

Google

Exam Questions Professional-Cloud-Developer

Google Certified Professional - Cloud Developer



NEW QUESTION 1

- (Exam Topic 1)

In order to meet their business requirements, how should HipLocal store their application state?

- A. Use local SSDs to store state.
- B. Put a memcache layer in front of MySQL.
- C. Move the state storage to Cloud Spanner.
- D. Replace the MySQL instance with Cloud SQL.

Answer: B

NEW QUESTION 2

- (Exam Topic 1)

Which database should HipLocal use for storing user activity?

- A. BigQuery
- B. Cloud SQL
- C. Cloud Spanner
- D. Cloud Datastore

Answer: A

NEW QUESTION 3

- (Exam Topic 1)

For this question, refer to the HipLocal case study.

HipLocal's application uses Cloud Client Libraries to interact with Google Cloud. HipLocal needs to configure authentication and authorization in the Cloud Client Libraries to implement least privileged access for the application. What should they do?

- A. Create an API key
- B. Use the API key to interact with Google Cloud.
- C. Use the default compute service account to interact with Google Cloud.
- D. Create a service account for the application
- E. Export and deploy the private key for the application
- F. Use the service account to interact with Google Cloud.
- G. Create a service account for the application and for each Google Cloud API used by the application. Export and deploy the private keys used by the application
- H. Use the service account with one Google Cloud API to interact with Google Cloud.

Answer: A

NEW QUESTION 4

- (Exam Topic 1)

HipLocal wants to improve the resilience of their MySQL deployment, while also meeting their business and technical requirements.

Which configuration should they choose?

- A. Use the current single instance MySQL on Compute Engine and several read-only MySQL servers on Compute Engine.
- B. Use the current single instance MySQL on Compute Engine, and replicate the data to Cloud SQL in an external master configuration.
- C. Replace the current single instance MySQL instance with Cloud SQL, and configure high availability.
- D. Replace the current single instance MySQL instance with Cloud SQL, and Google provides redundancy without further configuration.

Answer: B

NEW QUESTION 5

- (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 6

- (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 GoogleCloud-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 instance
- 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 7

- (Exam Topic 1)

Which service should HipLocal use for their public APIs?

- A. Cloud Armor
- B. Cloud Functions
- C. Cloud Endpoints
- D. Shielded Virtual Machines

Answer: D

NEW QUESTION 8

- (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 9

- (Exam Topic 2)

You support an application that uses the Cloud Storage API. You review the logs and discover multiple HTTP 503 Service Unavailable error responses from the API. Your application logs the error and does not take any further action. You want to implement Google-recommended retry logic to improve success rates. Which approach should you take?

- A. Retry the failures in batch after a set number of failures is logged.
- B. Retry each failure at a set time interval up to a maximum number of times.
- C. Retry each failure at increasing time intervals up to a maximum number of tries.
- D. Retry each failure at decreasing time intervals up to a maximum number of tries.

Answer: C

Explanation:

