and deploy serverless applications.
- D. Use Google Kubernetes Engine for automated deployments.
- E. Use a large Google Compute Engine cluster for deployments.

**Answer:** BC

#### NEW QUESTION 8

- (Exam Topic 2)

You are responsible for deploying a new API. That API will have three different URL paths:

- <https://yourcompany.com/students>
- <https://yourcompany.com/teachers>
- <https://yourcompany.com/classes>

You need to configure each API URL path to invoke a different function in your code. What should you do?

- A. Create one Cloud Function as a backend service exposed using an HTTPS load balancer.
- B. Create three Cloud Functions exposed directly.
- C. Create one Cloud Function exposed directly.
- D. Create three Cloud Functions as three backend services exposed using an HTTPS load balancer.

**Answer:** D

**Explanation:**

<https://cloud.google.com/load-balancing/docs/https/setup-global-ext-https-serverless>

#### NEW QUESTION 9

- (Exam Topic 2)

Your team is developing a new application using a PostgreSQL database and Cloud Run. You are responsible for ensuring that all traffic is kept private on Google Cloud. You want to use managed services and follow Google-recommended best practices. What should you do?

- A. 1) Enable Cloud SQL and Cloud Run in the same project.2) Configure a private IP address for Cloud SQ
- B. Enable private services access.3) Create a Serverless VPC Access connector.4) Configure Cloud Run to use the connector to connect to Cloud SQL.
- C. 1) Install PostgreSQL on a Compute Engine virtual machine (VM), and enable Cloud Run in the same project.2) Configure a private IP address for the V
- D. Enable private services access.3) Create a Serverless VPC Access connector.4) Configure Cloud Run to use the connector to connect to the VM hosting PostgreSQL.
- E. 1) Use Cloud SQL and Cloud Run in different projects.2) Configure a private IP address for Cloud SQ
- F. Enable private services access.3) Create a Serverless VPC Access connector.4) Set up a VPN connection between the two project
- G. Configure Cloud Run to use the connector to connect to Cloud SQL.
- H. 1) Install PostgreSQL on a Compute Engine VM, and enable Cloud Run in different projects.2) Configure a private IP address for the V
- I. Enable private services access.3) Create a Serverless VPC Access connector.4) Set up a VPN connection between the two project
- J. Configure Cloud Run to use the connector to access the VM hosting PostgreSQL

**Answer:** A

**Explanation:**

<https://cloud.google.com/sql/docs/postgres/connect-run#private-ip>

#### NEW QUESTION 10

- (Exam Topic 2)

You have an application in production. It is deployed on Compute Engine virtual machine instances controlled by a managed instance group. Traffic is routed to the instances via a HTTP(S) load balancer. Your users are unable to access your application. You want to implement a monitoring technique to alert you when the application is unavailable.

Which technique should you choose?

- A. Smoke tests
- B. Stackdriver uptime checks
- C. Cloud Load Balancing - health checks
- D. Managed instance group - health checks

**Answer:** B

**Explanation:**

Reference: <https://medium.com/google-cloud/stackdriver-monitoring-automation-part-3-uptime-checks-476b8507f59c>

#### NEW QUESTION 10

- (Exam Topic 2)

You want to create “fully baked” or “golden” Compute Engine images for your application. You need to bootstrap your application to connect to the appropriate database according to the environment the application is running on (test, staging, production). What should you do?

- A. Embed the appropriate database connection string in the image.
- B. Create a different image for each environment.
- C. When creating the Compute Engine instance, add a tag with the name of the database to be connected. In your application, query the Compute Engine API to pull the tags for the current instance, and use the tag to construct the appropriate database connection string.
- D. When creating the Compute Engine instance, create a metadata item with a key of “DATABASE” and a value for the appropriate database connection string.
- E. In your application, read the “DATABASE” environment variable, and use the value to connect to the appropriate database.
- F. When creating the Compute Engine instance, create a metadata item with a key of “DATABASE” and a value for the appropriate database connection string.
- G. In your application, query the metadata server for the “DATABASE” value, and use the value to connect to the appropriate database.

**Answer:** C

#### NEW QUESTION 15

- (Exam Topic 2)

Your application takes an input from a user and publishes it to the user's contacts. This input is stored in a table in Cloud Spanner. Your application is more sensitive to latency and less sensitive to consistency. How should you perform reads from Cloud Spanner for this application?

- A. Perform Read-Only transactions.
- B. Perform stale reads using single-read methods.
- C. Perform strong reads using single-read methods.
- D. Perform stale reads using read-write transactions.

