



**Google**

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

Google Certified Professional - Cloud Architect (GCP)

### NEW QUESTION 1

- (Topic 1)

For this question, refer to the Mountkirk Games case study

Mountkirk Games needs to create a repeatable and configurable mechanism for deploying isolated application environments. Developers and testers can access each other's environments and resources, but they cannot access staging or production resources. The staging environment needs access to some services from production.

What should you do to isolate development environments from staging and production?

- A. Create a project for development and test and another for staging and production.
- B. Create a network for development and test and another for staging and production.
- C. Create one subnetwork for development and another for staging and production.
- D. Create one project for development, a second for staging and a third for production.

**Answer: D**

### NEW QUESTION 2

- (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

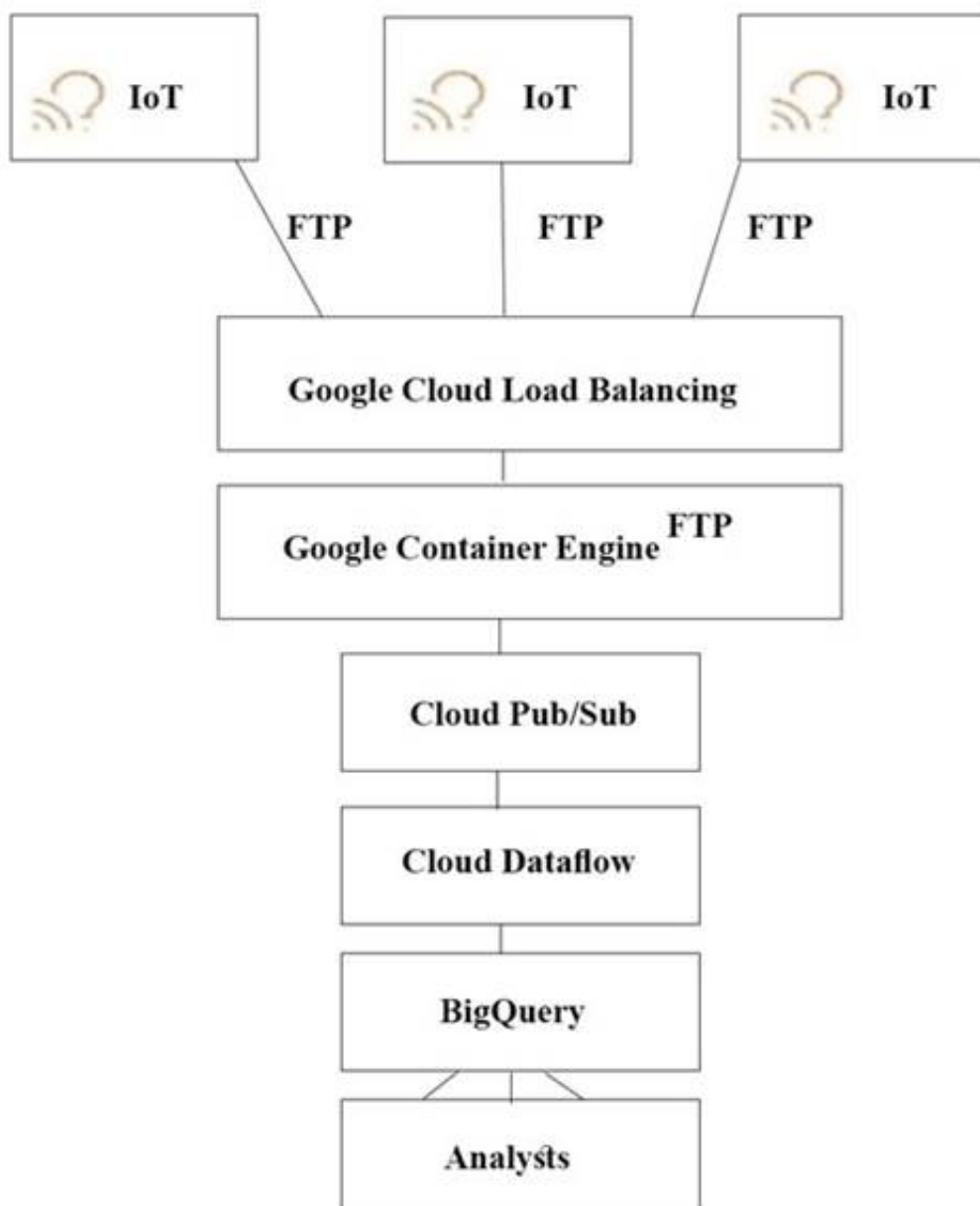
- (Topic 2)

For this question, refer to the TerramEarth case study.

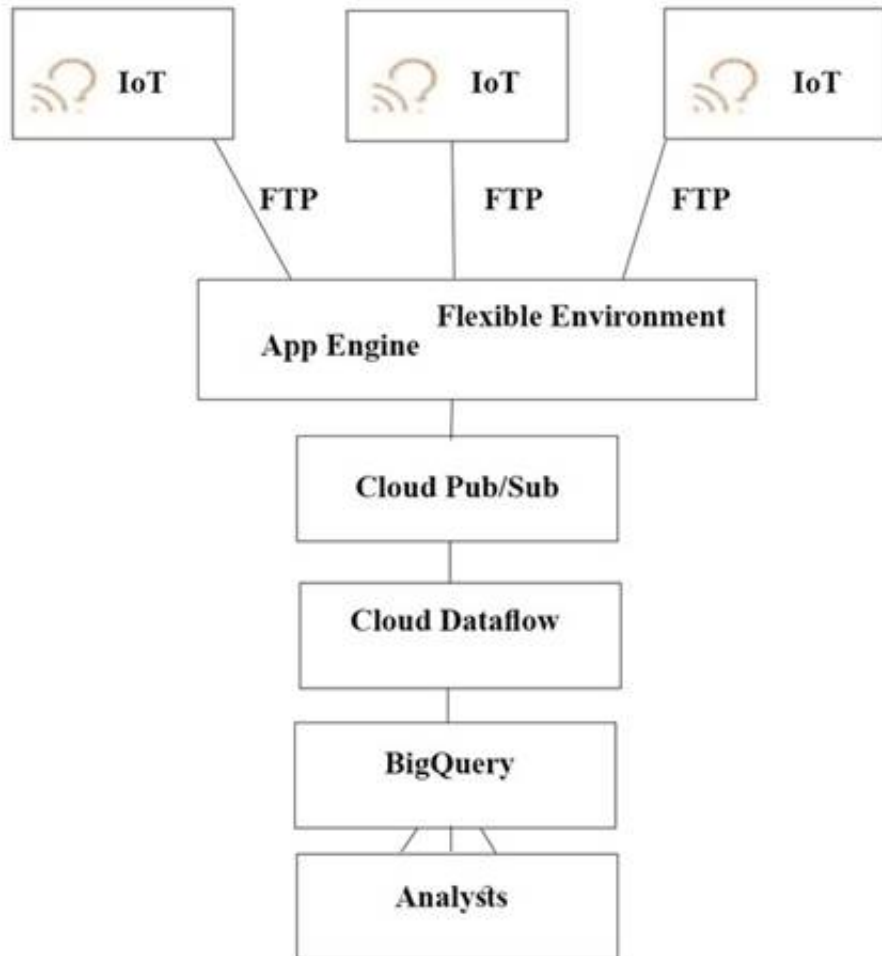
TerramEarth's CTO wants to use the raw data from connected vehicles to help identify approximately when a vehicle in the development team to focus their failure.