<https://cloud.google.com/storage/docs/retry-strategy>

NEW QUESTION 10

- (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

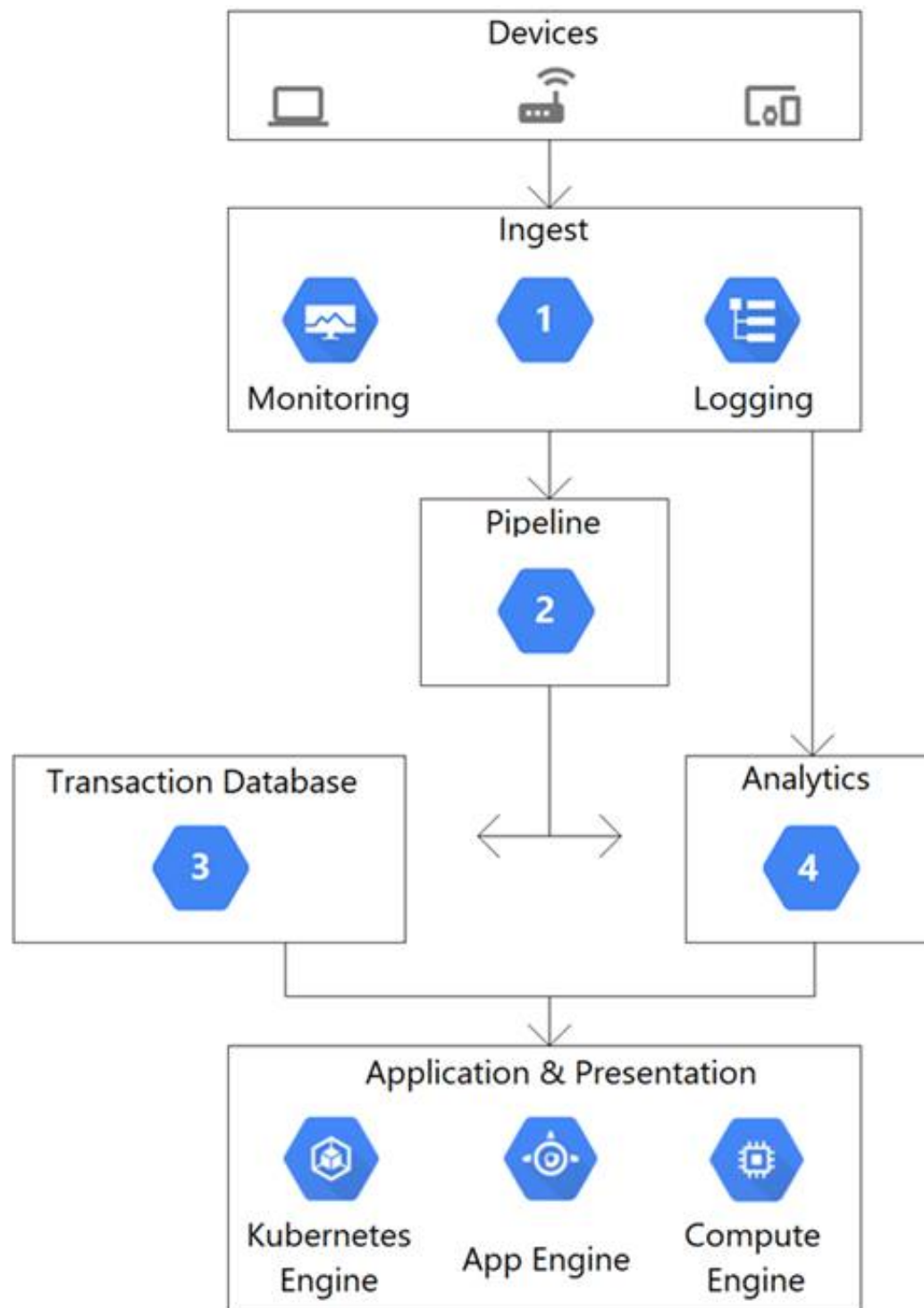
Explanation:

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

NEW QUESTION 10

- (Exam Topic 2)

This architectural diagram depicts a system that streams data from thousands of devices. You want to ingest data into a pipeline, store the data, and analyze the data using SQL statements. Which Google Cloud services should you use for steps 1, 2, 3, and 4?



- A. 1) App Engine2) Pub/Sub3) BigQuery4) Firestore
 B. 1) Dataflow2) Pub/Sub3) Firestore4) BigQuery
 C. 1) Pub/Sub2) Dataflow3) BigQuery4) Firestore
 D. 1) Pub/Sub2) Dataflow3) Firestore4) BigQuery

Answer: D

NEW QUESTION 15

- (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 16

- (Exam Topic 2)

You are developing a marquee stateless web application that will run on Google Cloud. The rate of the incoming user traffic is expected to be unpredictable, with no traffic on some days and large spikes on other days. You need the application to automatically scale up and down, and you need to minimize the cost associated with running the application. What should you do?