**Answer:** D

#### Explanation:

Reference: <https://cloud.google.com/solutions/best-practices-cloud-spanner-gaming-database>

#### NEW QUESTION 18

- (Exam Topic 2)

You want to re-architect a monolithic application so that it follows a microservices model. You want to accomplish this efficiently while minimizing the impact of this change to the business.

Which approach should you take?

- A. Deploy the application to Compute Engine and turn on autoscaling.
- B. Replace the application's features with appropriate microservices in phases.
- C. Refactor the monolithic application with appropriate microservices in a single effort and deploy it.
- D. Build a new application with the appropriate microservices separate from the monolith and replace it when it is complete.

**Answer:** C

#### Explanation:

Reference: <https://cloud.google.com/solutions/migrating-a-monolithic-app-to-microservices-gke>

#### NEW QUESTION 23

- (Exam Topic 2)

Your company is planning to migrate their on-premises Hadoop environment to the cloud. Increasing storage cost and maintenance of data stored in HDFS is a major concern for your company. You also want to make minimal changes to existing data analytics jobs and existing architecture. How should you proceed with the migration?

- A. Migrate your data stored in Hadoop to BigQuery.
- B. Change your jobs to source their information from BigQuery instead of the on-premises Hadoop environment.
- C. Create Compute Engine instances with HDD instead of SSD to save cost.
- D. Then perform a full migration of your existing environment into the new one in Compute Engine instances.
- E. Create a Cloud Dataproc cluster on Google Cloud Platform, and then migrate your Hadoop environment to the new Cloud Dataproc cluster.
- F. Move your HDFS data into larger HDD disks to save on storage costs.
- G. Create a Cloud Dataproc cluster on Google Cloud Platform, and then migrate your Hadoop code objects to the new cluster.
- H. Move your data to Cloud Storage and leverage the Cloud Dataproc connector to run jobs on that data.

**Answer:** D

#### NEW QUESTION 24

- (Exam Topic 2)

Your company's product team has a new requirement based on customer demand to autoscale your stateless and distributed service running in a Google Kubernetes Engine (GKE) cluster. You want to find a solution that minimizes changes because this feature will go live in two weeks. What should you do?

- A. Deploy a Vertical Pod Autoscaler, and scale based on the CPU load.
- B. Deploy a Vertical Pod Autoscaler, and scale based on a custom metric.
- C. Deploy a Horizontal Pod Autoscaler, and scale based on the CPU load.
- D. Deploy a Horizontal Pod Autoscaler, and scale based on a custom metric.

**Answer:** C

**Explanation:**

<https://cloud.google.com/kubernetes-engine/docs/concepts/horizontalpodautoscaler>

The Horizontal Pod Autoscaler changes the shape of your Kubernetes workload by automatically increasing or decreasing the number of Pods in response to the workload's CPU or memory consumption, or in response to custom metrics reported from within Kubernetes or external metrics from sources outside of your cluster.

**NEW QUESTION 27**

- (Exam Topic 2)

Your team is responsible for maintaining an application that aggregates news articles from many different sources. Your monitoring dashboard contains publicly accessible real-time reports and runs on a Compute Engine instance as a web application. External stakeholders and analysts need to access these reports via a secure channel without authentication. How should you configure this secure channel?

- A. Add a public IP address to the instance
- B. Use the service account key of the instance to encrypt the traffic.
- C. Use Cloud Scheduler to trigger Cloud Build every hour to create an export from the report
- D. Store the reports in a public Cloud Storage bucket.
- E. Add an HTTP(S) load balancer in front of the monitoring dashboard
- F. Configure Identity-Aware Proxy to secure the communication channel.
- G. Add an HTTP(S) load balancer in front of the monitoring dashboard
- H. Set up a Google-managed SSL certificate on the load balancer for traffic encryption.

**Answer:** D

**Explanation:**

<https://cloud.google.com/load-balancing/docs/ssl-certificates/google-managed-certs>

**NEW QUESTION 32**

- (Exam Topic 2)

You want to notify on-call engineers about a service degradation in production while minimizing development time. What should you do?

- A. Use Cloud Function to monitor resources and raise alerts.
- B. Use Cloud Pub/Sub to monitor resources and raise alerts.
- C. Use Stackdriver Error Reporting to capture errors and raise alerts.
- D. Use Stackdriver Monitoring to monitor resources and raise alerts.