You want to allow analysts to centrally query the vehicle data. Which architecture should you recommend?

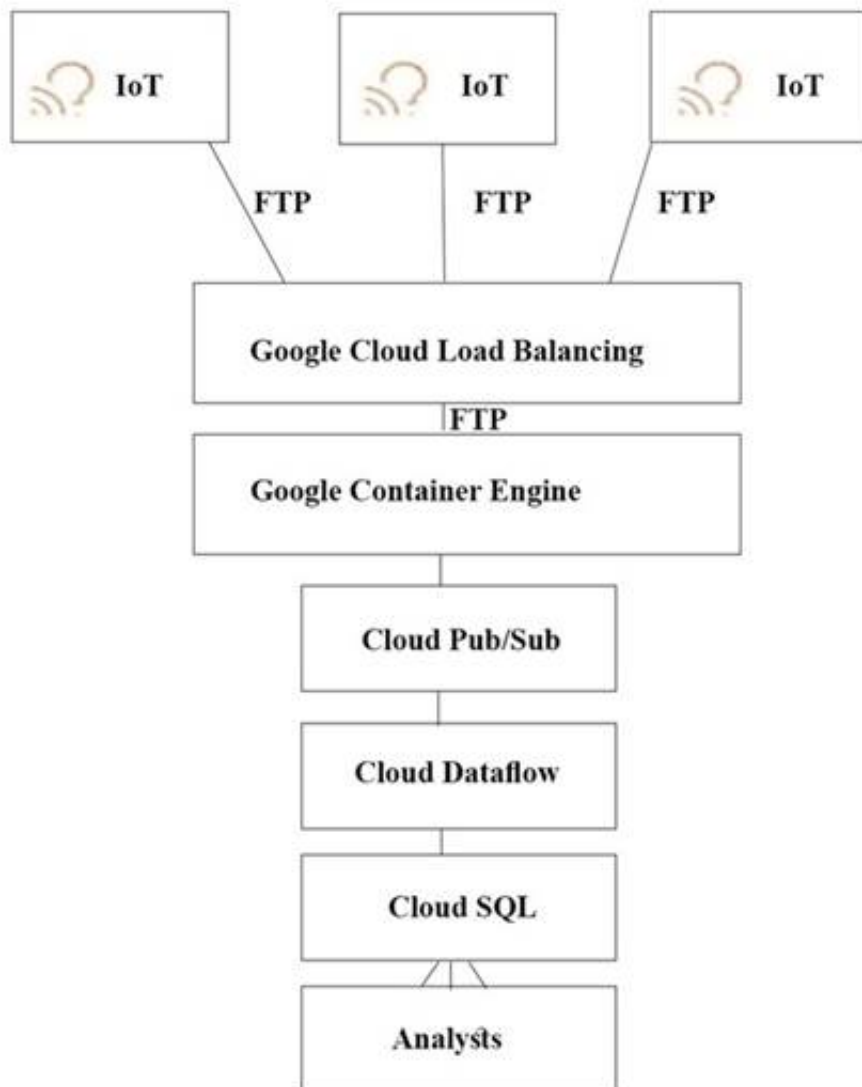
A)



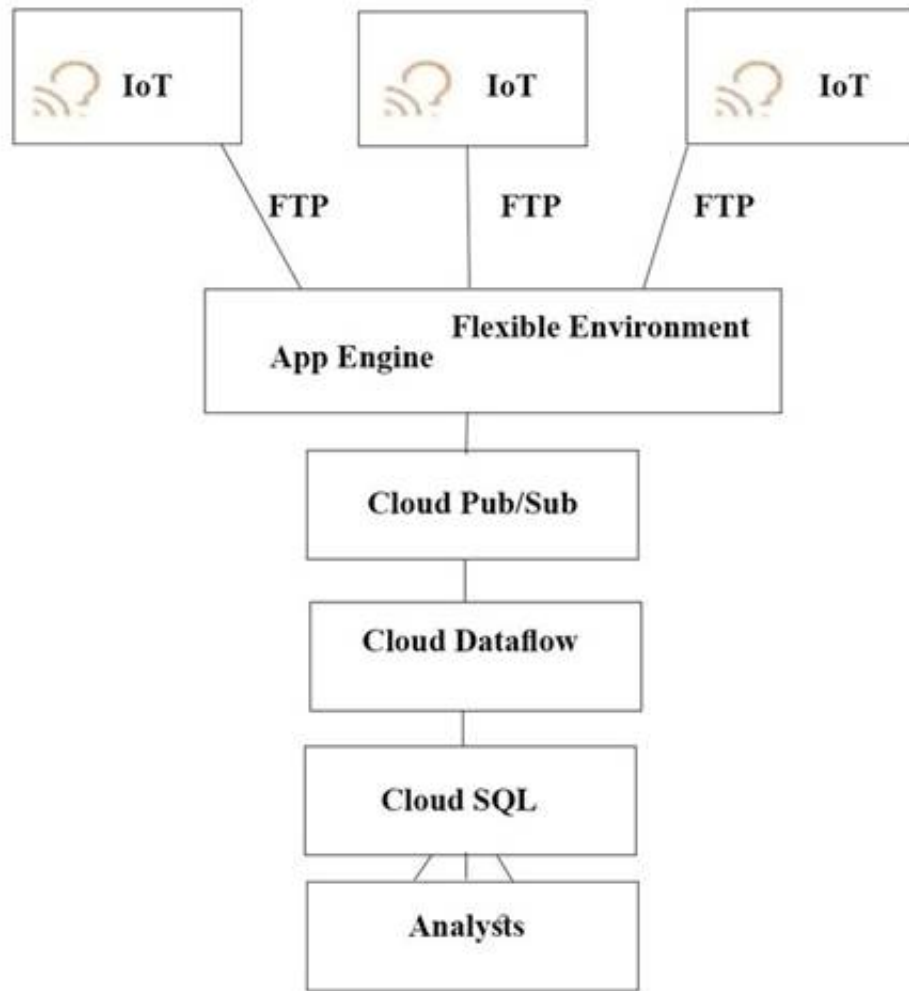
B)



C)



D)