- A. Build the application in Python with Firestore as the databas

- B. Deploy the application to Cloud Run.
- C. Build the application in C# with Firestore as the databas
- D. Deploy the application to App Engine flexible environment.
- E. Build the application in Python with CloudSQL as the databas
- F. Deploy the application to App Engine standard environment.
- G. Build the application in Python with Firestore as the databas
- H. Deploy the application to a Compute Engine managed instance group with autoscaling.

Answer: A

NEW QUESTION 19

- (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 21

- (Exam Topic 2)

Your company's corporate policy states that there must be a copyright comment at the very beginning of all source files. You want to write a custom step in Cloud Build that is triggered by each source commit. You need the trigger to validate that the source contains a copyright and add one for subsequent steps if not there. What should you do?

- A. Build a new Docker container that examines the files in /workspace and then checks and adds a copyright for each source fil
- B. Changed files are explicitly committed back to the source repository.
- C. Build a new Docker container that examines the files in /workspace and then checks and adds a copyright for each source fil
- D. Changed files do not need to be committed back to the source repository.
- E. Build a new Docker container that examines the files in a Cloud Storage bucket and then checks and adds a copyright for each source fil
- F. Changed files are written back to the Cloud Storage bucket.
- G. Build a new Docker container that examines the files in a Cloud Storage bucket and then checks and adds a copyright for each source fil
- H. Changed files are explicitly committed back to the source repository.

Answer: A

Explanation:

https://cloud.google.com/build/docs/configuring-builds/pass-data-between-steps#passing_data_using_workspace To pass data between build steps, store the assets produced by the build step in /workspace and these assets will be available to any subsequent build steps.

NEW QUESTION 22

- (Exam Topic 2)

You have a mixture of packaged and internally developed applications hosted on a Compute Engine instance that is running Linux. These applications write log records as text in local files. You want the logs to be written to Cloud Logging. What should you do?

- A. Pipe the content of the files to the Linux Syslog daemon.
- B. Install a Google version of fluentd on the Compute Engine instance.
- C. Install a Google version of collectd on the Compute Engine instance.
- D. Using cron, schedule a job to copy the log files to Cloud Storage once a day.

Answer: B

Explanation:

Reference: <https://cloud.google.com/logging/docs/agent/logging/configuration>

NEW QUESTION 25

- (Exam Topic 2)

You migrated your applications to Google Cloud Platform and kept your existing monitoring platform. You now find that your notification system is too slow for time critical problems. What should you do?

- A. Replace your entire monitoring platform with Stackdriver.
- B. Install the Stackdriver agents on your Compute Engine instances.
- C. Use Stackdriver to capture and alert on logs, then ship them to your existing platform.
- D. Migrate some traffic back to your old platform and perform AB testing on the two platforms concurrently.

Answer: B

Explanation:

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

NEW QUESTION 26

- (Exam Topic 2)

You are designing a schema for a table that will be moved from MySQL to Cloud Bigtable. The MySQL table is as follows:

```
AccountActivity
(
  Account_id int,
  Event_timestamp datetime,
  Transaction_type string,
  Amount numeric(18, 4)
) primary key (Account_id, Event_timestamp)
```

How should you design a row key for Cloud Bigtable for this table?

- A. Set Account_id as a key.
- B. Set Account_id_Event_timestamp as a key.
- C. Set Event_timestamp_Account_id as a key.
- D. Set Event_timestamp as a key.

Answer: C

NEW QUESTION 27

- (Exam Topic 2)

You are using the Cloud Client Library to upload an image in your application to Cloud Storage. Users of the application report that occasionally the upload does not complete and the client library reports an HTTP 504 Gateway Timeout error. You want to make the application more resilient to errors. What changes to the application should you make?