**Answer:** A

**NEW QUESTION 34**

- (Exam Topic 2)

Your team is writing a backend application to implement the business logic for an interactive voice response (IVR) system that will support a payroll application.

The IVR system has the following technical characteristics:

- Each customer phone call is associated with a unique IVR session.
- The IVR system creates a separate persistent gRPC connection to the backend for each session.
- If the connection is interrupted, the IVR system establishes a new connection, causing a slight latency for that call.

You need to determine which compute environment should be used to deploy the backend application. Using current call data, you determine that:

- Call duration ranges from 1 to 30 minutes.
- Calls are typically made during business hours.
- There are significant spikes of calls around certain known dates (e.g., pay days), or when large payroll changes occur.

You want to minimize cost, effort, and operational overhead. Where should you deploy the backend application?

- A. Compute Engine
- B. Google Kubernetes Engine cluster in Standard mode
- C. Cloud Functions
- D. Cloud Run

**Answer:** D

**Explanation:**

This page shows Cloud Run-specific details for developers who want to use gRPC to connect a Cloud Run service with other services, for example, to provide simple, high performance communication between internal microservices. You can use all gRPC types, streaming or unary, with Cloud Run.

Possible use cases include:

Communication between internal microservices.

High loads of data (gRPC uses protocol buffers, which are up to seven times faster than REST calls). Only a simple service definition is needed, you don't want to write a full client library.

Use streaming gRPCs in your gRPC server to build more responsive applications and APIs. <https://cloud.google.com/run/docs/tutorials/secure-services#:~:text=The%20backend%20service%20is%20private>

**NEW QUESTION 39**

- (Exam Topic 2)

You recently developed a new application. You want to deploy the application on Cloud Run without a Dockerfile. Your organization requires that all container images are pushed to a centrally managed container repository. How should you build your container using Google Cloud services? (Choose two.)

- A. Push your source code to Artifact Registry.
- B. Submit a Cloud Build job to push the image.
- C. Use the pack build command with pack CLI.
- D. Include the --source flag with the gcloud run deploy CLI command.
- E. Include the --platform=kubernetes flag with the gcloud run deploy CLI command.

**Answer:** AC

**Explanation:**

<https://cloud.google.com/run/docs/deploying#images> <https://cloud.google.com/blog/products/containers-kubernetes/google-cloud-now-supports-buildpacks>

**NEW QUESTION 41**

- (Exam Topic 2)

You are deploying a microservices application to Google Kubernetes Engine (GKE). The application will receive daily updates. You expect to deploy a large number of distinct containers that will run on the Linux operating system (OS). You want to be alerted to any known OS vulnerabilities in the new containers. You want to follow Google-recommended best practices. What should you do?

- A. Use the gcloud CLI to call Container Analysis to scan new container image
- B. Review the vulnerability results before each deployment.
- C. Enable Container Analysis, and upload new container images to Artifact Registry
- D. Review the vulnerability results before each deployment.
- E. Enable Container Analysis, and upload new container images to Artifact Registry
- F. Review the critical vulnerability results before each deployment.
- G. Use the Container Analysis REST API to call Container Analysis to scan new container image
- H. Review the vulnerability results before each deployment.

**Answer:** B

**Explanation:**

<https://cloud.google.com/container-analysis/docs/automated-scanning-howto> <https://cloud.google.com/container-analysis/docs/os-overview> says: The Container Scanning API allows you to automate OS vulnerability detection, scanning each time you push an image to Container Registry or Artifact Registry. Enabling this API also triggers language package scans for Go and Java vulnerabilities (Preview).

**NEW QUESTION 45**

- (Exam Topic 2)

Your team is building an application for a financial institution. The application's frontend runs on Compute Engine, and the data resides in Cloud SQL and one Cloud Storage bucket. The application will collect data containing PII, which will be stored in the Cloud SQL database and the Cloud Storage bucket. You need to secure the PII data. What should you do?