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

**Answer:** A

**Explanation:**

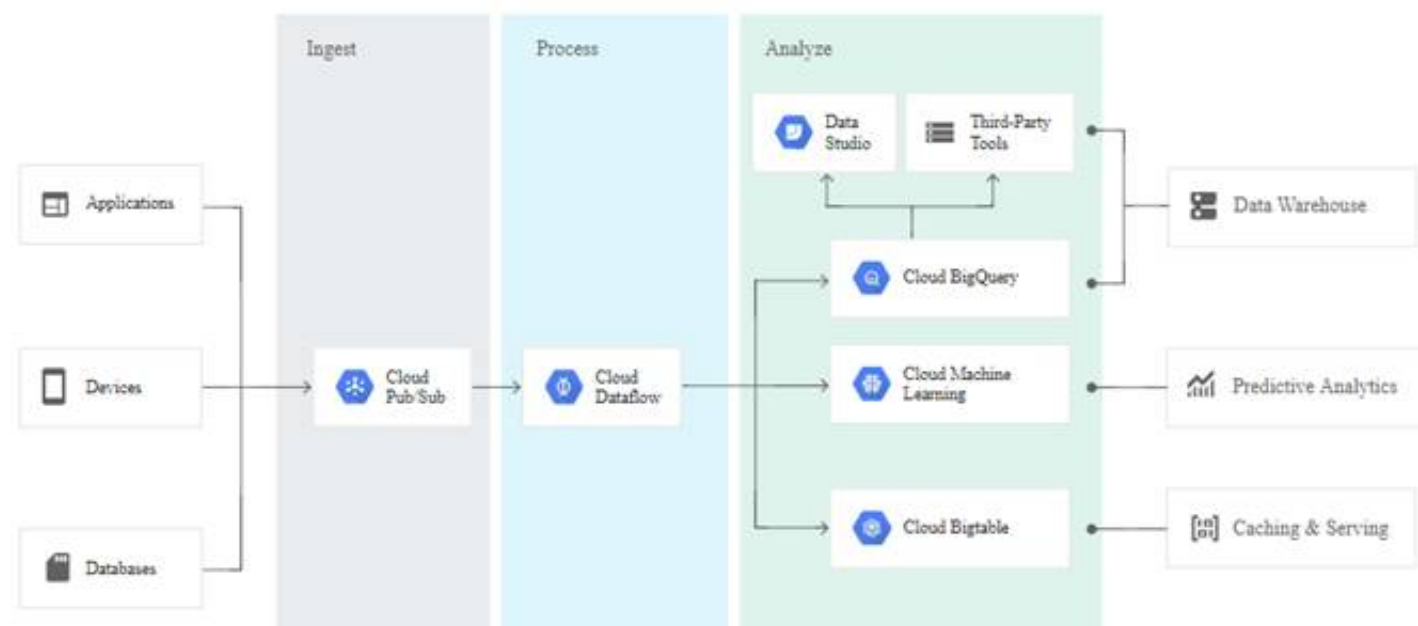
<https://cloud.google.com/solutions/iot/> <https://cloud.google.com/solutions/designing-connected-vehicle-platform> [https://cloud.google.com/solutions/designing-connected-vehicle-platform#data\\_ingestion](https://cloud.google.com/solutions/designing-connected-vehicle-platform#data_ingestion)

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

**NEW QUESTION 4**

- (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

- (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.

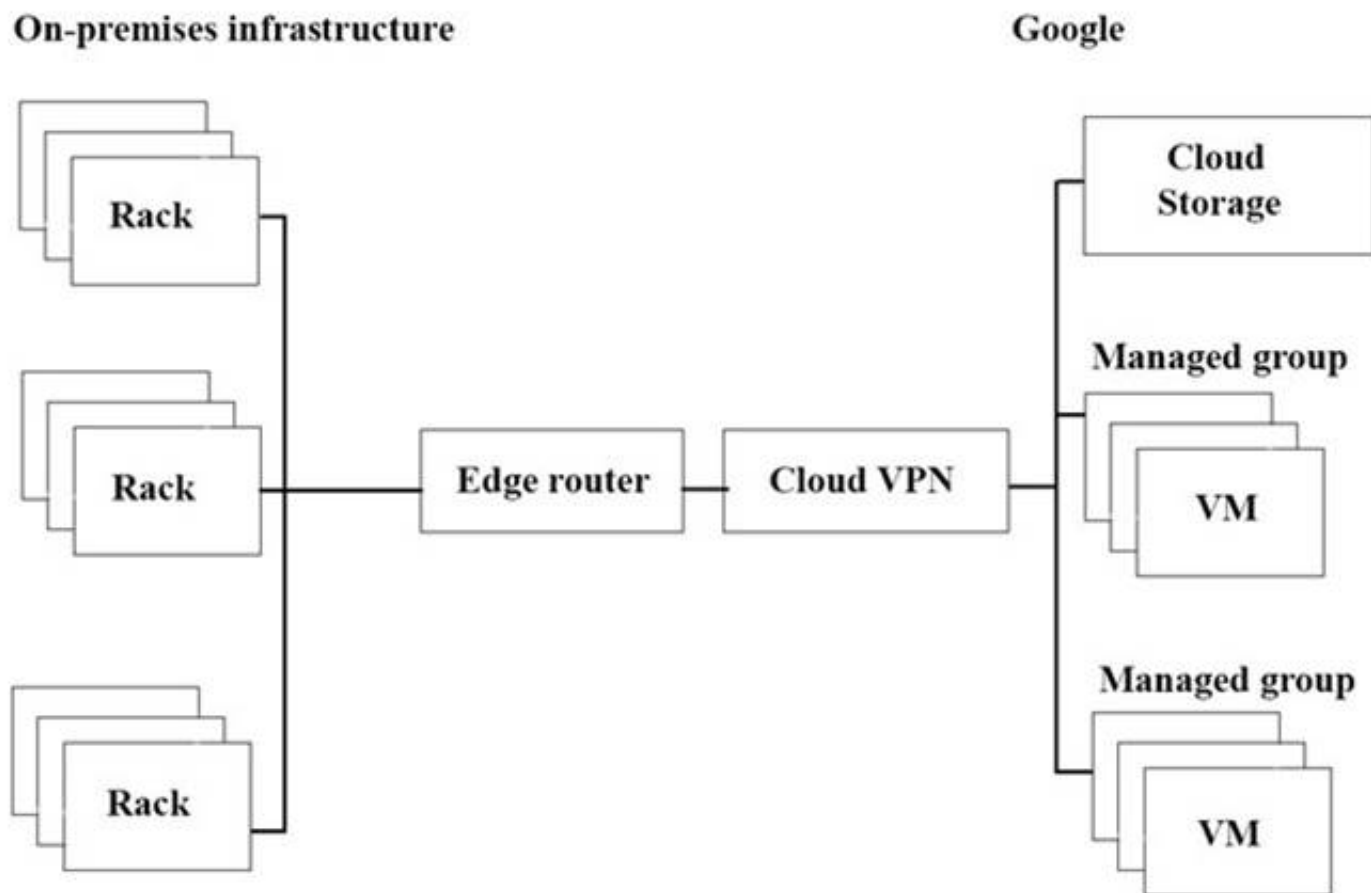
References: <https://cloud.google.com/storage/docs/streaming> <https://cloud.google.com/bigquery/docs/loading-data>

#### NEW QUESTION 6

- (Topic 3)

For this question, refer to the JencoMart case study.