- A. Write an exponential backoff process around the client library call.
- B. Write a one-second wait time backoff process around the client library call.
- C. Design a retry button in the application and ask users to click if the error occurs.
- D. Create a queue for the object and inform the users that the application will try again in 10 minutes.

Answer: A

NEW QUESTION 28

- (Exam Topic 2)

Your security team is auditing all deployed applications running in Google Kubernetes Engine. After completing the audit, your team discovers that some of the applications send traffic within the cluster in clear text. You need to ensure that all application traffic is encrypted as quickly as possible while minimizing changes to your applications and maintaining support from Google. What should you do?

- A. Use Network Policies to block traffic between applications.
- B. Install Istio, enable proxy injection on your application namespace, and then enable mTLS.
- C. Define Trusted Network ranges within the application, and configure the applications to allow traffic only from those networks.
- D. Use an automated process to request SSL Certificates for your applications from Let's Encrypt and add them to your applications.

Answer: D

NEW QUESTION 29

- (Exam Topic 2)

You are building a mobile application that will store hierarchical data structures in a database. The application will enable users working offline to sync changes when they are back online. A backend service will enrich the data in the database using a service account. The application is expected to be very popular and needs to scale seamlessly and securely. Which database and IAM role should you use?

- A. Use Cloud SQL, and assign the roles/cloudsql.editor role to the service account.
- B. Use Bigtable, and assign the roles/bigtable.viewer role to the service account.
- C. Use Firestore in Native mode and assign the roles/datastore.user role to the service account.
- D. Use Firestore in Datastore mode and assign the roles/datastore.viewer role to the service account.

Answer: C

Explanation:

<https://firebase.google.com/docs/firestore/manage-data/enable-offline>

Cloud Firestore supports offline data persistence. This feature caches a copy of the Cloud Firestore data that your app is actively using, so your app can access the data when the device is offline. You can write, read, listen to, and query the cached data. When the device comes back online, Cloud Firestore synchronizes any local changes made by your app to the Cloud Firestore backend.

NEW QUESTION 30

- (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%20priva>

NEW QUESTION 31

- (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 32

- (Exam Topic 2)

Your web application is deployed to the corporate intranet. You need to migrate the web application to Google Cloud. The web application must be available only to company employees and accessible to employees as they travel. You need to ensure the security and accessibility of the web application while minimizing application changes. What should you do?

- A. Configure the application to check authentication credentials for each HTTP(S) request to the application.
- B. Configure Identity-Aware Proxy to allow employees to access the application through its public IP address.
- C. Configure a Compute Engine instance that requests users to log in to their corporate account
- D. Change the web application DNS to point to the proxy Compute Engine instance
- E. After authenticating, the Compute Engine instance forwards requests to and from the web application.
- F. Configure a Compute Engine instance that requests users to log in to their corporate account
- G. Change the web application DNS to point to the proxy Compute Engine instance
- H. After authenticating, the Compute Engine issues an HTTP redirect to a public IP address hosting the web application.

Answer: B

NEW QUESTION 36

- (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 41

- (Exam Topic 2)

You need to deploy resources from your laptop to Google Cloud using Terraform. Resources in your Google Cloud environment must be created using a service account. Your Cloud Identity has the roles/iam.serviceAccountTokenCreator Identity and Access Management (IAM) role and the necessary permissions to deploy the resources using Terraform. You want to set up your development environment to deploy the desired resources following Google-recommended best practices. What should you do?

- A. 1) Download the service account's key file in JSON format, and store it locally on your laptop.2) Set the GOOGLE_APPLICATION_CREDENTIALS

environment variable to the path of your downloaded key file.

B. 1) Run the following command from a command line: `gcloud config set auth/impersonate_service_account service-account-name@project.iam.gserviceaccount.com`. 2) Set the `GOOGLE_OAUTH_ACCESS_TOKEN` environment variable to the value that is returned by the `gcloud auth print-access-token` command.

C. 1) Run the following command from a command line: `gcloud auth application-default login`. 2) In the browser window that opens, authenticate using your personal credentials.