- A. 1) Create the relevant firewall rules to allow only the frontend to communicate with the Cloud SQL database2) Using IAM, allow only the frontend service account to access the Cloud Storage bucket
- B. 1) Create the relevant firewall rules to allow only the frontend to communicate with the Cloud SQL database2) Enable private access to allow the frontend to access the Cloud Storage bucket privately
- C. 1) Configure a private IP address for Cloud SQL2) Use VPC-SC to create a service perimeter3) Add the Cloud SQL database and the Cloud Storage bucket to the same service perimeter
- D. 1) Configure a private IP address for Cloud SQL2) Use VPC-SC to create a service perimeter3) Add the Cloud SQL database and the Cloud Storage bucket to different service perimeters

**Answer:** C

**NEW QUESTION 49**

- (Exam Topic 2)

Your teammate has asked you to review the code below, which is adding a credit to an account balance in Cloud Datastore. Which improvement should you suggest your teammate make?

```
public Entity creditAccount(long accountId, long
creditAmount) {
    Entity account = datastore.get
(keyFactory.newKey(accountId));
    account = Entity.builder(account).set(
        "balance", account.getLong("balance")
+ creditAmount).build();
    datastore.put(account);
    return account;
}
```

- A. Get the entity with an ancestor query.
- B. Get and put the entity in a transaction.
- C. Use a strongly consistent transactional database.
- D. Don't return the account entity from the function.

**Answer:** A

**NEW QUESTION 51**

- (Exam Topic 2)

Your team develops services that run on Google Cloud. You need to build a data processing service and will use Cloud Functions. The data to be processed by the function is sensitive. You need to ensure that invocations can only happen from authorized services and follow Google-recommended best practices for securing functions. What should you do?

- A. Enable Identity-Aware Proxy in your projec
- B. Secure function access using its permissions.
- C. Create a service account with the Cloud Functions Viewer rol
- D. Use that service account to invoke the function.

- E. Create a service account with the Cloud Functions Invoker rol
- F. Use that service account to invoke the function.
- G. Create an OAuth 2.0 client ID for your calling service in the same project as the function you want to secur
- H. Use those credentials to invoke the function.

**Answer:** C

**Explanation:**

Reference:

<https://medium.com/google-cloud/how-to-securely-invoke-a-cloud-function-from-google-kubernetes-engine-run>

**NEW QUESTION 52**

- (Exam Topic 2)

Your company has a new security initiative that requires all data stored in Google Cloud to be encrypted by customer-managed encryption keys. You plan to use Cloud Key Management Service (KMS) to configure access to the keys. You need to follow the "separation of duties" principle and Google-recommended best practices. What should you do? (Choose two.)

- A. Provision Cloud KMS in its own project.
- B. Do not assign an owner to the Cloud KMS project.
- C. Provision Cloud KMS in the project where the keys are being used.
- D. Grant the roles/cloudkms.admin role to the owner of the project where the keys from Cloud KMS are being used.
- E. Grant an owner role for the Cloud KMS project to a different user than the owner of the project where the keys from Cloud KMS are being used.

**Answer:** AB

**Explanation:**

[https://cloud.google.com/kms/docs/separation-of-duties#using\\_separate\\_project](https://cloud.google.com/kms/docs/separation-of-duties#using_separate_project)

**NEW QUESTION 57**

- (Exam Topic 2)

You are evaluating developer tools to help drive Google Kubernetes Engine adoption and integration with your development environment, which includes VS Code and IntelliJ. What should you do?

- A. Use Cloud Code to develop applications.
- B. Use the Cloud Shell integrated Code Editor to edit code and configuration files.
- C. Use a Cloud Notebook instance to ingest and process data and deploy models.
- D. Use Cloud Shell to manage your infrastructure and applications from the command line.

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/code>

**NEW QUESTION 59**

- (Exam Topic 2)

You are developing a microservice-based application that will run on Google Kubernetes Engine (GKE). Some of the services need to access different Google Cloud APIs. How should you set up authentication of these services in the cluster following Google-recommended best practices? (Choose two.)

- A. Use the service account attached to the GKE node.
- B. Enable Workload Identity in the cluster via the gcloud command-line tool.
- C. Access the Google service account keys from a secret management service.
- D. Store the Google service account keys in a central secret management service.
- E. Use gcloud to bind the Kubernetes service account and the Google service account using roles/iam.workloadIdentity.

**Answer:** BE

**Explanation:**

<https://cloud.google.com/kubernetes-engine/docs/how-to/workload-identity>

**NEW QUESTION 64**

- (Exam Topic 2)

You are designing an application that will subscribe to and receive messages from a single Pub/Sub topic and insert corresponding rows into a database. Your application runs on Linux and leverages preemptible virtual machines to reduce costs. You need to create a shutdown script that will initiate a graceful shutdown. What should you do?

