



**Google**

## **Exam Questions Professional-Cloud-Architect**

Google Certified Professional - Cloud Architect (GCP)

### NEW QUESTION 1

- (Exam Topic 1)

For this question, refer to the Mountkirk Games case study.

Mountkirk Games wants you to design their new testing strategy. How should the test coverage differ from their existing backends on the other platforms?

- A. Tests should scale well beyond the prior approaches.
- B. Unit tests are no longer required, only end-to-end tests.
- C. Tests should be applied after the release is in the production environment.
- D. Tests should include directly testing the Google Cloud Platform (GCP) infrastructure.

**Answer:** A

#### Explanation:

From Scenario:

A few of their games were more popular than expected, and they had problems scaling their application servers, MySQL databases, and analytics tools.

Requirements for Game Analytics Platform include: Dynamically scale up or down based on game activity

### NEW QUESTION 2

- (Exam Topic 1)

For this question, refer to the Mountkirk Games case study.

Mountkirk Games has deployed their new backend on Google Cloud Platform (GCP). You want to create a thorough testing process for new versions of the backend before they are released to the public. You want the testing environment to scale in an economical way. How should you design the process?

- A. Create a scalable environment in GCP for simulating production load.
- B. Use the existing infrastructure to test the GCP-based backend at scale.
- C. Build stress tests into each component of your application using resources internal to GCP to simulate load.
- D. Create a set of static environments in GCP to test different levels of load — for example, high, medium, and low.

**Answer:** A

#### Explanation:

From scenario: Requirements for Game Backend Platform

- Dynamically scale up or down based on game activity
- Connect to a managed NoSQL database service
- Run customize Linux distro

### NEW QUESTION 3

- (Exam Topic 2)

For this question, refer to the TerramEarth case study.

The TerramEarth development team wants to create an API to meet the company's business requirements. You want the development team to focus their development effort on business value versus creating a custom framework. Which method should they use?

- A. Use Google App Engine with Google Cloud Endpoint
- B. Focus on an API for dealers and partners.
- C. Use Google App Engine with a JAX-RS Jersey Java-based framework
- D. Focus on an API for the public.
- E. Use Google App Engine with the Swagger (open API Specification) framework
- F. Focus on an API for the public.
- G. Use Google Container Engine with a Django Python container
- H. Focus on an API for the public.
- I. Use Google Container Engine with a Tomcat container with the Swagger (Open API Specification) framework
- J. Focus on an API for dealers and partners.

**Answer:** A

#### Explanation:

[https://cloud.google.com/endpoints/docs/openapi/about-cloud-endpoints?hl=en\\_US&\\_ga=2.21787131.-1712523](https://cloud.google.com/endpoints/docs/openapi/about-cloud-endpoints?hl=en_US&_ga=2.21787131.-1712523)

<https://cloud.google.com/endpoints/docs/openapi/architecture-overview> <https://cloud.google.com/storage/docs/gsutil/commands/test>

Develop, deploy, protect and monitor your APIs with Google Cloud Endpoints. Using an Open API Specification or one of our API frameworks, Cloud Endpoints gives you the tools you need for every phase of API development.

From scenario: Business Requirements

Decrease unplanned vehicle downtime to less than 1 week, without increasing the cost of carrying surplus inventory

Support the dealer network with more data on how their customers use their equipment to better position new products and services

Have the ability to partner with different companies – especially with seed and fertilizer suppliers in the fast-growing agricultural business – to create compelling joint offerings for their customers.

Reference: <https://cloud.google.com/certification/guides/cloud-architect/casestudy-terramearth>

### NEW QUESTION 4

- (Exam Topic 2)

Your agricultural division is experimenting with fully autonomous vehicles. You want your architecture to promote strong security during vehicle operation. Which two architecture should you consider?

Choose 2 answers:

- A. Treat every micro service call between modules on the vehicle as untrusted.
- B. Require IPv6 for connectivity to ensure a secure address space.
- C. Use a trusted platform module (TPM) and verify firmware and binaries on boot.
- D. Use a functional programming language to isolate code execution cycles.

- E. Use multiple connectivity subsystems for redundancy.
- F. Enclose the vehicle's drive electronics in a Faraday cage to isolate chips.

Answer: AC

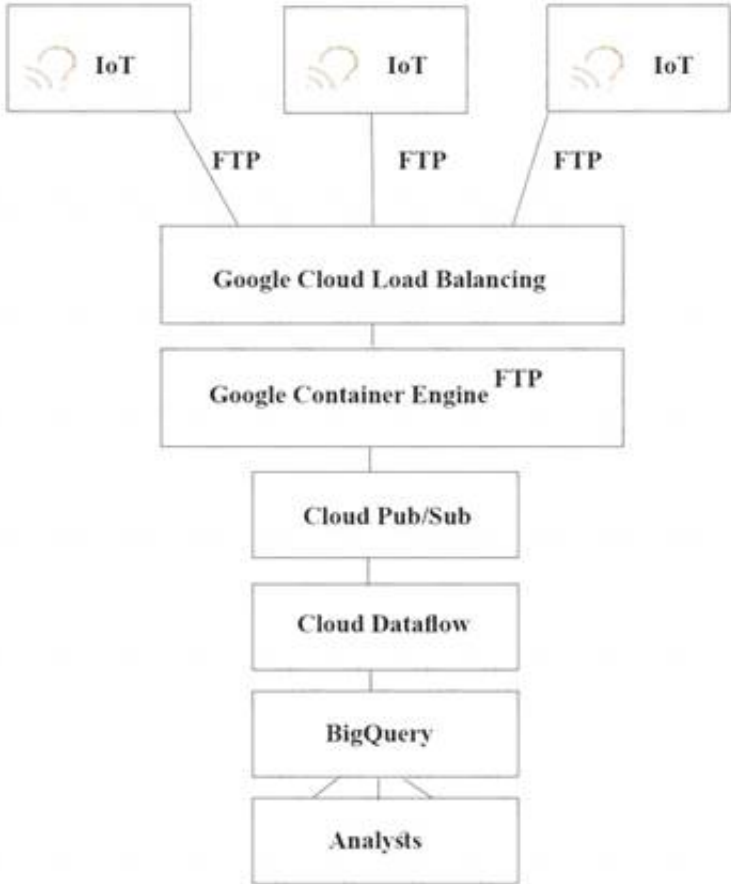
NEW QUESTION 5

- (Exam Topic 2)

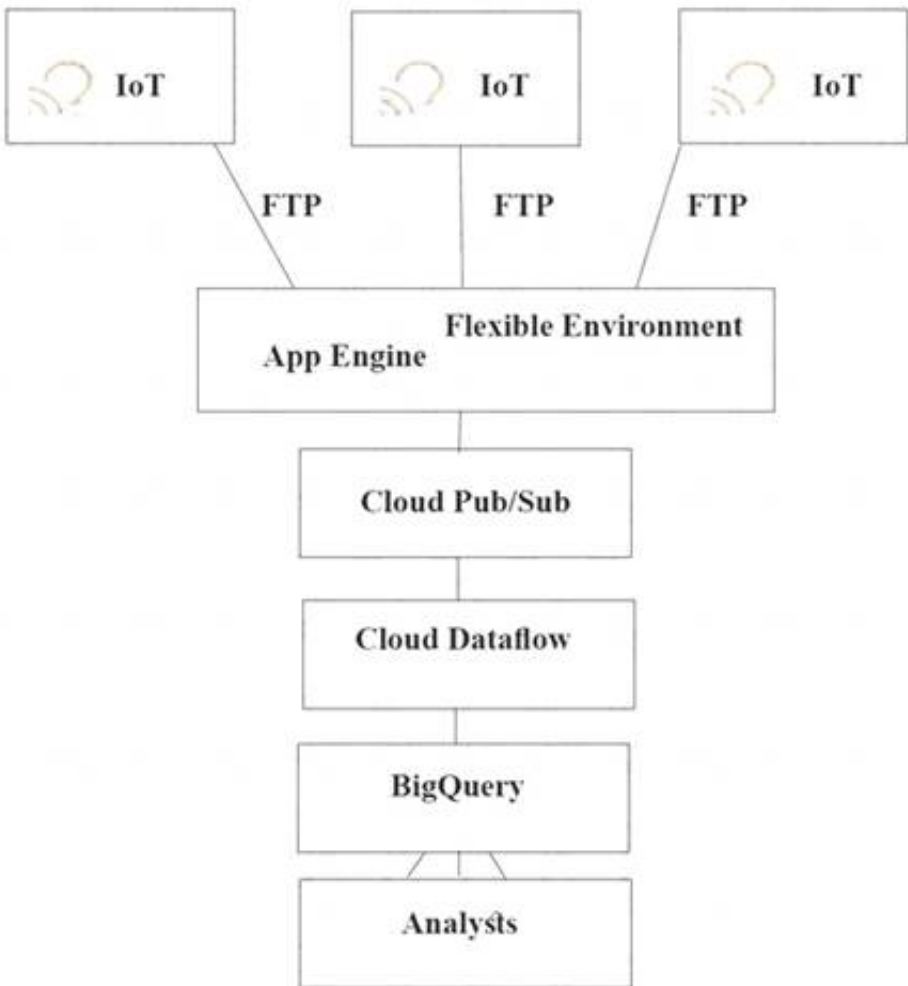
For this question, refer to the TerramEarth case study.

TerramEarth's CTO wants to use the raw data from connected vehicles to help identify approximately when a vehicle in the development team to focus their failure. You want to allow analysts to centrally query the vehicle data. Which architecture should you recommend?