D. 1) Store the service account's key file in JSON format in Hashicorp Vault. 2) Integrate Terraform with Vault to retrieve the key file dynamically, and authenticate to Vault using a short-lived access token.

Answer: D

Explanation:

<https://cloud.google.com/iam/docs/best-practices-for-managing-service-account-keys#file-system> Whenever possible, avoid storing service account keys on a file system. If you can't avoid storing keys on

disk, make sure to restrict access to the key file, configure file access auditing, and encrypt the underlying disk.

<https://cloud.google.com/iam/docs/best-practices-for-managing-service-account-keys#software-keystore> In situations where using a hardware-based key store isn't viable, use a software-based key store to manage

service account keys. Similar to hardware-based options, a software-based key store lets users or applications

use service account keys without revealing the private key. Software-based key store solutions can help you control key access in a fine-grained manner and can also ensure that each key access is logged.

NEW QUESTION 44

- (Exam Topic 2)

You are using Cloud Build for your CI/CD pipeline to complete several tasks, including copying certain files to Compute Engine virtual machines. Your pipeline requires a flat file that is generated in one builder in the pipeline to be accessible by subsequent builders in the same pipeline. How should you store the file so that all the builders in the pipeline can access it?

A. Store and retrieve the file contents using Compute Engine instance metadata.

B. Output the file contents to a file in `/workspace`

C. Read from the same `/workspace` file in the subsequent build step.

D. Use `gsutil` to output the file contents to a Cloud Storage object

E. Read from the same object in the subsequent build step.

F. Add a build argument that runs an HTTP POST via `curl` to a separate web server to persist the value in one build

G. Use an HTTP GET via `curl` from the subsequent build step to read the value.

Answer: B

Explanation:

<https://cloud.google.com/build/docs/build-config-file-schema>

NEW QUESTION 49

- (Exam Topic 2)

One of your deployed applications in Google Kubernetes Engine (GKE) is having intermittent performance

issues. Your team uses a third-party logging solution. You want to install this solution on each node in your GKE cluster so you can view the logs. What should you do?

A. Deploy the third-party solution as a DaemonSet

B. Modify your container image to include the monitoring software

C. Use SSH to connect to the GKE node, and install the software manually

D. Deploy the third-party solution using Terraform and deploy the logging Pod as a Kubernetes Deployment

Answer: A

Explanation:

https://cloud.google.com/kubernetes-engine/docs/concepts/daemonset#usage_patterns DaemonSets are useful for deploying ongoing background tasks that you need to run on all or certain nodes, and which do not require user intervention. Examples of such tasks include storage daemons like `ceph`, log collection daemons like `fluent-bit`, and node monitoring daemons like `collectd`.

NEW QUESTION 54

- (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 59

- (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 61

- (Exam Topic 2)

You want to migrate an on-premises container running in Knative to Google Cloud. You need to make sure that the migration doesn't affect your application's deployment strategy, and you want to use a fully managed service. Which Google Cloud service should you use to deploy your container?

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

Answer: A

Explanation:

<https://cloud.google.com/blog/products/serverless/knative-based-cloud-run-services-are-ga>

NEW QUESTION 62

- (Exam Topic 2)

You are deploying a single website on App Engine that needs to be accessible via the URL <http://www.altostrat.com/>. What should you do?

- A. Verify domain ownership with Webmaster Central
- B. Create a DNS CNAME record to point to the App Engine canonical name ghs.googlehosted.com.
- C. Verify domain ownership with Webmaster Central
- D. Define an A record pointing to the single global App Engine IP address.
- E. Define a mapping in `dispatch.yaml` to point the domain www.altostrat.com to your App Engine service. Create a DNS CNAME record to point to the App Engine canonical name ghs.googlehosted.com.
- F. Define a mapping in `dispatch.yaml` to point the domain www.altostrat.com to your App Engine service. Define an A record pointing to the single global App Engine IP address.