- A. Write a shutdown script that uses inter-process signals to notify the application process to disconnect from the database.
- B. Write a shutdown script that broadcasts a message to all signed-in users that the Compute Engine instance is going down and instructs them to save current work and sign out.
- C. Write a shutdown script that writes a file in a location that is being polled by the application once every five minute
- D. After the file is read, the application disconnects from the database.
- E. Write a shutdown script that publishes a message to the Pub/Sub topic announcing that a shutdown is in progres
- F. After the application reads the message, it disconnects from the database.

**Answer:** D

**NEW QUESTION 68**

- (Exam Topic 2)

Your company wants to expand their users outside the United States for their popular application. The company wants to ensure 99.999% availability of the database for their application and also wants to minimize the read latency for their users across the globe. Which two actions should they take? (Choose two.)

- A. Create a multi-regional Cloud Spanner instance with "nam-asia-eur1" configuration.
- B. Create a multi-regional Cloud Spanner instance with "nam3" configuration.
- C. Create a cluster with at least 3 Spanner nodes.
- D. Create a cluster with at least 1 Spanner node.
- E. Create a minimum of two Cloud Spanner instances in separate regions with at least one node.
- F. Create a Cloud Dataflow pipeline to replicate data across different databases.

**Answer:** BF

#### NEW QUESTION 73

- (Exam Topic 2)

Your application is running on Compute Engine and is showing sustained failures for a small number of requests. You have narrowed the cause down to a single Compute Engine instance, but the instance is unresponsive to SSH. What should you do next?

- A. Reboot the machine.
- B. Enable and check the serial port output.
- C. Delete the machine and create a new one.
- D. Take a snapshot of the disk and attach it to a new machine.

**Answer:** A

#### NEW QUESTION 76

- (Exam Topic 2)

Your team develops services that run on Google Cloud. You want to process messages sent to a Pub/Sub topic, and then store them. Each message must be processed exactly once to avoid duplication of data and any data conflicts. You need to use the cheapest and most simple solution. What should you do?

- A. Process the messages with a Dataproc job, and write the output to storage.
- B. Process the messages with a Dataflow streaming pipeline using Apache Beam's PubSubIO package, and write the output to storage.
- C. Process the messages with a Cloud Function, and write the results to a BigQuery location where you can run a job to deduplicate the data.
- D. Retrieve the messages with a Dataflow streaming pipeline, store them in Cloud Bigtable, and use another Dataflow streaming pipeline to deduplicate messages.

**Answer:** B

#### Explanation:

<https://cloud.google.com/dataflow/docs/concepts/streaming-with-cloud-pubsub>

#### NEW QUESTION 79

- (Exam Topic 2)

You are working on a social media application. You plan to add a feature that allows users to upload images. These images will be 2 MB – 1 GB in size. You want to minimize their infrastructure operations overhead for this feature. What should you do?

- A. Change the application to accept images directly and store them in the database that stores other user information.
- B. Change the application to create signed URLs for Cloud Storage
- C. Transfer these signed URLs to the client application to upload images to Cloud Storage.
- D. Set up a web server on GCP to accept user images and create a file store to keep uploaded file
- E. Change the application to retrieve images from the file store.
- F. Create a separate bucket for each user in Cloud Storage
- G. Assign a separate service account to allow write access on each bucket
- H. Transfer service account credentials to the client application based on user information
- I. The application uses this service account to upload images to Cloud Storage.

**Answer:** B

#### Explanation:

Reference:

<https://cloud.google.com/blog/products/storage-data-transfer/uploading-images-directly-to-cloud-storage-by-usi>

#### NEW QUESTION 83

- (Exam Topic 2)

You are using Cloud Build build to promote a Docker image to Development, Test, and Production environments. You need to ensure that the same Docker image is deployed to each of these environments. How should you identify the Docker image in your build?

- A. Use the latest Docker image tag.
- B. Use a unique Docker image name.
- C. Use the digest of the Docker image.
- D. Use a semantic version Docker image tag.

**Answer:** D

#### NEW QUESTION 86

- (Exam Topic 2)

You are designing a deployment technique for your new applications on Google Cloud. As part of your deployment planning, you want to use live traffic to gather performance metrics for both new and existing applications. You need to test against the full production load prior to launch. What should you do?

- A. Use canary deployment
- B. Use blue/green deployment
- C. Use rolling updates deployment
- D. Use A/B testing with traffic mirroring during deployment

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/architecture/application-deployment-and-testing-strategies>

**NEW QUESTION 90**

- (Exam Topic 2)

Your company's development teams want to use Cloud Build in their projects to build and push Docker images to Container Registry. The operations team requires all Docker images to be published to a centralized, securely managed Docker registry that the operations team manages. What should you do?