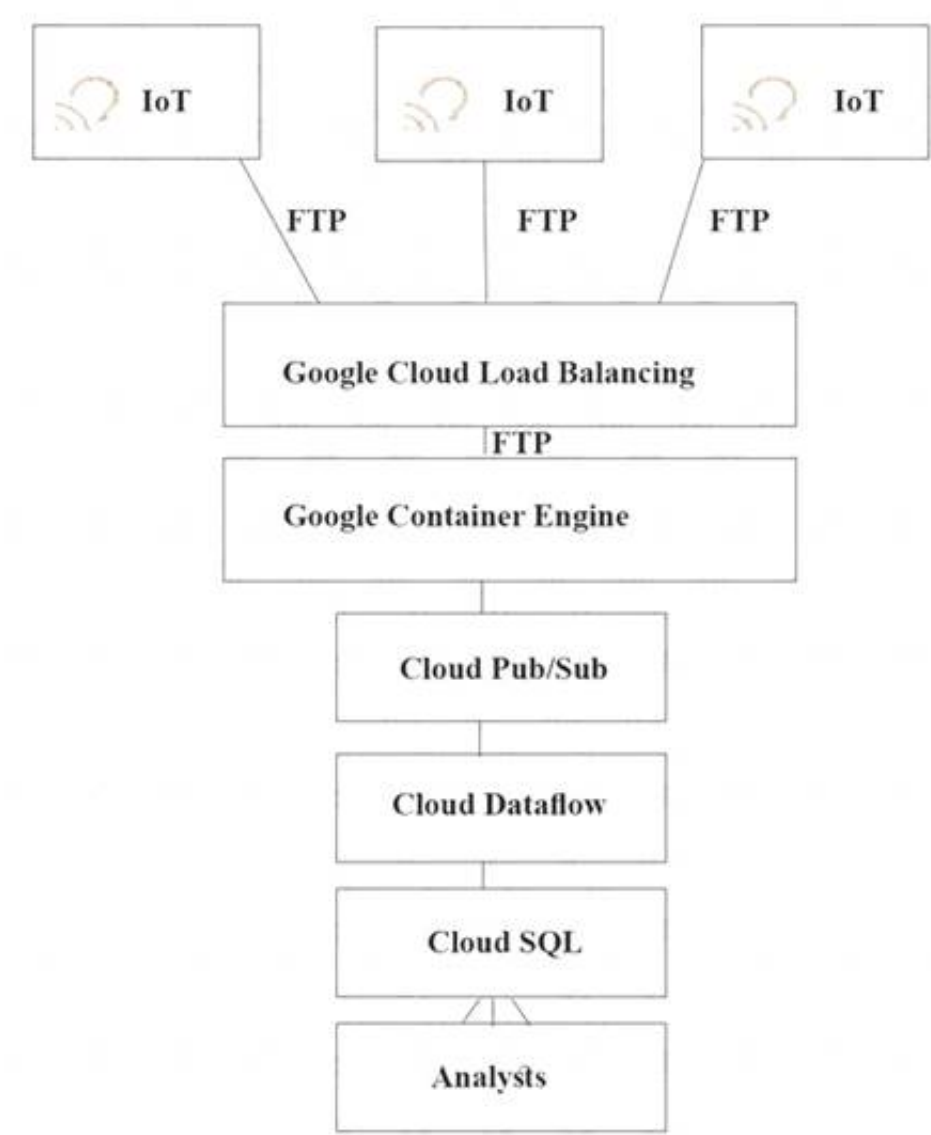
A)



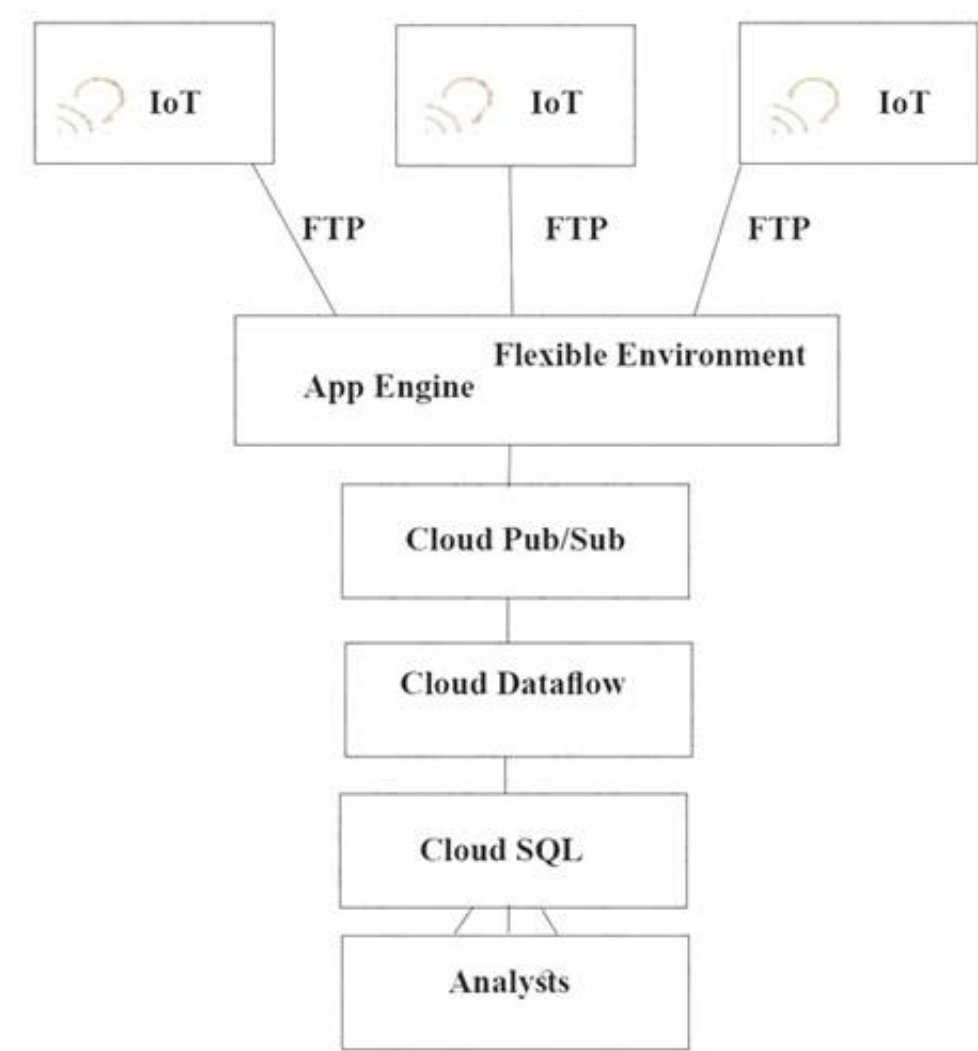
B)



C)



D)

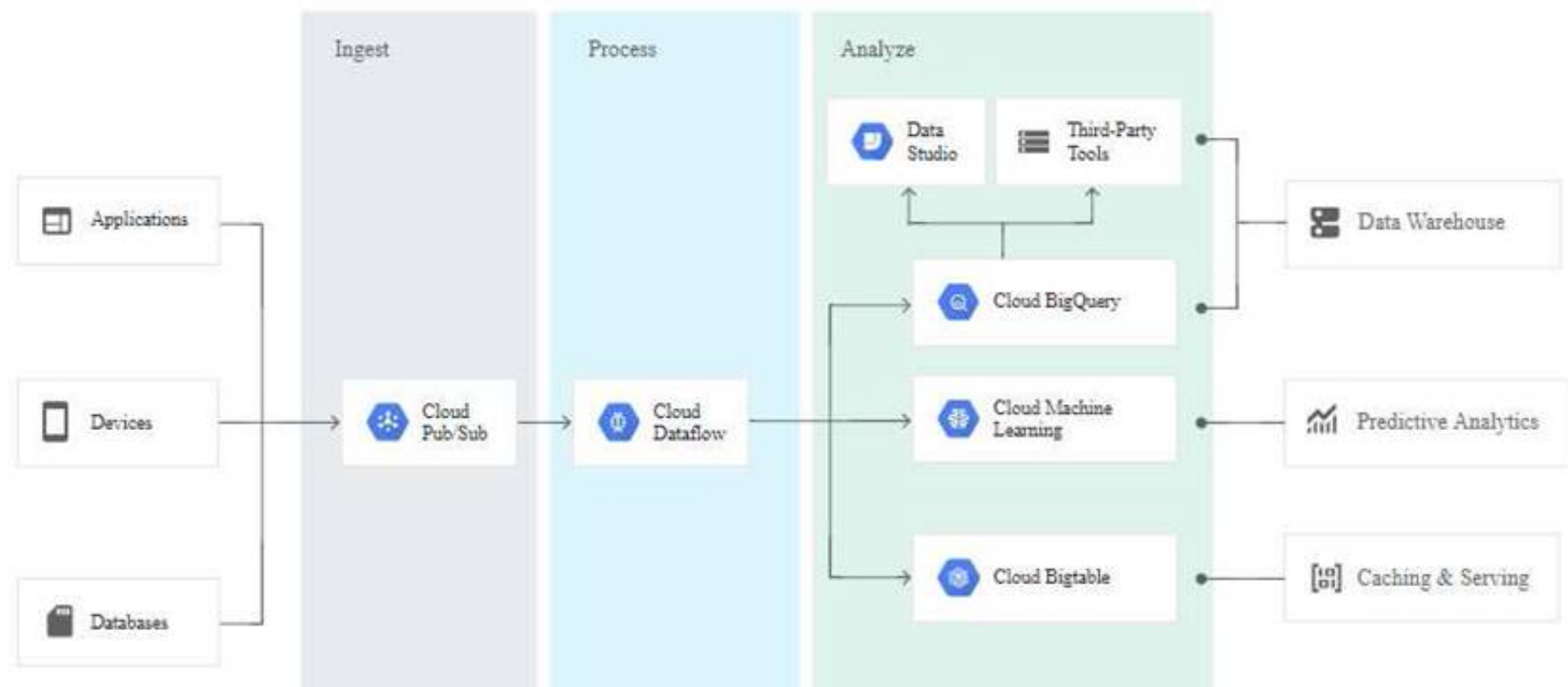


- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: A

Explanation:

<https://cloud.google.com/solutions/iot/> <https://cloud.google.com/solutions/designing-connected-vehicle-platform>  
[https://cloud.google.com/solutions/designing-connected-vehicle-platform#data\\_ingestion](https://cloud.google.com/solutions/designing-connected-vehicle-platform#data_ingestion)  
<http://www.eweek.com/big-data-and-analytics/google-touts-value-of-cloud-iot-core-for-analyzing-connected-car-data>  
<https://cloud.google.com/solutions/iot/> The push endpoint can be a load balancer. A container cluster can be used. Cloud Pub/Sub for Stream Analytics



References: <https://cloud.google.com/pubsub/> <https://cloud.google.com/solutions/iot/> <https://cloud.google.com/solutions/designing-connected-vehicle-platform>  
[https://cloud.google.com/solutions/designing-connected-vehicle-platform#data\\_ingestion](https://cloud.google.com/solutions/designing-connected-vehicle-platform#data_ingestion)  
<http://www.eweek.com/big-data-and-analytics/google-touts-value-of-cloud-iot-core-for-analyzing-connected-car>  
<https://cloud.google.com/solutions/iot/>

### NEW QUESTION 6

- (Exam Topic 2)

For this question, refer to the TerramEarth case study

You analyzed TerramEarth's business requirement to reduce downtime, and found that they can achieve a majority of time saving by reducing customers' wait time for parts. You decided to focus on reduction of the 3 weeks aggregate reporting time. Which modifications to the company's processes should you recommend?