The migration of JencoMart's application to Google Cloud Platform (GCP) is progressing too slowly. The infrastructure is shown in the diagram. You want to maximize throughput. What are three potential bottlenecks? (Choose 3 answers.)



- A. A single VPN tunnel, which limits throughput
- B. A tier of Google Cloud Storage that is not suited for this task
- C. A copy command that is not suited to operate over long distances
- D. Fewer virtual machines (VMs) in GCP than on-premises machines
- E. A separate storage layer outside the VMs, which is not suited for this task
- F. Complicated internet connectivity between the on-premises infrastructure and GCP

**Answer:** ADF

#### NEW QUESTION 7

- (Topic 3)

For this question, refer to the JencoMart case study.

The JencoMart security team requires that all Google Cloud Platform infrastructure is deployed using a least privilege model with separation of duties for administration between production and development resources. What Google domain and project structure should you recommend?

- A. Create two G Suite accounts to manage users: one for development/test/staging and one for production
- B. Each account should contain one project for every application.
- C. Create two G Suite accounts to manage users: one with a single project for all development applications and one with a single project for all production applications.
- D. Create a single G Suite account to manage users with each stage of each application in its own project.
- E. Create a single G Suite account to manage users with one project for the development/test/staging environment and one project for the production environment.

**Answer:** D

**Explanation:**

Note: The principle of least privilege and separation of duties are concepts that, although semantically different, are intrinsically related from the standpoint of security. The intent behind both is to prevent people from having higher privilege levels than they actually need

? Principle of Least Privilege: Users should only have the least amount of privileges required to perform their job and no more. This reduces authorization exploitation by limiting access to resources such as targets, jobs, or monitoring templates for which they are not authorized.

? Separation of Duties: Beyond limiting user privilege level, you also limit user duties, or the specific jobs they can perform. No user should be given responsibility for more than one related function. This limits the ability of a user to perform a malicious action and then cover up that action.

References: <https://cloud.google.com/kms/docs/separation-of-duties>

**NEW QUESTION 8**

- (Topic 4)

For this question, refer to the Dress4Win case study.

Dress4Win would like to become familiar with deploying applications to the cloud by successfully deploying some applications quickly, as is. They have asked for your recommendation. What should you advise?

- A. Identify self-contained applications with external dependencies as a first move to the cloud.
- B. Identify enterprise applications with internal dependencies and recommend these as a first move to the cloud.
- C. Suggest moving their in-house databases to the cloud and continue serving requests to on-premise applications.
- D. Recommend moving their message queuing servers to the cloud and continue handling requests to on-premise applications.

**Answer:** A

**Explanation:**

<https://cloud.google.com/blog/products/gcp/the-five-phases-of-migrating-to-google-cloud-platform>

**NEW QUESTION 9**

- (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 10**

- (Topic 4)

For this question, refer to the Dress4Win case study.

Dress4Win has end-to-end tests covering 100% of their endpoints. They want to ensure that the move to the cloud does not introduce any new bugs. Which additional testing methods should the developers employ to prevent an outage?

- A. They should enable Google Stackdriver Debugger on the application code to show errors in the code.
- B. They should add additional unit tests and production scale load tests on their cloud staging environment.
- C. They should run the end-to-end tests in the cloud staging environment to determine if the code is working as intended.
- 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 10**

- (Topic 4)

For this question, refer to the Dress4Win case study.

At Dress4Win, an operations engineer wants to create a low-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 14**

- (Topic 4)

For this question, refer to the Dress4Win case study.

As part of Dress4Win's plans to migrate to the cloud, they want to be able to set up a managed logging and monitoring system so they can handle spikes in their



traffic load.

They want to ensure that:

- The infrastructure can be notified when it needs to scale up and down to handle the ebb and flow of usage throughout the day
- Their administrators are notified automatically when their application reports errors.
- They can filter their aggregated logs down in order to debug one piece of the application across many hosts

Which Google StackDriver features should they use?

- A. Logging, Alerts, Insights, Debug
- B. Monitoring, Trace, Debug, Logging
- C. Monitoring, Logging, Alerts, Error Reporting
- D. Monitoring, Logging, Debug, Error Report

**Answer: D**

#### NEW QUESTION 18

- (Topic 4)

The current Dress4win system architecture has high latency to some customers because it is located in one data center.

As of a future evaluation and optimizing for performance in the cloud, Dress4win wants to distribute its system architecture to multiple locations when Google cloud platform. Which approach should they use?

- A. Use regional managed instance groups and a global load balancer to increase performance because the regional managed instance group can grow instances in each region separately based on traffic.
- B. Use a global load balancer with a set of virtual machines that forward the requests to a closer group of virtual machines managed by your operations team.
- C. Use regional managed instance groups and a global load balancer to increase reliability by providing automatic failover between zones in different regions.
- D. Use a global load balancer with a set of virtual machines that forward the requests to a closer group of virtual machines as part of a separate managed instance groups.

**Answer: A**

#### NEW QUESTION 21

- (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 26

- (Topic 5)

You are responsible for the Google Cloud environment in your company. Multiple departments need access to their own projects and the members within each department will have the same project responsibilities. You want to structure your Google Cloud environment for minimal maintenance and maximum overview of IAM permissions as each department's projects start and end. You want to follow Google-recommended practices. What should you do?

- A. Create a Google Group per department and add all department members to their respective groups. Create a folder per department and grant the respective group the required IAM permissions at the folder level. Add the projects under the respective folders.
- B. Grant all department members the required IAM permissions for their respective projects.
- C. Create a Google Group per department and add all department members to their respective groups. Grant each group the required IAM permissions for their respective projects.
- D. Create a folder per department and grant the respective members of the department the required IAM permissions at the folder level.
- E. Structure all projects for each department under the respective folders.

**Answer: A**

#### Explanation:

This option follows the Google-recommended practices for structuring a Google Cloud environment for minimal maintenance and maximum overview of IAM permissions. By creating a Google Group per department and adding all department members to their respective groups, you can simplify user management and avoid granting IAM permissions to individual users. By creating a folder per department and granting the respective group the required IAM permissions at the folder level, you can enforce consistent policies across all projects within each department and avoid granting IAM permissions at the project level. By adding the projects under the respective folders, you can organize your resources hierarchically and leverage inheritance of IAM policies from folders to projects. The other options are not optimal for this scenario, because they either require granting IAM permissions to individual users (B, C), or do not use Google Groups to manage users (D). References:

? <https://cloud.google.com/architecture/framework/system-design>

? <https://cloud.google.com/architecture/identity/best-practices-for-planning>

? <https://cloud.google.com/resource-manager/docs/creating-managing-folders>

#### NEW QUESTION 31

- (Topic 5)

Your company is running its application workloads on Compute Engine. The applications have been deployed in production, acceptance, and development environments. The production environment is business-critical and is used 24/7, while the acceptance and development environments are only critical during office hours. Your CFO has asked you to optimize these environments to achieve cost savings during idle times. What should you do?