Answer: A

Explanation:

Reference: <https://cloud.google.com/appengine/docs/flexible/dotnet/mapping-custom-domains?hl=fa>

NEW QUESTION 66

- (Exam Topic 2)

You are in the final stage of migrating an on-premises data center to Google Cloud. You are quickly approaching your deadline, and discover that a web API is running on a server slated for decommissioning. You need to recommend a solution to modernize this API while migrating to Google Cloud. The modernized web API must meet the following requirements:

- Autoscales during high traffic periods at the end of each month
- Written in Python 3.x
- Developers must be able to rapidly deploy new versions in response to frequent code changes

You want to minimize cost, effort, and operational overhead of this migration. What should you do?

- A. Modernize and deploy the code on App Engine flexible environment.
- B. Modernize and deploy the code on App Engine standard environment.
- C. Deploy the modernized application to an `n1-standard-1` Compute Engine instance.
- D. Ask the development team to re-write the application to run as a Docker container on Google Kubernetes Engine.

Answer: B

Explanation:

<https://cloud.google.com/appengine/docs/standard>

NEW QUESTION 71

- (Exam Topic 2)

You are running a containerized application on Google Kubernetes Engine. Your container images are stored in Container Registry. Your team uses CI/CD practices. You need to prevent the deployment of containers with known critical vulnerabilities. What should you do?

- A. • Use Web Security Scanner to automatically crawl your application• Review your application logs for scan results, and provide an attestation that the container is free of known critical vulnerabilities• Use Binary Authorization to implement a policy that forces the attestation to be provided before the container is deployed
- B. • Use Web Security Scanner to automatically crawl your application• Review the scan results in the scan details page in the Cloud Console, and provide an attestation that the container is free of known critical vulnerabilities• Use Binary Authorization to implement a policy that forces the attestation to be provided before the container is deployed
- C. • Enable the Container Scanning API to perform vulnerability scanning• Review vulnerability reporting in Container Registry in the Cloud Console, and provide

an attestation that the container is free of known critical vulnerabilities• Use Binary Authorization to implement a policy that forces the attestation to be provided before the container is deployed
D. • Enable the Container Scanning API to perform vulnerability scanning• Programmatically review vulnerability reporting through the Container Scanning API, and provide an attestation that the container is free of known critical vulnerabilities• Use Binary Authorization to implement a policy that forces the attestation to be provided before the container is deployed

Answer: D

Explanation:

<https://cloud.google.com/binary-authorization/docs/creating-attestations-kritis>
<https://cloud.google.com/container-analysis/docs/os-overview>

NEW QUESTION 76

- (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 allUser
- 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 applicatio
- E. Allow users to access the bucket after authenticating through IAP.
- F. Generate a signed URL that grants read access to the bucke
- 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 80

- (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 84

- (Exam Topic 2)

Your company has a BigQuery data mart that provides analytics information to hundreds of employees. One user of wants to run jobs without interrupting important workloads. This user isn't concerned about the time it takes to run these jobs. You want to fulfill this request while minimizing cost to the company and the effort required on your part.

What should you do?

- A. Ask the user to run the jobs as batch jobs.
- B. Create a separate project for the user to run jobs.
- C. Add the user as a job.user role in the existing project.
- D. Allow the user to run jobs when important workloads are not running.

Answer: B

NEW QUESTION 86

- (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 87

- (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 ["gunicorn", "-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

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 88

- (Exam Topic 2)

You work at a rapidly growing financial technology startup. You manage the payment processing application written in Go and hosted on Cloud Run in the Singapore region (asia-southeast1). The payment processing application processes data stored in a Cloud Storage bucket that is also located in the Singapore region.

The startup plans to expand further into the Asia Pacific region. You plan to deploy the Payment Gateway in Jakarta, Hong Kong, and Taiwan over the next six months. Each location has data residency requirements that require customer data to reside in the country where the transaction was made. You want to minimize the cost of these deployments. What should you do?