- A. Migrate from CSV to binary format, migrate from FTP to SFTP transport, and develop machine learning analysis of metrics.
- B. Migrate from FTP to streaming transport, migrate from CSV to binary format, and develop machine learning analysis of metrics.
- C. Increase fleet cellular connectivity to 80%, migrate from FTP to streaming transport, and develop machine learning analysis of metrics.
- D. Migrate from FTP to SFTP transport, develop machine learning analysis of metrics, and increase dealer local inventory by a fixed factor.

**Answer: C**

#### Explanation:

The Avro binary format is the preferred format for loading compressed data. Avro data is faster to load because the data can be read in parallel, even when the data blocks are compressed.

Cloud Storage supports streaming transfers with the gsutil tool or boto library, based on HTTP chunked transfer encoding. Streaming data lets you stream data to and from your Cloud Storage account as soon as it becomes available without requiring that the data be first saved to a separate file. Streaming transfers are useful if you have a process that generates data and you do not want to buffer it locally before uploading it, or if you want to send the result from a computational pipeline directly into Cloud Storage.

References: <https://cloud.google.com/storage/docs/streaming> <https://cloud.google.com/bigquery/docs/loading-data>

### NEW QUESTION 7

- (Exam Topic 2)

For this question, refer to the TerramEarth case study.

To speed up data retrieval, more vehicles will be upgraded to cellular connections and be able to transmit data to the ETL process. The current FTP process is error-prone and restarts the data transfer from the start of the file when connections fail, which happens often. You want to improve the reliability of the solution and minimize data transfer time on the cellular connections. What should you do?

- A. Use one Google Container Engine cluster of FTP server
- B. Save the data to a Multi-Regional bucket
- C. Run the ETL process using data in the bucket.
- D. Use multiple Google Container Engine clusters running FTP servers located in different region
- E. Save the data to Multi-Regional buckets in us, eu, and asi
- F. Run the ETL process using the data in the bucket.
- G. Directly transfer the files to different Google Cloud Multi-Regional Storage bucket locations in us, eu, and asia using Google APIs over HTTP(S). Run the ETL process using the data in the bucket.
- H. Directly transfer the files to a different Google Cloud Regional Storage bucket location in us, eu, and asia using Google APIs over HTTP(S). Run the ETL process to retrieve the data from each Regional bucket.

**Answer: D**

#### Explanation:

<https://cloud.google.com/storage/docs/locations>

### NEW QUESTION 8

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

Dress4Win has asked you to recommend machine types they should deploy their application servers to. How should you proceed?

- A. Perform a mapping of the on-premises physical hardware cores and RAM to the nearest machine types in the cloud.
- B. Recommend that Dress4Win deploy application servers to machine types that offer the highest RAM to CPU ratio available.



- C. Recommend that Dress4Win deploy into production with the smallest instances available, monitor them over time, and scale the machine type up until the desired performance is reached.
- D. Identify the number of virtual cores and RAM associated with the application server virtual machines align them to a custom machine type in the cloud, monitor performance, and scale the machine types up until the desired performance is reached.

**Answer:** C

#### NEW QUESTION 9

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

Dress4Win has asked you for advice on how to migrate their on-premises MySQL deployment to the cloud. They want to minimize downtime and performance impact to their on-premises solution during the migration. Which approach should you recommend?

- A. Create a dump of the on-premises MySQL master server, and then shut it down, upload it to the cloud environment, and load into a new MySQL cluster.
- B. Setup a MySQL replica server/slave in the cloud environment, and configure it for asynchronous replication from the MySQL master server on-premises until cutover.
- C. Create a new MySQL cluster in the cloud, configure applications to begin writing to both on-premises and cloud MySQL masters, and destroy the original cluster at cutover.
- D. Create a dump of the MySQL replica server into the cloud environment, load it into: Google Cloud Datastore, and configure applications to read/write to Cloud Datastore at cutover.

**Answer:** B

#### NEW QUESTION 10

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

Dress4Win has configured a new uptime check with Google Stackdriver for several of their legacy services. The Stackdriver dashboard is not reporting the services as healthy. What should they do?

- A. Install the Stackdriver agent on all of the legacy web servers.
- B. In the Cloud Platform Console download the list of the uptime servers' IP addresses and create an inbound firewall rule
- C. Configure their load balancer to pass through the User-Agent HTTP header when the value matches GoogleStackdriverMonitoring-UptimeChecks (<https://cloud.google.com/monitoring>)
- D. Configure their legacy web servers to allow requests that contain user-Agent HTTP header when the value matches GoogleStackdriverMonitoring—UptimeChecks (<https://cloud.google.com/monitoring>)

**Answer:** B

#### NEW QUESTION 10

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

You want to ensure Dress4Win's sales and tax records remain available for infrequent viewing by auditors for at least 10 years. Cost optimization is your top priority. Which cloud services should you choose?

- A. Google Cloud Storage Coldline to store the data, and gsutil to access the data.
- B. Google Cloud Storage Nearline to store the data, and gsutil to access the data.
- C. Google Bigtable with US or EU as location to store the data, and gcloud to access the data.
- D. BigQuery to store the data, and a web server cluster in a managed instance group to access the data. Google Cloud SQL mirrored across two distinct regions to store the data, and a Redis cluster in a managed instance group to access the data.

**Answer:** A

#### Explanation:

References: <https://cloud.google.com/storage/docs/storage-classes>

#### NEW QUESTION 15

- (Exam Topic 4)

Dress4win has end to end tests covering 100% of their endpoints.

They want to ensure that the move of cloud does not introduce any new bugs.

Which additional testing methods should the developers employ to prevent an outage?

- A. They should run the end to end tests in the cloud staging environment to determine if the code is working as intended.
- B. They should enable google stack driver debugger on the application code to show errors in the code
- C. They should add additional unit tests and production scale load tests on their cloud staging environment.
- D. They should add canary tests so developers can measure how much of an impact the new release causes to latency

**Answer:** B

#### NEW QUESTION 17

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

At Dress4Win, an operations engineer wants to create a tow-cost solution to remotely archive copies of database backup files. The database files are compressed tar files stored in their current data center. How should he proceed?

- A. Create a cron script using gsutil to copy the files to a Coldline Storage bucket.
- B. Create a cron script using gsutil to copy the files to a Regional Storage bucket.
- C. Create a Cloud Storage Transfer Service Job to copy the files to a Coldline Storage bucket.
- D. Create a Cloud Storage Transfer Service job to copy the files to a Regional Storage bucket.

**Answer:** A

**Explanation:**

Follow these rules of thumb when deciding whether to use gsutil or Storage Transfer Service:

- When transferring data from an on-premises location, use gsutil.
- When transferring data from another cloud storage provider, use Storage Transfer Service.
- Otherwise, evaluate both tools with respect to your specific scenario.

Use this guidance as a starting point. The specific details of your transfer scenario will also help you determine which tool is more appropriate

<https://cloud.google.com/storage-transfer/docs/overview>

**NEW QUESTION 22**

- (Exam Topic 5)

Your company has successfully migrated to the cloud and wants to analyze their data stream to optimize operations. They do not have any existing code for this analysis, so they are exploring all their options. These options include a mix of batch and stream processing, as they are running some hourly jobs and live-processing some data as it comes in. Which technology should they use for this?

- A. Google Cloud Dataproc
- B. Google Cloud Dataflow
- C. Google Container Engine with Bigtable
- D. Google Compute Engine with Google BigQuery

**Answer:** B

**Explanation:**

Dataflow is for processing both the Batch and Stream.

Cloud Dataflow is a fully-managed service for transforming and enriching data in stream (real time) and batch (historical) modes with equal reliability and expressiveness -- no more complex workarounds or compromises needed.

References: <https://cloud.google.com/dataflow/>

**NEW QUESTION 23**

- (Exam Topic 5)

Your organization requires that metrics from all applications be retained for 5 years for future analysis in possible legal proceedings. Which approach should you use?

- A. Grant the security team access to the logs in each Project.
- B. Configure Stackdriver Monitoring for all Projects, and export to BigQuery.
- C. Configure Stackdriver Monitoring for all Projects with the default retention policies.
- D. Configure Stackdriver Monitoring for all Projects, and export to Google Cloud Storage.

**Answer:** D

**Explanation:**

Overview of storage classes, price, and use cases <https://cloud.google.com/storage/docs/storage-classes>

Why export logs? <https://cloud.google.com/logging/docs/export/>

StackDriver Quotas and Limits for Monitoring <https://cloud.google.com/monitoring/quotas> The BigQuery pricing. <https://cloud.google.com/bigquery/pricing>

**NEW QUESTION 27**

- (Exam Topic 5)

You have found an error in your App Engine application caused by missing Cloud Datastore indexes. You have created a YAML file with the required indexes and want to deploy these new indexes to Cloud Datastore.

What should you do?