- A. Create a shell script that uses the gcloud command to change the machine type of the development and acceptance instances to a smaller machine type outside of office hour
- B. Schedule the shell script on one of the production instances to automate the task.
- C. Use Cloud Scheduler to trigger a Cloud Function that will stop the development and acceptance environments after office hours and start them just before office hours.
- D. Deploy the development and acceptance applications on a managed instance group and enable autoscaling.
- E. Use regular Compute Engine instances for the production environment, and usepreemptible VMs for the acceptance and development environments.

**Answer:** B

**Explanation:**

Reference: <https://cloud.google.com/blog/products/it-ops/best-practices-for-optimizing-your-cloud-costs>

**NEW QUESTION 33**

- (Topic 5)

Your company is planning to upload several important files to Cloud Storage. After the upload is completed, they want to verify that the upload content is identical to what they have on- premises. You want to minimize the cost and effort of performing this check. What should you do?

- A.
  - 1) Use gsutil -m to upload all the files to Cloud Storage.
  - 2) Use gsutil cp to download the uploaded files
  - 3) Use Linux diff to compare the content of the files
- B.
  - 1) Use gsutil -m to upload all the files to Cloud Storage.
  - 2) Develop a custom Java application that computes CRC32C hashes
  - 3) Use gsutil ls -L gs://[YOUR\_BUCKET\_NAME] to collect CRC32C hashes of the uploaded files
  - 4) Compare the hashes
- C.
  - 1) Use Linux shasum to compute a digest of files you want to upload
  - 2) Use gsutil -m to upload all the files to the Cloud Storage
  - 3) Use gsutil cp to download the uploaded files
  - 4) Use Linux shasum to compute a digest of the downloaded files 5.Compare the hashes
- D.
  - 1) Use gsutil -m to upload all the files to Cloud Storage.
  - 2) Use gsutil hash -c FILE\_NAME to generate CRC32C hashes of all on-premises files 3)Use gsutil ls -L gs://[YOUR\_BUCKET\_NAME] to collect CRC32C hashes of the uploaded files
  - 4)Compare the hashes

A.

**Answer:** D

**Explanation:**

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

**NEW QUESTION 37**

- (Topic 5)

You want to store critical business information in Cloud Storage buckets. The information is regularly changed but previous versions need to be referenced on a regular basis. You want to ensure that there is a record of all changes to any information in these buckets. You want to ensure that accidental edits or deletions can be easily roiled back. Which feature should you enable?

- A. Bucket Lock
- B. Object Versioning
- C. Object change notification
- D. Object Lifecycle Management

**Answer:** B

**NEW QUESTION 38**

- (Topic 5)

Your company has an application running on multiple Compute Engine instances. You need to ensure that the application can communicate with an on-premises service that requires high throughput via internal IPs, while minimizing latency. What should you do?

- A. Use OpenVPN to configure a VPN tunnel between the on-premises environment and Google Cloud.
- B. Configure a direct peering connection between the on-premises environment and Google Cloud.
- C. Use Cloud VPN to configure a VPN tunnel between the on-premises environment and Google Cloud.
- D. Configure a Cloud Dedicated Interconnect connection between the on-premises environment and Google Cloud.

**Answer:** D

**Explanation:**

Reference <https://cloud.google.com/architecture/setting-up-private-access-to-cloud-apis-through-vpn-tunnels>

**NEW QUESTION 41**

- (Topic 5)

Your company recently acquired a company that has infrastructure in Google Cloud. Each company has its own Google Cloud organization Each company is using a Shared Virtual Private Cloud (VPC) to provide network connectivity tor its applications Some of the subnets used by both companies overlap In order for both businesses to integrate, the applications need to have private network connectivity. These applications are not on overlapping subnets. You want to provide connectivity with minimal re-engineering. What should you do?



- A. Set up VPC peering and peer each Shared VPC together
- B. Configure SSH port forwarding on each application to provide connectivity between applications in the different Shared VPCs
- C. Migrate the projects from the acquired company into your company's Google Cloud organization. Relaunch the instances in your company's Shared VPC
- D. Set up a Cloud VPN gateway in each Shared VPC and peer Cloud VPNs

**Answer:** B

#### NEW QUESTION 43

- (Topic 5)

You have developed an application using Cloud ML Engine that recognizes famous paintings from uploaded images. You want to test the application and allow specific people to upload images for the next 24 hours. Not all users have a Google Account. How should you have users upload images?

- A. Have users upload the images to Cloud Storage
- B. Protect the bucket with a password that expires after 24 hours.
- C. Have users upload the images to Cloud Storage using a signed URL that expires after 24 hours.
- D. Create an App Engine web application where users can upload image
- E. Configure App Engine to disable the application after 24 hours
- F. Authenticate users via Cloud Identity.
- G. Create an App Engine web application where users can upload images for the next 24 hours
- H. Authenticate users via Cloud Identity.

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 44

- (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 48

- (Topic 5)

A development manager is building a new application. He asks you to review his requirements and identify what cloud technologies he can use to meet them. The application must

- \* 1. Be based on open-source technology for cloud portability
- \* 2. Dynamically scale compute capacity based on demand
- \* 3. Support continuous software delivery
- \* 4. Run multiple segregated copies of the same application stack
- \* 5. Deploy application bundles using dynamic templates
- \* 6. Route network traffic to specific services based on URL

Which combination of technologies will meet all of his requirements?

- A. Google Container Engine, Jenkins, and Helm
- B. Google Container Engine and Cloud Load Balancing
- C. Google Compute Engine and Cloud Deployment Manager
- D. Google Compute Engine, Jenkins, and Cloud Load Balancing

**Answer:** A

#### Explanation:

Helm for managing Kubernetes

Kubernetes can base on the URL to route traffic to different location (path)

<https://cloud.google.com/kubernetes-engine/docs/tutorials/http-balancer> eg. apiVersion: networking.k8s.io/v1beta1

kind: Ingress metadata:

name: fanout-ingress spec:

rules:

- http: paths:

- path: /\* backend:

serviceName: web servicePort: 8080

- path: /v2/\* backend: serviceName: web2 servicePort: 8080

#### NEW QUESTION 49

- (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 53**

- (Topic 5)

Your company has a Google Cloud project that uses BigQuery for data warehousing. They have a VPN tunnel between the on-premises environment and Google Cloud that is configured with Cloud VPN. The security team wants to avoid data exfiltration by malicious insiders, compromised code, and accidental oversharing. What should they do?