- A. Create a Cloud Storage bucket in each region, and create a Cloud Run service of the payment processing application in each region.
- B. Create a Cloud Storage bucket in each region, and create three Cloud Run services of the payment processing application in the Singapore region.
- C. Create three Cloud Storage buckets in the Asia multi-region, and create three Cloud Run services of the payment processing application in the Singapore region.
- D. Create three Cloud Storage buckets in the Asia multi-region, and create three Cloud Run revisions of the payment processing application in the Singapore region.

Answer: A

NEW QUESTION 91

- (Exam Topic 2)

You are planning to deploy your application in a Google Kubernetes Engine (GKE) cluster. Your application can scale horizontally, and each instance of your application needs to have a stable network identity and its own persistent disk.

Which GKE object should you use?

- A. Deployment
- B. StatefulSet
- C. ReplicaSet
- D. ReplicaController

Answer: B

Explanation:

Reference: <https://livebook.manning.com/book/kubernetes-in-action/chapter-10/46>

NEW QUESTION 96

- (Exam Topic 2)

You plan to deploy a new application revision with a Deployment resource to Google Kubernetes Engine (GKE) in production. The container might not work correctly. You want to minimize risk in case there are issues after deploying the revision. You want to follow Google-recommended best practices. What should you do?

- A. Perform a rolling update with a PodDisruptionBudget of 80%.
- B. Perform a rolling update with a HorizontalPodAutoscaler scale-down policy value of 0.
- C. Convert the Deployment to a StatefulSet, and perform a rolling update with a PodDisruptionBudget of 80%.
- D. Convert the Deployment to a StatefulSet, and perform a rolling update with a HorizontalPodAutoscaler scale-down policy value of 0.

Answer: A

Explanation:

<https://cloud.google.com/blog/products/containers-kubernetes/ensuring-reliability-and-uptime-for-your-gke-clus> Setting PodDisruptionBudget ensures that your

workloads have a sufficient number of replicas, even during maintenance. Using the PDB, you can define a number (or percentage) of pods that can be terminated, even if terminating them brings the current replica count below the desired value. With PDB configured, Kubernetes will drain a node following the configured disruption schedule. New pods will be deployed on other available nodes. This approach ensures Kubernetes schedules workloads in an optimal way while controlling the disruption based on the PDB configuration.

<https://blog.knoldus.com/how-to-avoid-outages-in-your-kubernetes-cluster-using-pdb/>

NEW QUESTION 100

- (Exam Topic 2)

Your service adds text to images that it reads from Cloud Storage. During busy times of the year, requests to Cloud Storage fail with an HTTP 429 "Too Many Requests" status code.

How should you handle this error?

- A. Add a cache-control header to the objects.
- B. Request a quota increase from the GCP Console.
- C. Retry the request with a truncated exponential backoff strategy.
- D. Change the storage class of the Cloud Storage bucket to Multi-regional.

Answer: C

Explanation:

Reference: <https://developers.google.com/gmail/api/v1/reference/quota>

NEW QUESTION 104

- (Exam Topic 2)

Your team develops services that run on Google Kubernetes Engine. You need to standardize their log data using Google-recommended practices and make the data more useful in the fewest number of steps. What should you do? (Choose two.)

- A. Create aggregated exports on application logs to BigQuery to facilitate log analytics.
- B. Create aggregated exports on application logs to Cloud Storage to facilitate log analytics.
- C. Write log output to standard output (stdout) as single-line JSON to be ingested into Cloud Logging as structured logs.
- D. Mandate the use of the Logging API in the application code to write structured logs to Cloud Logging.
- E. Mandate the use of the Pub/Sub API to write structured data to Pub/Sub and create a Dataflow streaming pipeline to normalize logs and write them to BigQuery for analytics.