- A. Point gcloud datastore create-indexes to your configuration file
- B. Upload the configuration file the App Engine's default Cloud Storage bucket, and have App Engine detect the new indexes
- C. In the GCP Console, use Datastore Admin to delete the current indexes and upload the new configuration file
- D. Create an HTTP request to the built-in python module to send the index configuration file to your application

**Answer:** A

**NEW QUESTION 29**

- (Exam Topic 5)

Your company has just recently activated Cloud Identity to manage users. The Google Cloud Organization has been configured as well. The security team needs to secure protects that will be part of the Organization. They want to prohibit IAM users outside the domain from gaining permissions from now on. What should they do?

- A. Configure an organization policy to restrict identities by domain
- B. Configure an organization policy to block creation of service accounts
- C. Configure Cloud Scheduler to trigger a Cloud Function every hour that removes all users that don't belong to the Cloud identity domain from all projects.
- D. Create a technical user (e.g. crawler@yourdomain.com), and give it the protect owner role at root organization level Write a bash script that• Lists all the IAM rules of all projects within the organization• Deletes all users that do not belong to the company domainCreate a Compute Engine instance in a project within the Organization and configure gcloud to be executed with technical user credentials Configure a cron job that executes the bash script every hour.

**Answer:** A

**NEW QUESTION 30**

- (Exam Topic 5)

You have an App Engine application that needs to be updated. You want to test the update with production traffic before replacing the current application version.

What should you do?

- A. Deploy the update using the Instance Group Updater to create a partial rollout, which allows for canary testing.
- B. Deploy the update as a new version in the App Engine application, and split traffic between the new and current versions.
- C. Deploy the update in a new VPC, and use Google's global HTTP load balancing to split traffic between the update and current applications.
- D. Deploy the update as a new App Engine application, and use Google's global HTTP load balancing to split traffic between the new and current applications.

**Answer:** B

**Explanation:**

<https://cloud.google.com/appengine/docs/standard/python/splitting-traffic>

### NEW QUESTION 33

- (Exam Topic 5)

Your company creates rendering software which users can download from the company website. Your company has customers all over the world. You want to minimize latency for all your customers. You want to follow Google-recommended practices. How should you store the files?

- A. Save the files in a Multi-Regional Cloud Storage bucket.
- B. Save the files in a Regional Cloud Storage bucket, one bucket per zone of the region.
- C. Save the files in multiple Regional Cloud Storage buckets, one bucket per zone per region.
- D. Save the files in multiple Multi-Regional Cloud Storage buckets, one bucket per multi-region.

**Answer:** A

**Explanation:**

<https://cloud.google.com/storage/docs/locations#location-mr>

### NEW QUESTION 34

- (Exam Topic 5)

You are monitoring Google Kubernetes Engine (GKE) clusters in a Cloud Monitoring workspace. As a Site Reliability Engineer (SRE), you need to triage incidents quickly. What should you do?

- A. Navigate the predefined dashboards in the Cloud Monitoring workspace, and then add metrics and create alert policies.
- B. Navigate the predefined dashboards in the Cloud Monitoring workspace, create custom metrics, and install alerting software on a Compute Engine instance.
- C. Write a shell script that gathers metrics from GKE nodes, publish these metrics to a Pub/Sub topic, export the data to BigQuery, and make a Data Studio dashboard.
- D. Create a custom dashboard in the Cloud Monitoring workspace for each incident, and then add metrics and create alert policies.

**Answer:** A

**Explanation:**

<https://cloud.google.com/stackdriver/docs/solutions/gke/legacy-stackdriver/monitoring>

### NEW QUESTION 38

- (Exam Topic 5)

You need to ensure reliability for your application and operations by supporting reliable task scheduling for compute on GCP. Leveraging Google best practices, what should you do?

- A. Using the Cron service provided by App Engine, publishing messages directly to a message-processing utility service running on Compute Engine instances.
- B. Using the Cron service provided by App Engine, publish messages to a Cloud Pub/Sub topic
- C. Subscribe to that topic using a message-processing utility service running on Compute Engine instances.
- D. Using the Cron service provided by Google Kubernetes Engine (GKE), publish messages directly to a message-processing utility service running on Compute Engine instances.
- E. Using the Cron service provided by GKE, publish messages to a Cloud Pub/Sub topic
- F. Subscribe to that topic using a message-processing utility service running on Compute Engine instances.

**Answer:** B

**Explanation:**

<https://cloud.google.com/solutions/reliable-task-scheduling-compute-engine>

### NEW QUESTION 39

- (Exam Topic 5)

You deploy your custom java application to google app engine. It fails to deploy and gives you the following stack trace:



```
Java.lang.SecurityException : SHA1 digest

At com.google.appengine.runtime.Request.pr

At

Sun.security.util.ManifestEntryVerifier.ver

At java . net . URLClassLoader . defineCla

At sun . reflect . GeneratedMethodAccessors

At

Sun.reflect . DelegatingMethodAccesorImpl.

At java . lang . reflect . MThod . invoke
```

- A. Recompile the CLoakedServlet class using and MD5 hash instead of SHA1
- B. Digitally sign all of your JAR files and redeploy your application.
- C. Upload missing JAR files and redeploy your application

**Answer:** B

#### NEW QUESTION 44

- (Exam Topic 5)

One of the developers on your team deployed their application in Google Container Engine with the Dockerfile below. They report that their application deployments are taking too long.

```
FROM ubuntu:16.04

COPY . /src

RUN apt-get update && apt-get install -y python python-pip

RUN pip install -r requirements.txt
```

You want to optimize this Dockerfile for faster deployment times without adversely affecting the app's functionality. Which two actions should you take? Choose 2 answers.

- A. Remove Python after running pip.
- B. Remove dependencies from requirements.txt.
- C. Use a slimmed-down base image like Alpine linux.
- D. Use larger machine types for your Google Container Engine node pools.
- E. Copy the source after the package dependencies (Python and pip) are installed.

**Answer:** CE

#### Explanation:

The speed of deployment can be changed by limiting the size of the uploaded app, limiting the complexity of the build necessary in the Dockerfile, if present, and by ensuring a fast and reliable internet connection.

Note: Alpine Linux is built around musl libc and busybox. This makes it smaller and more resource efficient than traditional GNU/Linux distributions. A container requires no more than 8 MB and a minimal installation to disk requires around 130 MB of storage. Not only do you get a fully-fledged Linux environment but a large selection of packages from the repository.

References: <https://groups.google.com/forum/#!topic/google-appengine/hZMEkmmObDU> <https://www.alpinelinux.org/about/>

#### NEW QUESTION 49

- (Exam Topic 5)

You team needs to create a Google Kubernetes Engine (GKE) cluster to host a newly built application that requires access to third-party services on the internet. Your company does not allow any Compute Engine instance to have a public IP address on Google Cloud. You need to create a deployment strategy that adheres to these guidelines. What should you do?

- A. Create a Compute Engine instance, and install a NAT Proxy on the instanc
- B. Configure all workloads on GKE to pass through this proxy to access third-party services on the Internet
- C. Configure the GKE cluster as a private cluster, and configure Cloud NAT Gateway for the cluster subnet
- D. Configure the GKE cluster as a route-based cluste
- E. Configure Private Google Access on the Virtual Private Cloud (VPC)
- F. Configure the GKE cluster as a private cluste
- G. Configure Private Google Access on the Virtual Private Cloud (VPC)

**Answer:** B

**Explanation:**

A Cloud NAT gateway can perform NAT for nodes and Pods in a private cluster, which is a type of VPC-native cluster. The Cloud NAT gateway must be configured to apply to at least the following subnet IP address ranges for the subnet that your cluster uses:

- Subnet primary IP address range (used by nodes)
- Subnet secondary IP address range used for Pods in the cluster
- Subnet secondary IP address range used for Services in the cluster

The simplest way to provide NAT for an entire private cluster is to configure a Cloud NAT gateway to apply to all of the cluster's subnet's IP address ranges.

<https://cloud.google.com/nat/docs/overview>

**NEW QUESTION 52**

- (Exam Topic 5)

You are designing a mobile chat application. You want to ensure people cannot spoof chat messages, by providing a message were sent by a specific user. What should you do

- A. Tag messages client side with the originating user identifier and the destination user.
- B. Encrypt the message client side using block-based encryption with a shared key.
- C. Use public key infrastructure (PKI) to encrypt the message client side using the originating user's private key.
- D. Use a trusted certificate authority to enable SSL connectivity between the client application and the server.

**Answer:** C

**NEW QUESTION 54**

- (Exam Topic 5)

You have been asked to select the storage system for the click-data of your company's large portfolio of websites. This data is streamed in from a custom website analytics package at a typical rate of 6,000 clicks per minute, with bursts of up to 8,500 clicks per second. It must be stored for future analysis by your data science and user experience teams. Which storage infrastructure should you choose?

- A. Google Cloud SQL
- B. Google Cloud Bigtable
- C. Google Cloud Storage
- D. Google cloud Datastore

**Answer:** C

**Explanation:**

<https://cloud.google.com/bigquery/docs/loading-data-cloud-storage>

**NEW QUESTION 58**

- (Exam Topic 5)

You have been engaged by your client to lead the migration of their application infrastructure to GCP. One of their current problems is that the on-premises high performance SAN is requiring frequent and expensive upgrades to keep up with the variety of workloads that are identified as follows: 20TB of log archives retained for legal reasons; 500 GB of VM boot/data volumes and templates; 500 GB of image thumbnails; 200 GB of customer session state data that allows customers to restart sessions even if off-line for several days.

Which of the following best reflects your recommendations for a cost-effective storage allocation?

- A. Local SSD for customer session state dat
- B. Lifecycle-managed Cloud Storage for log archives, thumbnails, and VM boot/data volumes.
- C. Memcache backed by Cloud Datastore for the customer session state dat
- D. Lifecycle- managed Cloud Storage for log archives, thumbnails, and VM boot/data volumes.
- E. Memcache backed by Cloud SQL for customer session state dat
- F. Assorted local SSD-backed instances for VM boot/data volume
- G. Cloud Storage for log archives and thumbnails.
- H. Memcache backed by Persistent Disk SSD storage for customer session state dat
- I. Assorted local SSDbacked instances for VM boot/data volume
- J. Cloud Storage for log archives and thumbnails.