- A. Configure Private Google Access for on-premises only.
- B. Perform the following tasks: 1) Create a service account. 2) Give the BigQuery JobUser role and Storage Reader role to the service account. 3) Remove all other IAM access from the project.
- C. Configure VPC Service Controls and configure Private Google Access.
- D. Configure Private Google Access.

**Answer:** C

**Explanation:**

<https://cloud.google.com/vpc-service-controls/docs/overview>

VPC Service Controls improves your ability to mitigate the risk of data exfiltration from Google Cloud services such as Cloud Storage and BigQuery.

**NEW QUESTION 57**

- (Topic 5)

Your BigQuery project has several users. For audit purposes, you need to see how many queries each user ran in the last month.

- A. Connect Google Data Studio to BigQuery
- B. Create a dimension for the users and a metric for the amount of queries per user.
- C. In the BigQuery interface, execute a query on the JOBS table to get the required information.
- D. Use 'bq show' to list all jobs
- E. Per job, use 'bq ls' to list job information and get the required information.
- F. Use Cloud Audit Logging to view Cloud Audit Logs, and create a filter on the query operation to get the required information.

**Answer:** C

**Explanation:**

<https://cloud.google.com/bigquery/docs/managing-jobs>

**NEW QUESTION 61**

- (Topic 5)

Your company has a Google Cloud project that uses BigQuery for data warehousing on a pay-per-use basis. You want to monitor queries in real time to discover the most costly queries and which users spend the most. What should you do?

- A.
  - \* 1. Create a Cloud Logging sink to export BigQuery data access logs to Cloud Storage.
  - \* 2. Develop a Dataflow pipeline to compute the cost of queries split by users.
- B.
  - \* 1. Create a Cloud Logging sink to export BigQuery data access logs to BigQuery.
  - \* 2. Perform a BigQuery query on the generated table to extract the information you need.
- C.
  - \* 1. Activate billing export into BigQuery.
  - \* 2. Perform a BigQuery query on the billing table to extract the information you need.
- D.
  - \* 1. In the BigQuery dataset that contains all the tables to be queried, add a label for each user that can launch a query.
  - \* 2. Open the Billing page of the project.
  - \* 3. Select Reports.
  - \* 4. Select BigQuery as the product and filter by the user you want to check.

A.

**Answer:** C

**Explanation:**

<https://cloud.google.com/blog/products/data-analytics/taking-a-practical-approach-to-bigquery-cost-monitoring>

#### NEW QUESTION 62

- (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

#### Explanation:

<https://cloud.google.com/resource-manager/docs/organization-policy/restricting-domains>

#### NEW QUESTION 63

- (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 64

- (Topic 5)

You are deploying a PHP App Engine Standard service with SQL as the backend. You want to minimize the number of queries to the database. What should you do?

- A. Set the memcache service level to dedicate
- B. Create a key from the hash of the query, and return database values from memcache before issuing a query to Cloud SQL.
- C. Set the memcache service level to share
- D. Create a cron task that runs every minute to populate the cache with keys containing query results.
- E. Set the memcache service level to share
- F. Create a cron task that runs every minute to save all expected queries to a key called "cached-queries".
- G. Set the memcache service level to share
- H. Create a key called "cached-queries", and return database values from the key before using a query to Cloud SQL.

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 68

- (Topic 5)

You are moving an application that uses MySQL from on-premises to Google Cloud. The application will run on Compute Engine and will use Cloud SQL. You want to cut over to the Compute Engine deployment of the application with minimal downtime and no data loss to your customers. You want to migrate the application with minimal modification. You also need to determine the cutover strategy. What should you do?

- A. \* 1. Set up Cloud VPN to provide private network connectivity between the Compute Engine application and the on-premises MySQL server.\* 2. Stop the on-premises application.\* 3. Create a mysqldump of the on-premises MySQL server
- B. \* 4.Upload the dump to a Cloud Storage bucket.\* 5. Import the dump into Cloud SQL.\* 6. Modify the source code of the application to write queries to both databases and read from its local database.\* 7. Start the Compute Engine application
- C. \* 8.Stop the on-premises application.
- D. \* 1. Set up Cloud SQL proxy and MySQL proxy
- E. \* 2.Create a mysqldump of the on-premises MySQL server
- F. \* 3.Upload the dump to a Cloud Storage bucket.\* 4.Import the dump into Cloud SQL
- G. \* 5.Stop the on-premises application
- H. \* 6.Start the Compute Engine application.
- I. \* 1. Set up Cloud VPN to provide private network connectivity between the Compute Engine application and the on-premises MySQL server.\* 2. Stop the on-premises application.\* 3. Start the Compute Engine application, configured to read and write to the on-premises MySQL server.\* 4. Create the replication configuration in Cloud SQL.\* 5. Configure the source database server to accept connections from the Cloud SQL replica
- J. \* 6.Finalize the Cloud SQL replica configuration.\* 7.When replication has been completed, stop the Compute Engine application
- K. \* 8.Promote the Cloud SQL replica to a standalone instance.\* 9.Restart the Compute Engine application, configured to read and write to the Cloud SQL standalone instance.
- L. \* 1. Stop the on-premises application.\* 2.Create a mysqldump of the on-premises MySQL server
- M. \* 3.Upload the dump to a Cloud Storage bucket.\* 4. Import the dump into Cloud SQL.\* 5. Start the application on Compute Engine.

**Answer:** C

#### Explanation:

External replica promotion migration In the migration strategy of external replica promotion, you create an external database replica and synchronize the existing

data to that replica. This can happen with minimal downtime to the existing database. When you have a replica database, the two databases have different roles that are referred to in this document as primary and replica. After the data is synchronized, you promote the replica to be the primary in order to move the management layer with minimal impact to database uptime. In Cloud SQL, an easy way to accomplish the external replica promotion is to use the automated migration workflow. This process automates many of the steps that are needed for this type of migration.

<https://cloud.google.com/architecture/migrating-mysql-to-cloudsql-concept>

- The best option for migrating your MySQL database is to use an external replica promotion. In this strategy, you create a replica database and set your existing database as the primary. You wait until the two databases are in sync, and you then promote your MySQL replica database to be the primary. This process minimizes database downtime related to the database migration. - [https://cloud.google.com/architecture/migrating-mysql-to-cloudsql-concept#external\\_replica\\_promotion\\_migration](https://cloud.google.com/architecture/migrating-mysql-to-cloudsql-concept#external_replica_promotion_migration)

## NEW QUESTION 72

- (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 is -lr gs://backups/\*\* to find and remove items older than 90 days.
- D. Schedule a cron script using gsutil ls -1 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 76

- (Topic 5)

You are working in a highly secured environment where public Internet access from the Compute Engine VMs is not allowed. You do not yet have a VPN connection to access an on-premises file server. You need to install specific software on a Compute Engine instance. How should you install the software?