Answer: AC

Explanation:

https://cloud.google.com/stackdriver/docs/solutions/gke/managing-logs#best_practices

NEW QUESTION 105

- (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 109

- (Exam Topic 2)

You are deploying a microservices application to Google Kubernetes Engine (GKE) that will broadcast livestreams. You expect unpredictable traffic patterns and large variations in the number of concurrent users. Your application must meet the following requirements:

- Scales automatically during popular events and maintains high availability
- Is resilient in the event of hardware failures

How should you configure the deployment parameters? (Choose two.)

- A. Distribute your workload evenly using a multi-zonal node pool.
- B. Distribute your workload evenly using multiple zonal node pools.
- C. Use cluster autoscaler to resize the number of nodes in the node pool, and use a Horizontal Pod Autoscaler to scale the workload.
- D. Create a managed instance group for Compute Engine with the cluster node
- E. Configure autoscaling rules for the managed instance group.
- F. Create alerting policies in Cloud Monitoring based on GKE CPU and memory utilization
- G. Ask an on-duty engineer to scale the workload by executing a script when CPU and memory usage exceed predefined thresholds.

Answer: AC

NEW QUESTION 111

- (Exam Topic 2)

You are building a CI/CD pipeline that consists of a version control system, Cloud Build, and Container Registry. Each time a new tag is pushed to the repository, a Cloud Build job is triggered, which runs unit tests on the new code builds a new Docker container image, and pushes it into Container Registry. The last step of your pipeline should deploy the new container to your production Google Kubernetes Engine (GKE) cluster. You need to select a tool and deployment strategy that meets the following requirements:

- Zero downtime is incurred
- Testing is fully automated

- Allows for testing before being rolled out to users
- Can quickly rollback if needed What should you do?

- A. Trigger a Spinnaker pipeline configured as an A/B test of your new code and, if it is successful, deploy the container to production.
B. Trigger a Spinnaker pipeline configured as a canary test of your new code and, if it is successful, deploy the container to production.
C. Trigger another Cloud Build job that uses the Kubernetes CLI tools to deploy your new container to your GKE cluster, where you can perform a canary test.
D. Trigger another Cloud Build job that uses the Kubernetes CLI tools to deploy your new container to your GKE cluster, where you can perform a shadow test.

Answer: D

Explanation:

https://cloud.google.com/architecture/implementing-deployment-and-testing-strategies-on-gke#perform_a_shad With a shadow test, you test the new version of your application by mirroring user traffic from the current application version without impacting the user requests.

NEW QUESTION 113

- (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 116

- (Exam Topic 2)

Your team is developing unit tests for Cloud Function code. The code is stored in a Cloud Source Repositories repository. You are responsible for implementing the tests. Only a specific service account has the necessary permissions to deploy the code to Cloud Functions. You want to ensure that the code cannot be deployed without first passing the tests. How should you configure the unit testing process?

- A. Configure Cloud Build to deploy the Cloud Function
B. If the code passes the tests, a deployment approval is sent to you.
C. Configure Cloud Build to deploy the Cloud Function, using the specific service account as the build agent
D. Run the unit tests after successful deployment.
E. Configure Cloud Build to run the unit test
F. If the code passes the tests, the developer deploys the Cloud Function.
G. Configure Cloud Build to run the unit tests, using the specific service account as the build agent
H. If the code passes the tests, Cloud Build deploys the Cloud Function.

Answer: D

NEW QUESTION 120

- (Exam Topic 2)

Your API backend is running on multiple cloud providers. You want to generate reports for the network latency of your API. Which two steps should you take? (Choose two.)

- A. Use Zipkin collector to gather data.
B. Use Fluentd agent to gather data.
C. Use Stackdriver Trace to generate reports.
D. Use Stackdriver Debugger to generate report.
E. Use Stackdriver Profiler to generate report.

Answer: AC

Explanation:

<https://cloud.google.com/trace/docs/zipkin>

"receive traces from Zipkin clients and forward those traces to Cloud Trace for analysis." https://cloud.google.com/trace/docs/quickstart#analysis_reports_window

NEW QUESTION 125

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