**Answer:** D

**Explanation:**

<https://cloud.google.com/compute/docs/disks>

**NEW QUESTION 60**

- (Exam Topic 5)

You are working at an institution that processes medical data. You are migrating several workloads onto Google Cloud. Company policies require all workloads to run on physically separated hardware, and workloads from different clients must also be separated You created a sole-tenant node group and added a node for each client. You need to deploy the workloads on these dedicated hosts. What should you do?

- A. Add the node group name as a network tag when creating Compute Engine instances in order to host each workload on the correct node group.
- B. Add the node name as a network tag when creating Compute Engine instances in order to host each workload on the correct node.
- C. Use node affinity labels based on the node group name when creating Compute Engine instances in order to host each workload on the correct node group
- D. Use node affinity labels based on the node name when creating Compute Engine instances in order to host each workload on the correct node.

**Answer:** C

**Explanation:**

[https://cloud.google.com/compute/docs/nodes/provisioning-sole-tenant-vms#provision\\_a\\_sole-tenant\\_vm](https://cloud.google.com/compute/docs/nodes/provisioning-sole-tenant-vms#provision_a_sole-tenant_vm)

[https://cloud.google.com/compute/docs/nodes/provisioning-sole-tenant-vms#gcloud\\_2](https://cloud.google.com/compute/docs/nodes/provisioning-sole-tenant-vms#gcloud_2)

When you create a VM, you request sole-tenancy by specifying node affinity or anti-affinity, referencing one or more node affinity labels. You specify custom node

affinity labels when you create a node template, and Compute Engine automatically includes some default affinity labels on each node. By specifying affinity when you create a VM, you can schedule VMs together on a specific node or nodes in a node group. By specifying anti-affinity when you create a VM, you can ensure that certain VMs are not scheduled together on the same node or nodes in a node group.

#### NEW QUESTION 65

- (Exam Topic 5)

The database administration team has asked you to help them improve the performance of their new database server running on Google Compute Engine. The database is for importing and normalizing their performance statistics and is built with MySQL running on Debian Linux. They have an n1-standard-8 virtual machine with 80 GB of SSD persistent disk. What should they change to get better performance from this system?

- A. Increase the virtual machine's memory to 64 GB.
- B. Create a new virtual machine running PostgreSQL.
- C. Dynamically resize the SSD persistent disk to 500 GB.
- D. Migrate their performance metrics warehouse to BigQuery.
- E. Modify all of their batch jobs to use bulk inserts into the database.

**Answer:** C

#### NEW QUESTION 68

- (Exam Topic 5)

Your company sends all Google Cloud logs to Cloud Logging. Your security team wants to monitor the logs. You want to ensure that the security team can react quickly if an anomaly such as an unwanted firewall change or server breach is detected. You want to follow Google-recommended practices. What should you do?

- A. Schedule a cron job with Cloud Schedule
- B. The scheduled job queries the logs every minute for the relevant events.
- C. Export logs to BigQuery, and trigger a query in BigQuery to process the log data for the relevant events.
- D. Export logs to a Pub/Sub topic, and trigger Cloud Function with the relevant log events.
- E. Export logs to a Cloud Storage bucket, and trigger Cloud Run with the relevant log events.

**Answer:** C

#### Explanation:

<https://cloud.google.com/blog/products/management-tools/automate-your-response-to-a-cloud-logging-event>

#### NEW QUESTION 71

- (Exam Topic 5)

You need to evaluate your team readiness for a new GCP project. You must perform the evaluation and create a skills gap plan incorporates the business goal of cost optimization. Your team has deployed two GCP projects successfully to date. What should you do?

- A. Allocate budget for team trainin
- B. Set a deadline for the new GCP project.
- C. Allocate budget for team trainin
- D. Create a roadmap for your team to achieve Google Cloud certification based on job role.
- E. Allocate budget to hire skilled external consultant
- F. Set a deadline for the new GCP project.
- G. Allocate budget to hire skilled external consultant
- H. Create a roadmap for your team to achieve Google Cloud certification based on job role.

**Answer:** B

#### Explanation:

[https://services.google.com/fh/files/misc/cloud\\_center\\_of\\_excellence.pdf](https://services.google.com/fh/files/misc/cloud_center_of_excellence.pdf)

#### NEW QUESTION 75

- (Exam Topic 5)

Your company has a stateless web API that performs scientific calculations. The web API runs on a single Google Kubernetes Engine (GKE) cluster. The cluster is currently deployed in us-central1. Your company has expanded to offer your API to customers in Asia. You want to reduce the latency for the users in Asia. What should you do?

- A. Use a global HTTP(s) load balancer with Cloud CDN enabled
- B. Create a second GKE cluster in asia-southeast1, and expose both API's using a Service of type Load Balance
- C. Add the public Ips to the Cloud DNS zone
- D. Increase the memory and CPU allocated to the application in the cluster
- E. Create a second GKE cluster in asia-southeast1, and use kubemci to create a global HTTP(s) load balancer

**Answer:** D

#### Explanation:

[https://cloud.google.com/kubernetes-engine/docs/concepts/multi-cluster-ingress#how\\_works](https://cloud.google.com/kubernetes-engine/docs/concepts/multi-cluster-ingress#how_works)

<https://github.com/GoogleCloudPlatform/k8s-multicloud-ingress> <https://cloud.google.com/blog/products/gcp/how-to-deploy-geographically-distributed-services-on-kubernetes-e>

#### NEW QUESTION 78

- (Exam Topic 5)

You need to reduce the number of unplanned rollbacks of erroneous production deployments in your company's web hosting platform. Improvement to the QA/Test processes accomplished an 80% reduction. Which additional two approaches can you take to further reduce the rollbacks? Choose 2 answers

- A. Introduce a green-blue deployment model.

- B. Replace the QA environment with canary releases.
- C. Fragment the monolithic platform into microservices.
- D. Reduce the platform's dependency on relational database systems.
- E. Replace the platform's relational database systems with a NoSQL database.

**Answer:** AC

#### NEW QUESTION 83

- (Exam Topic 5)

A news feed web service has the following code running on Google App Engine. During peak load, users report that they can see news articles they already viewed. What is the most likely cause of this problem?

```
import news
from flask import Flask, redirect, request
from flask.ext.api import status
from google.appengine.api import users

app = Flask(__name__)
sessions = {}

@app.route("/")
def homepage():
    user = users.get_current_user()
    if not user:
        return "Invalid login",
        status.HTTP_401_UNAUTHORIZED

    if user not in sessions:
        sessions[user] = {"viewed": []}

    news_articles = news.get_new_news (user, sessions [user]
["viewed"])
    sessions [user] ["viewed"] += [n["id"] for n
in news_articles]

    return news.render(news_articles)

if __name__ == "__main__":
    app.run()
```

- A. The session variable is local to just a single instance.
- B. The session variable is being overwritten in Cloud Datastore.
- C. The URL of the API needs to be modified to prevent caching.
- D. The HTTP Expires header needs to be set to -1 to stop caching.

**Answer:** A

#### Explanation:

<https://stackoverflow.com/questions/3164280/google-app-engine-cache-list-in-session-variable?rq=1>

#### NEW QUESTION 87

- (Exam Topic 5)

Your organization has decided to restrict the use of external IP addresses on instances to only approved instances. You want to enforce this requirement across all of your Virtual Private Clouds (VPCs). What should you do?

- A. Remove the default route on all VPC
- B. Move all approved instances into a new subnet that has a default route to an internet gateway.
- C. Create a new VPC in custom mode
- D. Create a new subnet for the approved instances, and set a default route to the internet gateway on this new subnet.
- E. Implement a Cloud NAT solution to remove the need for external IP addresses entirely.
- F. Set an Organization Policy with a constraint on constraints/compute.vmExternalIpAccess
- G. List the approved instances in the allowedValues list.

**Answer:** D

#### Explanation:

Reference: <https://cloud.google.com/compute/docs/ip-addresses/reserve-static-external-ip-address> <https://cloud.google.com/compute/docs/ip-addresses/reserve-static-external-ip-address#disableexternalip>

you might want to restrict external IP address so that only specific VM instances can use them. This option can help to prevent data exfiltration or maintain network isolation. Using an Organization Policy, you can restrict external IP addresses to specific VM instances with constraints to control use of external IP addresses for your VM instances within an organization or a project.

#### NEW QUESTION 92

- (Exam Topic 5)

Your company has just recently activated Cloud Identity to manage users. The Google Cloud Organization has been configured as well. The security team needs



to secure protects that will be part of the Organization. They want to prohibit IAM users outside the domain from gaining permissions from now on. What should they do?

- A. Configure an organization policy to restrict identities by domain
- B. Configure an organization policy to block creation of service accounts
- C. Configure Cloud Scheduler to trigger a Cloud Function every hour that removes all users that don't belong to the Cloud identity domain from all projects.

**Answer:** A

#### NEW QUESTION 97

- (Exam Topic 5)

A production database virtual machine on Google Compute Engine has an ext4-formatted persistent disk for data files The database is about to run out of storage space How can you remediate the problem with the least amount of downtime?

- A. In the Cloud Platform Console, increase the size of the persistent disk and use the `resize2fs` command in Linux.
- B. Shut down the virtual machine, use the Cloud Platform Console to increase the persistent disk size, then restart the virtual machine.
- C. In the Cloud Platform Console, increase the size of the persistent disk and verify the new space is ready to use with the `fdisk` command in Linux.
- D. In the Cloud Platform Console, create a new persistent disk attached to the virtual machine, format and mount it, and configure the database service to move the files to the new disk.
- E. In the Cloud Platform Console, create a snapshot of the persistent disk, restore the snapshot to a new larger disk, unmount the old disk, mount the new disk, and restart the database service.

**Answer:** A

#### Explanation:

On Linux instances, connect to your instance and manually resize your partitions and file systems to use the additional disk space that you added.

Extend the file system on the disk or the partition to use the added space. If you grew a partition on your disk, specify the partition. If your disk does not have a partition table, specify only the disk ID.

```
sudo resize2fs /dev/[DISK_ID][PARTITION_NUMBER]
```

where [DISK\_ID] is the device name and [PARTITION\_ID] is the partition number for the device where you are resizing the file system.