- A. Upload the required installation files to Cloud Storage
- B. Configure the VM on a subnet with a Private Google Access subne
- C. Assign only an internal IP address to the V
- D. Download the installation files to the VM using gsutil.
- E. Upload the required installation files to Cloud Storage and use firewall rules to block all traffic except the IP address range for Cloud Storag
- F. Download the files to the VM using gsutil.
- G. Upload the required installation files to Cloud Source Repositorie
- H. Configure the VM on a subnet with a Private Google Access subne
- I. Assign only an internal IP address to the V
- J. Download the installation files to the VM using gcloud.
- K. Upload the required installation files to Cloud Source Repositories and use firewall rules to block all traffic except the IP address range for Cloud Source Repositorie
- L. Download the files to the VM using gsutil.

**Answer:** A

### Explanation:

<https://cloud.google.com/vpc/docs/private-access-options#pga-supported>

## NEW QUESTION 80

- (Topic 5)

You are developing a globally scaled frontend for a legacy streaming backend data API.

This API expects

events in strict chronological order with no repeat data for proper processing.

Which products should you deploy to ensure guaranteed-once FIFO (first-in, first-out) delivery of data?

- A. Cloud Pub/Sub alone
- B. Cloud Pub/Sub to Cloud DataFlow
- C. Cloud Pub/Sub to Stackdriver
- D. Cloud Pub/Sub to Cloud SQL

**Answer:** B

### Explanation:

Reference <https://cloud.google.com/pubsub/docs/ordering>

## NEW QUESTION 83

- (Topic 5)

You have deployed an application on Anthos clusters (formerly Anthos GKE). According to the SRE practices at your company you need to be alerted if the request latency is above a certain threshold for a specified amount of time. What should you do?

- A. Enable the Cloud Trace API on your project and use Cloud Monitoring Alerts to send an alert based on the Cloud Trace metrics
- B. Configure Anthos Config Management on your cluster and create a yaml file that defines the SLO and alerting policy you want to deploy in your cluster
- C. Use Cloud Profiler to follow up the request latenc
- D. Create a custom metric in Cloud Monitoring based on the results of Cloud Profiler, and create an Alerting Policy in case this metric exceeds the threshold
- E. Install Anthos Service Mesh on your cluste
- F. Use the Google Cloud Console to define a Service Level Objective (SLO)

**Answer:** D



**Explanation:**

<https://cloud.google.com/service-mesh/docs/overview> <https://cloud.google.com/service-mesh/docs/observability/slo-overview>

**NEW QUESTION 86**

- (Topic 5)

You are building a continuous deployment pipeline for a project stored in a Git source repository and want to ensure that code changes can be verified deploying to production. What should you do?

- A. Use Spinnaker to deploy builds to production using the red/black deployment strategy so that changes can easily be rolled back.
- B. Use Spinnaker to deploy builds to production and run tests on production deployments.
- C. Use Jenkins to build the staging branches and the master branch
- D. Build and deploy changes to production for 10% of users before doing a complete rollout.
- E. Use Jenkins to monitor tags in the repository
- F. Deploy staging tags to a staging environment for testing. After testing, tag the repository for production and deploy that to the production environment.

**Answer:** D

**Explanation:**

Reference: <https://github.com/GoogleCloudPlatform/continuous-deployment-on-kubernetes/blob/master/README.md>

**NEW QUESTION 88**

- (Topic 5)

You want to optimize the performance of an accurate, real-time, weather-charting application. The data comes from 50,000 sensors sending 10 readings a second, in the format of a timestamp and sensor reading. Where should you store the data?

- A. Google BigQuery
- B. Google Cloud SQL
- C. Google Cloud Bigtable
- D. Google Cloud Storage

**Answer:** C

**Explanation:**

It is time-series data, So Big Table. <https://cloud.google.com/bigtable/docs/schema-design-time-series>

Google Cloud Bigtable is a scalable, fully-managed NoSQL wide-column database that is suitable for both real-time access and analytics workloads.

Good for:

- ? Low-latency read/write access
- ? High-throughput analytics
- ? Native time series support
- ? Common workloads:
- ? IoT, finance, adtech
- ? Personalization, recommendations
- ? Monitoring
- ? Geospatial datasets
- ? Graphs

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

**NEW QUESTION 90**

- (Topic 5)

You are implementing the infrastructure for a web service on Google Cloud. The web service needs to receive and store the data from 500,000 requests per second. The data will be queried later in real time, based on exact matches of a known set of attributes. There will be periods where the web service will not receive any requests. The business wants to keep costs low. Which web service platform and database should you use for the application?

- A. Cloud Run and BigQuery
- B. Cloud Run and Cloud Bigtable
- C. A Compute Engine autoscaling managed instance group and BigQuery
- D. A Compute Engine autoscaling managed instance group and Cloud Bigtable

**Answer:** B

**Explanation:**

<https://cloud.google.com/run/docs/about-instance-autoscaling> <https://cloud.google.com/blog/topics/developers-practitioners/bigtable-vs-bigquery-whats-difference>

**NEW QUESTION 92**

- (Topic 5)

A lead software engineer tells you that his new application design uses websockets and HTTP sessions that are not distributed across the web servers. You want to help him ensure his application will run properly on Google Cloud Platform. What should you do?

- A. Help the engineer to convert his websocket code to use HTTP streaming.
- B. Review the encryption requirements for websocket connections with the security team.
- C. Meet with the cloud operations team and the engineer to discuss load balancer options.
- D. Help the engineer redesign the application to use a distributed user session service that does not rely on websockets and HTTP sessions.

**Answer:** C

**Explanation:**

Google Cloud Platform (GCP) HTTP(S) load balancing provides global load balancing for HTTP(S) requests destined for your instances.

The HTTP(S) load balancer has native support for the WebSocket protocol.



**NEW QUESTION 97**

- (Topic 5)

You need to set up Microsoft SQL Server on GCP. Management requires that there's no downtime in case of a data center outage in any of the zones within a GCP region. What should you do?

- A. Configure a Cloud SQL instance with high availability enabled.
- B. Configure a Cloud Spanner instance with a regional instance configuration.
- C. Set up SQL Server on Compute Engine, using Always On Availability Groups using Windows FailoverClusterin
- D. Place nodes in different subnets.
- E. Set up SQL Server Always On Availability Groups using Windows Failover Clusterin
- F. Place nodes in different zones.