- A. Use Container Registry to create a registry in each development team's project
- B. Configure the Cloud Build build to push the Docker image to the project's registry
- C. Grant the operations team access to each development team's registry.
- D. Create a separate project for the operations team that has Container Registry configured
- E. Assign appropriate permissions to the Cloud Build service account in each developer team's project to allow access to the operations team's registry.
- F. Create a separate project for the operations team that has Container Registry configured
- G. Create a Service Account for each development team and assign the appropriate permissions to allow it access to the operations team's registry
- H. Store the service account key file in the source code repository and use it to authenticate against the operations team's registry.
- I. Create a separate project for the operations team that has the open source Docker Registry deployed on a Compute Engine virtual machine instance
- J. Create a username and password for each development team
- K. Store the username and password in the source code repository and use it to authenticate against the operations team's Docker registry.

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/container-registry/>

**NEW QUESTION 91**

- (Exam Topic 2)

You are developing a web application that contains private images and videos stored in a Cloud Storage bucket. Your users are anonymous and do not have Google Accounts. You want to use your application-specific logic to control access to the images and videos. How should you configure access?

- A. Cache each web application user's IP address to create a named IP table using Google Cloud Armor. Create a Google Cloud Armor security policy that allows users to access the backend bucket.
- B. Grant the Storage Object Viewer IAM role to allUsers
- C. Allow users to access the bucket after authenticating through your web application.
- D. Configure Identity-Aware Proxy (IAP) to authenticate users into the web application
- E. Allow users to access the bucket after authenticating through IAP.
- F. Generate a signed URL that grants read access to the bucket
- G. Allow users to access the URL after authenticating through your web application.

**Answer:** D

**Explanation:**

<https://cloud.google.com/storage/docs/access-control/signed-urls#should-you-use>

In some scenarios, you might not want to require your users to have a Google account in order to access Cloud Storage, but you still want to control access using your application-specific logic. The typical way to address this use case is to provide a signed URL to a user, which gives the user read, write, or delete access to that resource for a limited time. You specify an expiration time when you create the signed URL. Anyone who knows the URL can access the resource until the expiration time for the URL is reached or the key used to sign the URL is rotated.

**NEW QUESTION 96**

- (Exam Topic 2)

Your company has a BigQuery dataset named "Master" that keeps information about employee travel and expenses. This information is organized by employee department. That means employees should only be able to view information for their department. You want to apply a security framework to enforce this requirement with the minimum number of steps. What should you do?

- A. Create a separate dataset for each department
- B. Create a view with an appropriate WHERE clause to select records from a particular dataset for the specific department
- C. Authorize this view to access records from your Master dataset
- D. Give employees the permission to this department-specific dataset.
- E. Create a separate dataset for each department
- F. Create a data pipeline for each department to copy appropriate information from the Master dataset to the specific dataset for the department
- G. Give employees the permission to this department-specific dataset.
- H. Create a dataset named Master dataset
- I. Create a separate view for each department in the Master dataset
- J. Give employees access to the specific view for their department.
- K. Create a dataset named Master dataset
- L. Create a separate table for each department in the Master dataset
- M. Give employees access to the specific table for their department.

**Answer:** B

#### NEW QUESTION 101

- (Exam Topic 2)

You are load testing your server application. During the first 30 seconds, you observe that a previously inactive Cloud Storage bucket is now servicing 2000 write requests per second and 7500 read requests per second. Your application is now receiving intermittent 5xx and 429 HTTP responses from the Cloud Storage JSON API as the demand escalates. You want to decrease the failed responses from the Cloud Storage API. What should you do?

- A. Distribute the uploads across a large number of individual storage buckets.
- B. Use the XML API instead of the JSON API for interfacing with Cloud Storage.
- C. Pass the HTTP response codes back to clients that are invoking the uploads from your application.
- D. Limit the upload rate from your application clients so that the dormant bucket's peak request rate is reached more gradually.

**Answer:** A

#### Explanation:

Reference: <https://cloud.google.com/storage/docs/request-rate>

#### NEW QUESTION 104

- (Exam Topic 2)

You have an application written in Python running in production on Cloud Run. Your application needs to read/write data stored in a Cloud Storage bucket in the same project. You want to grant access to your application following the principle of least privilege. What should you do?