References: <https://cloud.google.com/compute/docs/disks/add-persistent-disk>

#### NEW QUESTION 100

- (Exam Topic 5)

You created a pipeline that can deploy your source code changes to your infrastructure in instance groups for self healing.

One of the changes negatively affects your key performance indicator. You are not sure how to fix it and investigation could take up to a week.

What should you do

- A. Log in to a server, and iterate a fix locally
- B. Change the instance group template to the previous one, and delete all instances.
- C. Revert the source code change and rerun the deployment pipeline
- D. Log into the servers with the bad code change, and swap in the previous code

**Answer:** C

#### NEW QUESTION 102

- (Exam Topic 5)

You need to design a solution for global load balancing based on the URL path being requested. You need to ensure operations reliability and end-to-end in-transit encryption based on Google best practices.

What should you do?

- A. Create a cross-region load balancer with URL Maps.
- B. Create an HTTPS load balancer with URL maps.
- C. Create appropriate instance groups and instance
- D. Configure SSL proxy load balancing.
- E. Create a global forwarding rule
- F. Configure SSL proxy balancing.

**Answer:** B

#### Explanation:

Reference <https://cloud.google.com/load-balancing/docs/https/url-map>

#### NEW QUESTION 107

- (Exam Topic 5)

You are creating a solution to remove backup files older than 90 days from your backup Cloud Storage bucket. You want to optimize ongoing Cloud Storage spend. What should you do?

- A. Write a lifecycle management rule in XML and push it to the bucket with `gsutil`.
- B. Write a lifecycle management rule in JSON and push it to the bucket with `gsutil`.
- C. Schedule a cron script using `gsutil ls -lr gs://backups/**` to find and remove items older than 90 days.
- D. Schedule a cron script using `gsutil ls -l gs://backups/**` to find and remove items older than 90 days and schedule it with cron.

**Answer:** B

#### Explanation:

<https://cloud.google.com/storage/docs/gsutil/commands/lifecycle>



#### NEW QUESTION 108

- (Exam Topic 5)

You want to automate the creation of a managed instance group and a startup script to install the OS package dependencies. You want to minimize the startup time for VMs in the instance group.

What should you do?

- A. Use Terraform to create the managed instance group and a startup script to install the OS package dependencies.
- B. Create a custom VM image with all OS package dependencies.
- C. Use Deployment Manager to create the managed instance group with the VM image.
- D. Use Puppet to create the managed instance group and install the OS package dependencies.
- E. Use Deployment Manager to create the managed instance group and Ansible to install the OS package dependencies.

**Answer:** B

#### Explanation:

"Custom images are more deterministic and start more quickly than instances with startup scripts. However, startup scripts are more flexible and let you update the apps and settings in your instances more easily." [https://cloud.google.com/compute/docs/instance-templates/create-instance-templates#using\\_custom\\_or\\_public\\_i](https://cloud.google.com/compute/docs/instance-templates/create-instance-templates#using_custom_or_public_i)

#### NEW QUESTION 109

- (Exam Topic 5)

The application reliability team at your company has added a debug feature to their backend service to send all server events to Google Cloud Storage for eventual analysis. The event records are at least 50 KB and at most 15 MB and are expected to peak at 3,000 events per second. You want to minimize data loss. Which process should you implement?

- A. • Append metadata to file body. • Compress individual files. • Name files with serverName-Timestamp. • Create a new bucket if bucket is older than 1 hour and save individual files to the new bucket.
- B. Otherwise, save files to existing bucket.
- C. • Batch every 10,000 events with a single manifest file for metadata. • Compress event files and manifest file into a single archive file. • Name files using serverName-EventSequence. • Create a new bucket if bucket is older than 1 day and save the single archive file to the new bucket.
- D. Otherwise, save the single archive file to existing bucket.
- E. • Compress individual files. • Name files with serverName-EventSequence. • Save files to one bucket. • Set custom metadata headers for each object after saving.
- F. • Append metadata to file body. • Compress individual files. • Name files with a random prefix pattern. • Save files to one bucket.

**Answer:** D

#### Explanation:

In order to maintain a high request rate, avoid using sequential names. Using completely random object names will give you the best load distribution. Randomness after a common prefix is effective under the prefix <https://cloud.google.com/storage/docs/request-rate>

#### NEW QUESTION 110

- (Exam Topic 5)

You are working at a sports association whose members range in age from 8 to 30. The association collects a large amount of health data, such as sustained injuries. You are storing this data in BigQuery. Current legislation requires you to delete such information upon request of the subject. You want to design a solution that can accommodate such a request. What should you do?

- A. Use a unique identifier for each individual.
- B. Upon a deletion request, delete all rows from BigQuery with this identifier.
- C. When ingesting new data in BigQuery, run the data through the Data Loss Prevention (DLP) API to identify any personal information.
- D. As part of the DLP scan, save the result to Data Catalog.
- E. Upon a deletion request, query Data Catalog to find the column with personal information.
- F. Create a BigQuery view over the table that contains all data.
- G. Upon a deletion request, exclude the rows that affect the subject's data from this view.
- H. Use this view instead of the source table for all analysis tasks.
- I. Use a unique identifier for each individual.
- J. Upon a deletion request, overwrite the column with the unique identifier with a salted SHA256 of its value.

**Answer:** B

#### Explanation:

Current legislation requires you to delete "SUCH" information upon request of the subject. " So from that point of view the question is not to delete the entire user records but specific data related to personal health data. With DLP you can use InfoTypes and InfoType detectors to specifically scan for those entries and how to act upon them (link <https://cloud.google.com/dlp/docs/concepts-infotypes>)  
<https://cloud.google.com/dlp#section-6>

#### NEW QUESTION 113

- (Exam Topic 5)

Your company has a support ticketing solution that uses App Engine Standard. The project that contains the App Engine application already has a Virtual Private Cloud(VPC) network fully connected to the company's on-premises environment through a Cloud VPN tunnel. You want to enable App Engine application to communicate with a database that is running in the company's on-premises environment. What should you do?

- A. Configure private services access.
- B. Configure private Google access for on-premises hosts only.
- C. Configure serverless VPC access.
- D. Configure private Google access.

**Answer:** C

#### Explanation:

<https://cloud.google.com/appengine/docs/standard/python3/connecting-vpc> [https://cloud.google.com/appengine/docs/flexible/python/using-third-party-databases#on\\_premises](https://cloud.google.com/appengine/docs/flexible/python/using-third-party-databases#on_premises)

#### NEW QUESTION 115

- (Exam Topic 5)

You are developing an application using different microservices that should remain internal to the cluster. You want to be able to configure each microservice with a specific number of replicas. You also want to be able to address a specific microservice from any other microservice in a uniform way, regardless of the number of replicas the microservice scales to. You need to implement this solution on Google Kubernetes Engine. What should you do?

- A. Deploy each microservice as a Deployment
- B. Expose the Deployment in the cluster using a Service, and use the Service DNS name to address it from other microservices within the cluster.
- C. Deploy each microservice as a Deployment
- D. Expose the Deployment in the cluster using an Ingress, and use the Ingress IP address to address the Deployment from other microservices within the cluster.
- E. Deploy each microservice as a Pod
- F. Expose the Pod in the cluster using a Service, and use the Service DNS name to address the microservice from other microservices within the cluster.
- G. Deploy each microservice as a Pod
- H. Expose the Pod in the cluster using an Ingress, and use the Ingress IP address name to address the Pod from other microservices within the cluster.

**Answer:** A

#### Explanation:

<https://kubernetes.io/docs/concepts/services-networking/ingress/>

#### NEW QUESTION 117

- (Exam Topic 5)

Your company has a Kubernetes application that pulls messages from Pub/Sub and stores them in Firestore. Because the application is simple, it was deployed as a single pod. The infrastructure team has analyzed Pub/Sub metrics and discovered that the application cannot process the messages in real time. Most of them wait for minutes before being processed. You need to scale the elaboration process that is I/O-intensive. What should you do?

- A. Configure a Kubernetes autoscaling based on the subscription/push\_request metric.
- B. Use the `--enable-autoscaling` flag when you create the Kubernetes cluster
- C. Configure a Kubernetes autoscaling based on the subscription/num\_undelivered message metric.
- D. Use `kubectl autoscale deployment APP_NAME --max 6 --min 2 --cpu-percent 50` to configure Kubernetes autoscaling deployment

**Answer:** A

#### Explanation:

[https://cloud.google.com/kubernetes-engine/docs/concepts/custom-and-external-metrics#external\\_metrics](https://cloud.google.com/kubernetes-engine/docs/concepts/custom-and-external-metrics#external_metrics)

#### NEW QUESTION 121

- (Exam Topic 5)

Your customer wants to do resilience testing of their authentication layer. This consists of a regional managed instance group serving a public REST API that reads from and writes to a Cloud SQL instance. What should you do?

- A. Engage with a security company to run web scrapes that look your users' authentication data on malicious websites and notify you if any is found.
- B. Deploy intrusion detection software to your virtual machines to detect and log unauthorized access.
- C. Schedule a disaster simulation exercise during which you can shut off all VMs in a zone to see how your application behaves.
- D. Configure a read replica for your Cloud SQL instance in a different zone than the master, and then manually trigger a failover while monitoring KPIs for our REST API.

**Answer:** C

#### NEW QUESTION 125

- (Exam Topic 5)

Your customer is receiving reports that their recently updated Google App Engine application is taking approximately 30 seconds to load for some of their users. This behavior was not reported before the update. What strategy should you take?

- A. Work with your ISP to diagnose the problem.
- B. Open a support ticket to ask for network capture and flow data to diagnose the problem, then roll back your application.
- C. Roll back to an earlier known good release initially, then use Stackdriver Trace and logging to diagnose the problem in a development/test/staging environment.
- D. Roll back to an earlier known good release, then push the release again at a quieter period to investigate. Then use Stackdriver Trace and logging to diagnose the problem.

**Answer:** C

#### Explanation:

Stackdriver Logging allows you to store, search, analyze, monitor, and alert on log data and events from Google Cloud Platform and Amazon Web Services (AWS). Our API also allows ingestion of any custom log data from any source. Stackdriver Logging is a fully managed service that performs at scale and can ingest application and system log data from thousands of VMs. Even better, you can analyze all that log data in real time.

References: <https://cloud.google.com/logging/>

#### NEW QUESTION 129

- (Exam Topic 5)

You need to develop procedures to verify resilience of disaster recovery for remote recovery using GCP. Your production environment is hosted on-premises. You need to establish a secure, redundant connection between your on-premises network and the GCP network. What should you do?

- A. Verify that Dedicated Interconnect can replicate files to GC
- B. Verify that direct peering can establish a secure connection between your networks if Dedicated Interconnect fails.
- C. Verify that Dedicated Interconnect can replicate files to GC
- D. Verify that Cloud VPN can establish a secure connection between your networks if Dedicated Interconnect fails.
- E. Verify that the Transfer Appliance can replicate files to GC
- F. Verify that direct peering can establish a secure connection between your networks if the Transfer Appliance fails.
- G. Verify that the Transfer Appliance can replicate files to GC
- H. Verify that Cloud VPN can establish a secure connection between your networks if the Transfer Appliance fails.

**Answer:** B

**Explanation:**

<https://cloud.google.com/interconnect/docs/how-to/direct-peering>

**NEW QUESTION 133**

- (Exam Topic 5)

You are implementing a single Cloud SQL MySQL second-generation database that contains business-critical transaction data. You want to ensure that the minimum amount of data is lost in case of catastrophic failure. Which two features should you implement? (Choose two.)

- A. Sharding
- B. Read replicas
- C. Binary logging
- D. Automated backups
- E. Semisynchronous replication

**Answer:** CD

**Explanation:**

Backups help you restore lost data to your Cloud SQL instance. Additionally, if an instance is having a problem, you can restore it to a previous state by using the backup to overwrite it. Enable automated backups for any instance that contains necessary data. Backups protect your data from loss or damage.

Enabling automated backups, along with binary logging, is also required for some operations, such as clone and replica creation.

Reference: <https://cloud.google.com/sql/docs/mysql/backup-recovery/backups>

**NEW QUESTION 134**

- (Exam Topic 5)

Your company captures all web traffic data in Google Analytics 260 and stores it in BigQuery. Each country has its own dataset. Each dataset has multiple tables. You want analysts from each country to be able to see and query only the data for their respective countries. How should you configure the access rights?

- A. Create a group per countr
- B. Add analysts to their respective country-group
- C. Create a single group 'all\_analysts', and add all country-groups as member
- D. Grant the 'all-analysis' group the IAM role of BigQuery jobUse
- E. Share the appropriate dataset with view access with each respective analyst country-group.
- F. Create a group per countr
- G. Add analysts to their respective country-group
- H. Create a single group 'all\_analysts', and add all country-groups as member
- I. Grant the 'all-analysis' group the IAM role of BigQuery jobUse
- J. Share the appropriate tables with view access with each respective analystcountrygroup.
- K. Create a group per countr
- L. Add analysts to their respective country-group
- M. Create a single group 'all\_analysts', and add all country-groups as member
- N. Grant the 'all-analysis' group the IAM role of BigQuery dataViewe
- O. Share the appropriate dataset with view access with each respective analyst country-group.
- P. Create a group per countr
- Q. Add analysts to their respective country-group
- R. Create a single group 'all\_analysts', and add all country-groups as member
- S. Grant the 'all-analysis' group the IAM role of BigQuery dataViewe
- T. Share the appropriate table with view access with each respective analyst countrygroup.

**Answer:** A

**NEW QUESTION 137**

- (Exam Topic 5)

You are deploying an application on App Engine that needs to integrate with an on-premises database. For security purposes, your on-premises database must not be accessible through the public Internet. What should you do?

- A. Deploy your application on App Engine standard environment and use App Engine firewall rules to limit access to the open on-premises database.
- B. Deploy your application on App Engine standard environment and use Cloud VPN to limit access to the onpremises database.
- C. Deploy your application on App Engine flexible environment and use App Engine firewall rules to limit access to the on-premises database.
- D. Deploy your application on App Engine flexible environment and use Cloud VPN to limit access to the on-premises database.

**Answer:** D

**Explanation:**

<https://cloud.google.com/appengine/docs/flexible/python/using-third-party-databases>

**NEW QUESTION 142**

- (Exam Topic 5)

You are configuring the cloud network architecture for a newly created project in Google Cloud that will host applications in Compute Engine. Virtual machine instances will be created in two different subnets (sub-a and sub-b) within a single region.

- Instances in sub-a will have public IP addresses
- Instances in sub-b will have only private IP addresses

To download updated packages, instances must connect to a public repository outside the boundaries of Google Cloud. You need to allow sub-b to access the external repository. What should you do?

- A. Enable Private Google Access on sub-b
- B. Configure Cloud NAT and select sub-b in the NAT mapping section
- C. Configure a bastion host instance in sub-a to connect to instances in sub-b
- D. Enable Identity Aware Proxy for TCP forwarding for instances in sub-b

**Answer:** B

#### NEW QUESTION 147

- (Exam Topic 5)

One of your primary business objectives is being able to trust the data stored in your application. You want to log all changes to the application data. How can you design your logging system to verify authenticity of your logs?

- A. Write the log concurrently in the cloud and on premises.
- B. Use a SQL database and limit who can modify the log table.
- C. Digitally sign each timestamp and log entry and store the signature.
- D. Create a JSON dump of each log entry and store it in Google Cloud Storage.

**Answer:** C

#### Explanation:

<https://cloud.google.com/storage/docs/access-logs>

References: <https://cloud.google.com/logging/docs/reference/tools/gcloud-logging>

#### NEW QUESTION 150

- (Exam Topic 5)

You are helping the QA team to roll out a new load-testing tool to test the scalability of your primary cloud services that run on Google Compute Engine with Cloud Bigtable. Which three requirements should they include? Choose 3 answers.

- A. Ensure that the load tests validate the performance of Cloud Bigtable.
- B. Create a separate Google Cloud project to use for the load-testing environment.
- C. Schedule the load-testing tool to regularly run against the production environment.
- D. Ensure all third-party systems your services use are capable of handling high load.
- E. Instrument the production services to record every transaction for replay by the load-testing tool.
- F. Instrument the load-testing tool and the target services with detailed logging and metrics collection.

**Answer:** ABF

#### NEW QUESTION 153

- (Exam Topic 5)

Your company provides a recommendation engine for retail customers. You are providing retail customers with an API where they can submit a user ID and the API returns a list of recommendations for that user. You are responsible for the API lifecycle and want to ensure stability for your customers in case the API makes backward-incompatible changes. You want to follow Google-recommended practices. What should you do?

- A. Create a distribution list of all customers to inform them of an upcoming backward-incompatible change at least one month before replacing the old API with the new API.
- B. Create an automated process to generate API documentation, and update the public API documentation as part of the CI/CD process when deploying an update to the API.
- C. Use a versioning strategy for the APIs that increases the version number on every backward-incompatible change.
- D. Use a versioning strategy for the APIs that adds the suffix "DEPRECATED" to the current API version number on every backward-incompatible change.
- E. Use the current version number for the new API.

**Answer:** C

#### Explanation:

<https://cloud.google.com/apis/design/versioning>

All Google API interfaces must provide a major version number, which is encoded at the end of the protobuf package, and included as the first part of the URI path for REST APIs. If an API introduces a breaking change, such as removing or renaming a field, it must increment its API version number to ensure that existing user code does not suddenly break.

#### NEW QUESTION 158

- (Exam Topic 5)

You need to deploy an application on Google Cloud that must run on a Debian Linux environment. The application requires extensive configuration in order to operate correctly. You want to ensure that you can install Debian distribution updates with minimal manual intervention whenever they become available. What should you do?

- A. Create a Compute Engine instance template using the most recent Debian image.
- B. Create an instance from this template, and install and configure the application as part of the startup script.
- C. Repeat this process whenever a new Google-managed Debian image becomes available.
- D. Create a Debian-based Compute Engine instance, install and configure the application, and use OS patch management to install available updates.
- E. Create an instance with the latest available Debian image.
- F. Connect to the instance via SSH, and install and configure the application on the instance.
- G. Repeat this process whenever a new Google-managed Debian image becomes available.



- H. Create a Docker container with Debian as the base image
- I. Install and configure the application as part of the Docker image creation process
- J. Host the container on Google Kubernetes Engine and restart the container whenever a new update is available.

**Answer:** B

**Explanation:**

Reference: <https://cloud.google.com/compute/docs/os-patch-management>

**NEW QUESTION 161**

- (Exam Topic 7)

For this question, refer to the TerramEarth case study. You are asked to design a new architecture for the ingestion of the data of the 200,000 vehicles that are connected to a cellular network. You want to follow Google-recommended practices. Considering the technical requirements, which components should you use for the ingestion of the data?

- A. Google Kubernetes Engine with an SSL Ingress
- B. Cloud IoT Core with public/private key pairs
- C. Compute Engine with project-wide SSH keys
- D. Compute Engine with specific SSH keys

**Answer:** A

**Explanation:**

<https://cloud.google.com/solutions/iot-overview> <https://cloud.google.com/iot/quotas>

**NEW QUESTION 166**

- (Exam Topic 7)

For this question, refer to the TerramEarth case study. A new architecture that writes all incoming data to BigQuery has been introduced. You notice that the data is dirty, and want to ensure data quality on an automated daily basis while managing cost. What should you do?

- A. Set up a streaming Cloud Dataflow job, receiving data by the ingestion process
- B. Clean the data in a Cloud Dataflow pipeline.
- C. Create a Cloud Function that reads data from BigQuery and cleans it
- D. Trigger it
- E. Trigger the Cloud Function from a Compute Engine instance.
- F. Create a SQL statement on the data in BigQuery, and save it as a view
- G. Run the view daily, and save the result to a new table.
- H. Use Cloud Dataprep and configure the BigQuery tables as the source
- I. Schedule a daily job to clean the data.

**Answer:** A

**NEW QUESTION 167**

- (Exam Topic 8)

For this question, refer to the Mountkirk Games case study. You need to analyze and define the technical architecture for the database workloads for your company, Mountkirk Games. Considering the business and technical requirements, what should you do?