- A. Create a user-managed service account with a custom Identity and Access Management (IAM) role.
- B. Create a user-managed service account with the Storage Admin Identity and Access Management (IAM) role.
- C. Create a user-managed service account with the Project Editor Identity and Access Management (IAM) role.
- D. Use the default service account linked to the Cloud Run revision in production.

**Answer:** A

#### Explanation:

<https://cloud.google.com/iam/docs/understanding-roles#storage.admin>

#### NEW QUESTION 105

- (Exam Topic 2)

You are configuring a continuous integration pipeline using Cloud Build to automate the deployment of new container images to Google Kubernetes Engine (GKE). The pipeline builds the application from its source code, runs unit and integration tests in separate steps, and pushes the container to Container Registry. The application runs on a Python web server.

The Dockerfile is as follows: FROM python:3.7-alpine - COPY . /app WORKDIR /app

RUN pip install -r requirements.txt CMD [ "unicorn", "-w 4", "main:app" ]

You notice that Cloud Build runs are taking longer than expected to complete. You want to decrease the build time. What should you do? (Choose two.)

- A. Select a virtual machine (VM) size with higher CPU for Cloud Build runs.
- B. Deploy a Container Registry on a Compute Engine VM in a VPC, and use it to store the final images.
- C. Cache the Docker image for subsequent builds using the --cache-from argument in your build config file.
- D. Change the base image in the Dockerfile to ubuntu:latest, and install Python 3.7 using a package manager utility.
- E. Store application source code on Cloud Storage, and configure the pipeline to use gsutil to download the source code.

**Answer:** AC

#### Explanation:

<https://cloud.google.com/build/docs/optimize-builds/increase-vcpu-for-builds>

By default, Cloud Build runs your builds on a standard virtual machine (VM). In addition to the standard VM, Cloud Build provides several high-CPU VM types to run builds. To increase the speed of your build, select a machine with a higher vCPU to run builds. Keep in mind that although selecting a high vCPU machine increases your build speed, it may also increase the startup time of your build as Cloud Build only starts non-standard machines on demand.

[https://cloud.google.com/build/docs/optimize-builds/speeding-up-builds#using\\_a\\_cached\\_docker\\_image](https://cloud.google.com/build/docs/optimize-builds/speeding-up-builds#using_a_cached_docker_image)

The easiest way to increase the speed of your Docker image build is by specifying a cached image that can be used for subsequent builds. You can specify the cached image by adding the --cache-from argument in your build config file, which will instruct Docker to build using that image as a cache source.

#### NEW QUESTION 110

- (Exam Topic 2)

Your application is controlled by a managed instance group. You want to share a large read-only data set between all the instances in the managed instance group. You want to ensure that each instance can start quickly and can access the data set via its filesystem with very low latency. You also want to minimize the Total cost of the solution. What should you do?

- A. Move the data to a Cloud Storage bucket, and mount the bucket on the filesystem using Cloud Storage FUSE.
- B. Move the data to a Cloud Storage bucket, and copy the data to the boot disk of the instance via a startup script.
- C. Move the data to a Compute Engine persistent disk, and attach the disk in read-only mode to multiple Compute Engine virtual machine instances.
- D. Move the data to a Compute Engine persistent disk, take a snapshot, create multiple disks from the snapshot, and attach each disk to its own instance.

**Answer:** C

#### NEW QUESTION 111

- (Exam Topic 2)

You are using Cloud Build to build and test application source code stored in Cloud Source Repositories. The build process requires a build tool not available in the Cloud Build environment.

What should you do?

- A. Download the binary from the internet during the build process.

- B. Build a custom cloud builder image and reference the image in your build steps.
- C. Include the binary in your Cloud Source Repositories repository and reference it in your build scripts.
- D. Ask to have the binary added to the Cloud Build environment by filing a feature request against the Cloud Build public Issue Tracker.

**Answer:** B

#### NEW QUESTION 115

- (Exam Topic 2)

You are building an API that will be used by Android and iOS apps. The API must:

- Support HTTPs
  - Minimize bandwidth cost
  - Integrate easily with mobile apps
- Which API architecture should you use?

- A. RESTful APIs
- B. MQTT for APIs
- C. gRPC-based APIs
- D. SOAP-based APIs

**Answer:** A

#### Explanation:

Reference: <https://www.devteam.space/blog/how-to-build-restful-api-for-your-mobile-app/>

#### NEW QUESTION 120

- (Exam Topic 2)

You have an on-premises application that authenticates to the Cloud Storage API using a user-managed service account with a user-managed key. The application connects to Cloud Storage using Private Google Access over a Dedicated Interconnect link. You discover that requests from the application to access objects in the Cloud Storage bucket are failing with a 403 Permission Denied error code. What is the likely cause of this issue?