- A. Use Cloud SQL for time series data, and use Cloud Bigtable for historical data queries.
- B. Use Cloud SQL to replace MySQL, and use Cloud Spanner for historical data queries.
- C. Use Cloud Bigtable to replace MySQL, and use BigQuery for historical data queries.
- D. Use Cloud Bigtable for time series data, use Cloud Spanner for transactional data, and use BigQuery for historical data queries.

**Answer:** D

**Explanation:**

<https://cloud.google.com/bigtable/docs/schema-design-time-series>

**NEW QUESTION 172**

- (Exam Topic 8)

For this question, refer to the Mountkirk Games case study. Mountkirk Games wants to migrate from their current analytics and statistics reporting model to one that meets their technical requirements on Google Cloud Platform. Which two steps should be part of their migration plan? (Choose two.)

- A. Evaluate the impact of migrating their current batch ETL code to Cloud Dataflow.
- B. Write a schema migration plan to denormalize data for better performance in BigQuery.
- C. Draw an architecture diagram that shows how to move from a single MySQL database to a MySQL cluster.
- D. Load 10 TB of analytics data from a previous game into a Cloud SQL instance, and run test queries against the full dataset to confirm that they complete successfully.
- E. Integrate Cloud Armor to defend against possible SQL injection attacks in analytics files uploaded to Cloud Storage.

**Answer:** AB

**Explanation:**

[https://cloud.google.com/bigquery/docs/loading-data#loading\\_denormalized\\_nested\\_and\\_repeated\\_data](https://cloud.google.com/bigquery/docs/loading-data#loading_denormalized_nested_and_repeated_data)

**NEW QUESTION 173**



- (Exam Topic 8)

You need to implement a network ingress for a new game that meets the defined business and technical requirements. Mountkirk Games wants each regional game instance to be located in multiple Google Cloud regions. What should you do?

- A. Configure a global load balancer connected to a managed instance group running Compute Engine instances.
- B. Configure kubemci with a global load balancer and Google Kubernetes Engine.
- C. Configure a global load balancer with Google Kubernetes Engine.
- D. Configure Ingress for Anthos with a global load balancer and Google Kubernetes Engine.

**Answer:** A

#### NEW QUESTION 174

- (Exam Topic 8)

Your development team has created a mobile game app. You want to test the new mobile app on Android and iOS devices with a variety of configurations. You need to ensure that testing is efficient and cost-effective.

What should you do?

- A. Upload your mobile app to the Firebase Test Lab, and test the mobile app on Android and iOS devices.
- B. Create Android and iOS VMs on Google Cloud, install the mobile app on the VMs, and test the mobile app.
- C. Create Android and iOS containers on Google Kubernetes Engine (GKE), install the mobile app on the containers, and test the mobile app.
- D. Upload your mobile app with different configurations to Firebase Hosting and test each configuration.

**Answer:** C

#### NEW QUESTION 177

- (Exam Topic 8)

Your development teams release new versions of games running on Google Kubernetes Engine (GKE) daily. You want to create service level indicators (SLIs) to evaluate the quality of the new versions from the user's perspective. What should you do?

- A. Create CPU Utilization and Request Latency as service level indicators.
- B. Create GKE CPU Utilization and Memory Utilization as service level indicators.
- C. Create Request Latency and Error Rate as service level indicators.
- D. Create Server Uptime and Error Rate as service level indicators.

**Answer:** C

#### NEW QUESTION 180

- (Exam Topic 8)

You are implementing Firestore for Mountkirk Games. Mountkirk Games wants to give a new game programmatic access to a legacy game's Firestore database. Access should be as restricted as possible. What should you do?

- A. Create a service account (SA) in the legacy game's Google Cloud project, add this SA in the new game's IAM page, and then give it the Firebase Admin role in both projects
- B. Create a service account (SA) in the legacy game's Google Cloud project, add a second SA in the new game's IAM page, and then give the Organization Admin role to both SAs
- C. Create a service account (SA) in the legacy game's Google Cloud project, give it the Firebase Admin role, and then migrate the new game to the legacy game's project.
- D. Create a service account (SA) in the legacy game's Google Cloud project, give the SA the Organization Admin rule and then give it the Firebase Admin role in both projects

**Answer:** B

#### NEW QUESTION 183

- (Exam Topic 8)

Mountkirk Games wants you to secure the connectivity from the new gaming application platform to Google Cloud. You want to streamline the process and follow Google-recommended practices. What should you do?

- A. Configure Workload Identity and service accounts to be used by the application platform.
- B. Use Kubernetes Secrets, which are obfuscated by default
- C. Configure these Secrets to be used by the application platform.
- D. Configure Kubernetes Secrets to store the secret, enable Application-Layer Secrets Encryption, and use Cloud Key Management Service (Cloud KMS) to manage the encryption key
- E. Configure these Secrets to be used by the application platform.
- F. Configure HashiCorp Vault on Compute Engine, and use customer managed encryption keys and Cloud Key Management Service (Cloud KMS) to manage the encryption key
- G. Configure these Secrets to be used by the application platform.

**Answer:** A

#### NEW QUESTION 185

- (Exam Topic 9)

For this question, refer to the Helicopter Racing League (HRL) case study. The HRL development team releases a new version of their predictive capability application every Tuesday evening at 3 a.m. UTC to a repository. The security team at HRL has developed an in-house penetration test Cloud Function called Airwolf.

The security team wants to run Airwolf against the predictive capability application as soon as it is released every Tuesday. You need to set up Airwolf to run at the recurring weekly cadence. What should you do?

- A. Set up Cloud Tasks and a Cloud Storage bucket that triggers a Cloud Function.

- B. Set up a Cloud Logging sink and a Cloud Storage bucket that triggers a Cloud Function.
- C. Configure the deployment job to notify a Pub/Sub queue that triggers a Cloud Function.
- D. Set up Identity and Access Management (IAM) and Confidential Computing to trigger a Cloud Function.

**Answer:** A

#### NEW QUESTION 190

- (Exam Topic 9)

For this question, refer to the Helicopter Racing League (HRL) case study. A recent finance audit of cloud infrastructure noted an exceptionally high number of Compute Engine instances are allocated to do video encoding and transcoding. You suspect that these Virtual Machines are zombie machines that were not deleted after their workloads completed. You need to quickly get a list of which VM instances are idle. What should you do?

- A. Log into each Compute Engine instance and collect disk, CPU, memory, and network usage statistics for analysis.
- B. Use the `gcloud compute instances list` to list the virtual machine instances that have the `idle: true` label set.
- C. Use the `gcloud recommender` command to list the idle virtual machine instances.
- D. From the Google Console, identify which Compute Engine instances in the managed instance groups are no longer responding to health check probes.

**Answer:** C

#### Explanation:

Reference: <https://cloud.google.com/compute/docs/instances/viewing-and-applying-idle-vm-recommendations>

#### NEW QUESTION 192

- (Exam Topic 9)

For this question, refer to the Helicopter Racing League (HRL) case study. Your team is in charge of creating a payment card data vault for card numbers used to bill tens of thousands of viewers, merchandise consumers, and season ticket holders. You need to implement a custom card tokenization service that meets the following requirements:

- It must provide low latency at minimal cost.
- It must be able to identify duplicate credit cards and must not store plaintext card numbers.
- It should support annual key rotation.

Which storage approach should you adopt for your tokenization service?

- A. Store the card data in Secret Manager after running a query to identify duplicates.
- B. Encrypt the card data with a deterministic algorithm stored in Firestore using Datastore mode.
- C. Encrypt the card data with a deterministic algorithm and shard it across multiple Memorystore instances.
- D. Use column-level encryption to store the data in Cloud SQL.

**Answer:** B

#### NEW QUESTION 196

- (Exam Topic 10)

For this question, refer to the EHR Healthcare case study. In the past, configuration errors put public IP addresses on backend servers that should not have been accessible from the Internet. You need to ensure that no one can put external IP addresses on backend Compute Engine instances and that external IP addresses can only be configured on frontend Compute Engine instances. What should you do?

- A. Create an Organizational Policy with a constraint to allow external IP addresses only on the frontend Compute Engine instances.
- B. Revoke the `compute.networkAdmin` role from all users in the project with front end instances.
- C. Create an Identity and Access Management (IAM) policy that maps the IT staff to the `compute.networkAdmin` role for the organization.
- D. Create a custom Identity and Access Management (IAM) role named `GCE_FRONTEND` with the `compute.addresses.create` permission.

**Answer:** A

#### Explanation:

<https://cloud.google.com/compute/docs/ip-addresses/reserve-static-external-ip-address#disableexternalip>

#### NEW QUESTION 197

- (Exam Topic 10)

For this question, refer to the EHR Healthcare case study. EHR has single Dedicated Interconnect connection between their primary data center and Googles network. This connection satisfies EHR's network and security policies:

- On-premises servers without public IP addresses need to connect to cloud resources without public IP addresses
- Traffic flows from production network mgmt. servers to Compute Engine virtual machines should never traverse the public internet.

You need to upgrade the EHR connection to comply with their requirements. The new connection design must support business critical needs and meet the same network and security policy requirements. What should you do?

- A. Add a new Dedicated Interconnect connection
- B. Upgrade the bandwidth on the Dedicated Interconnect connection to 100 G
- C. Add three new Cloud VPN connections
- D. Add a new Carrier Peering connection

**Answer:** A

#### Explanation:

The case does not call out the throughput being an issue. However, to achieve 99.99%, you need to have 4 connections as per Google recommendations. However, in the options only A has the option to add an additional Interconnect connection.

<https://cloud.google.com/network-connectivity/docs/interconnect/concepts/dedicated-overview#availability>

#### NEW QUESTION 199

- (Exam Topic 10)

You need to upgrade the EHR connection to comply with their requirements. The new connection design must support business-critical needs and meet the same network and security policy requirements. What should you do?

- A. Add a new Dedicated Interconnect connection.
- B. Upgrade the bandwidth on the Dedicated Interconnect connection to 100 G.
- C. Add three new Cloud VPN connections.
- D. Add a new Carrier Peering connection.

**Answer:** D

#### NEW QUESTION 202

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