- A. The folder structure inside the bucket and object paths have changed.
- B. The permissions of the service account's predefined role have changed.
- C. The service account key has been rotated but not updated on the application server.
- D. The Interconnect link from the on-premises data center to Google Cloud is experiencing a temporary outage.

**Answer:** C

#### NEW QUESTION 122

- (Exam Topic 2)

You are creating and running containers across different projects in Google Cloud. The application you are developing needs to access Google Cloud services from within Google Kubernetes Engine (GKE). What should you do?

- A. Assign a Google service account to the GKE nodes.
- B. Use a Google service account to run the Pod with Workload Identity.
- C. Store the Google service account credentials as a Kubernetes Secret.
- D. Use a Google service account with GKE role-based access control (RBAC).

**Answer:** B

#### Explanation:

<https://cloud.google.com/kubernetes-engine/docs/concepts/workload-identity>

#### NEW QUESTION 124

- (Exam Topic 2)

Your analytics system executes queries against a BigQuery dataset. The SQL query is executed in batch and passes the contents of a SQL file to the BigQuery CLI. Then it redirects the BigQuery CLI output to another process. However, you are getting a permission error from the BigQuery CLI when the queries are executed. You want to resolve the issue. What should you do?

- A. Grant the service account BigQuery Data Viewer and BigQuery Job User roles.
- B. Grant the service account BigQuery Data Editor and BigQuery Data Viewer roles.
- C. Create a view in BigQuery from the SQL query and SELECT\* from the view in the CLI.
- D. Create a new dataset in BigQuery, and copy the source table to the new dataset. Query the new dataset and table from the CLI.

**Answer:** B

#### NEW QUESTION 127

- (Exam Topic 2)

You want to upload files from an on-premises virtual machine to Google Cloud Storage as part of a data migration. These files will be consumed by Cloud DataProc Hadoop cluster in a GCP environment. Which command should you use?

- A. `gsutil cp [LOCAL_OBJECT] gs://[DESTINATION_BUCKET_NAME]/`
- B. `gcloud cp [LOCAL_OBJECT] gs://[DESTINATION_BUCKET_NAME]/`
- C. `hadoop fs cp [LOCAL_OBJECT] gs://[DESTINATION_BUCKET_NAME]/`
- D. `gcloud dataproc cp [LOCAL_OBJECT] gs://[DESTINATION_BUCKET_NAME]/`

**Answer:** A

#### Explanation:

The gsutil cp command allows you to copy data between your local file. storage. boto files generated by running "gsutil config"

#### NEW QUESTION 132

- (Exam Topic 2)

Your application performs well when tested locally, but it runs significantly slower when you deploy it to App Engine standard environment. You want to diagnose the problem. What should you do?

- A. File a ticket with Cloud Support indicating that the application performs faster locally.
- B. Use Stackdriver Debugger Snapshots to look at a point-in-time execution of the application.
- C. Use Stackdriver Trace to determine which functions within the application have higher latency.
- D. Add logging commands to the application and use Stackdriver Logging to check where the latency problem occurs.

**Answer:** D

#### NEW QUESTION 135

- (Exam Topic 2)

You are trying to connect to your Google Kubernetes Engine (GKE) cluster using kubectl from Cloud Shell. You have deployed your GKE cluster with a public endpoint. From Cloud Shell, you run the following command:

```
gcloud container clusters get-credentials <cluster-name> \  
  --zone <zone> --project <project-name> \  
  \
```

You notice that the kubectl commands time out without returning an error message. What is the most likely cause of this issue?

- A. Your user account does not have privileges to interact with the cluster using kubectl.
- B. Your Cloud Shell external IP address is not part of the authorized networks of the cluster.
- C. The Cloud Shell is not part of the same VPC as the GKE cluster.
- D. A VPC firewall is blocking access to the cluster's endpoint.

**Answer:** B

#### Explanation:

[https://cloud.google.com/kubernetes-engine/docs/how-to/private-clusters#cloud\\_shell](https://cloud.google.com/kubernetes-engine/docs/how-to/private-clusters#cloud_shell)

If you want to use Cloud Shell to access the cluster, you must add the public IP address of your Cloud Shell to the cluster's list of authorized networks.

#### NEW QUESTION 138

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