**Answer: D****Explanation:**<https://cloud.google.com/sql/docs/sqlserver/configure-ha>**NEW QUESTION 99**

- (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 error for
com/Altostrat/CloakedServlet.class
    at com.google.appengine.runtime.Request.process
-d36f818a24b8cf1d (Request.java)
    at
sun.security.util.ManifestEntryVerifier.verify
(ManifestEntryVerifier.java:210)
    at java.util.jar.JarVerifier.processEntry
(JarVerifier.java:218)
    at java.util.jar.JarVerifier.update
(JarVerifier.java:205)
    at
java.util.jar.JarVerifiersVerifierStream.read
(JarVerifier.java:428)
    at sun.misc.Resource.getBytes
(Resource.java:124)
    at java.net.URL.ClassLoader.defineClass
(URLClassLoader.java:273)
    at sun.reflect.GeneratedMethodAccessor5.invoke
(Unknown Source)
    at
sun.reflect.DelegatingMethodAccessorImpl.invoke
(DelegatingMethodAccessorImpl.java:43)
    at java.lang.reflect.Method.invoke
(Method.java:616)
    at java.lang.ClassLoader.loadClass
(ClassLoader.java:266)
```

What should you do?

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

**Answer: B****NEW QUESTION 104**

- (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 108**

- (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 113**

- (Topic 5)

Your company runs several databases on a single MySQL instance. They need to take backups of a specific database at regular intervals. The backup activity needs to complete as quickly as possible and cannot be allowed to impact disk performance. How should you configure the storage?

- A. Configure a cron job to use the gcloud tool to take regular backups using persistent disk snapshots.
- B. Mount a Local SSD volume as the backup location.
- C. After the backup is complete, use gsutil to move the backup to Google Cloud Storage.
- D. Use gcsfuse to mount a Google Cloud Storage bucket as a volume directly on the instance and write backups to the mounted location using mysqldump.
- E. Mount additional persistent disk volumes onto each virtual machine (VM) instance in a RAID10 array and use LVM to create snapshots to send to Cloud Storage.

**Answer:** B

**Explanation:**

<https://cloud.google.com/compute/docs/instances/sql-server/best-practices>

**NEW QUESTION 114**

- (Topic 5)

To reduce costs, the Director of Engineering has required all developers to move their development infrastructure resources from on-premises virtual machines (VMs) to Google Cloud Platform. These resources go through multiple start/stop events during the day and require state to persist. You have been asked to design the process of running a development environment in Google Cloud while providing cost visibility to the finance department. Which two steps should you take? Choose 2 answers

- A. Use the --no-auto-delete flag on all persistent disks and stop the VM.
- B. Use the -auto-delete flag on all persistent disks and terminate the VM.
- C. Apply VM CPU utilization label and include it in the BigQuery billing export.
- D. Use Google BigQuery billing export and labels to associate cost to groups.
- E. Store all state into local SSD, snapshot the persistent disks, and terminate the VM.
- F. Store all state in Google Cloud Storage, snapshot the persistent disks, and terminate the VM.

**Answer:** AD

**Explanation:**

<https://cloud.google.com/billing/docs/how-to/export-data-bigquery>

**NEW QUESTION 118**

- (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 123**

- (Topic 5)

You need to upload files from your on-premises environment to Cloud Storage. You want the files to be encrypted on Cloud Storage using customer-supplied encryption keys. What should you do?

- A. Supply the encryption key in a .boto configuration file
- B. Use gsutil to upload the files.
- C. Supply the encryption key using gcloud config
- D. Use gsutil to upload the files to that bucket.
- E. Use gsutil to upload the files, and use the flag --encryption-key to supply the encryption key.
- F. Use gsutil to create a bucket, and use the flag --encryption-key to supply the encryption key
- G. Use gsutil to upload the files to that bucket.

**Answer:** A

**Explanation:**

<https://cloud.google.com/storage/docs/encryption/customer-supplied-keys#gsutil>

#### NEW QUESTION 126

- (Topic 5)

Your marketing department wants to send out a promotional email campaign. The development team wants to minimize direct operation management. They project a wide range of possible customer responses, from 100 to 500,000 click-throughs per day. The link leads to a simple website that explains the promotion and collects user information and preferences. Which infrastructure should you recommend? (CHOOSE TWO)

- A. Use Google App Engine to serve the website and Google Cloud Datastore to store user data.
- B. Use a Google Container Engine cluster to serve the website and store data to persistent disk.
- C. Use a managed instance group to serve the website and Google Cloud Bigtable to store user data.
- D. Use a single compute Engine virtual machine (VM) to host a web server, backed by Google Cloud SQL.

**Answer:** AC

**Explanation:**

Reference: <https://cloud.google.com/storage-options/>

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

#### NEW QUESTION 127

- (Topic 5)

You want to enable your running Google Container Engine cluster to scale as demand for your application changes. What should you do?

- A. Add additional nodes to your Container Engine cluster using the following command: `gcloud container clusters resize CLUSTER_NAME --size 10`
- B. Add a tag to the instances in the cluster with the following command: `gcloud compute instances add-tags INSTANCE --tags enable --autoscaling max-nodes=10`
- C. Update the existing Container Engine cluster with the following command: `gcloud alpha container clusters update mycluster --enable-autoscaling --min-nodes=1 --max-nodes=10`
- D. Create a new Container Engine cluster with the following command: `gcloud alpha container clusters create mycluster --enable-autoscaling --min-nodes=1 --max-nodes=10` and redeploy your application.

**Answer:** B

**Explanation:**

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

Cluster autoscaling

--enable-autoscaling

Enables autoscaling for a node pool.

Enables autoscaling in the node pool specified by --node-pool or the default node pool if --node-pool is not provided.

Where:

--max-nodes=MAX\_NODES

Maximum number of nodes in the node pool.

Maximum number of nodes to which the node pool specified by --node-pool (or default node pool if unspecified) can scale.

#### NEW QUESTION 131

- (Topic 5)

You need to deploy a stateful workload on Google Cloud. The workload can scale horizontally, but each instance needs to read and write to the same POSIX filesystem. At high load, the stateful workload needs to support up to 100 MB/s of writes. What should you do?

- A. Use a persistent disk for each instance.
- B. Use a regional persistent disk for each instance.
- C. Create a Cloud Filestore instance and mount it in each instance.
- D. Create a Cloud Storage bucket and mount it in each instance using gcsfuse.

**Answer:** C

**Explanation:**

<https://cloud.google.com/storage/docs/gcs-fuse#notes>

Cloud Filestore: Cloud Filestore is a scalable and highly available shared file service fully managed by Google. Cloud Filestore provides persistent storage ideal for shared workloads. It is best suited for enterprise applications requiring persistent, durable, shared storage which is accessed by NFS or requires a POSIX compliant file system.

Reference: <https://cloud.google.com/storage/docs/gcs-fuse>

#### NEW QUESTION 135

- (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 140

- (Topic 5)

The development team has provided you with a Kubernetes Deployment file. You have no infrastructure yet and need to deploy the application. What should you do?

- A. Use gcloud to create a Kubernetes cluste
- B. Use Deployment Manager to create the deployment.
- C. Use gcloud to create a Kubernetes cluste
- D. Use kubectl to create the deployment.
- E. Use kubectl to create a Kubernetes cluste
- F. Use Deployment Manager to create the deployment.
- G. Use kubectl to create a Kubernetes cluste
- H. Use kubectl to create the deployment.

**Answer:** B

#### Explanation:

<https://cloud.google.com/kubernetes-engine/docs/how-to/creating-a-cluster>

#### NEW QUESTION 144

- (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 145

- (Topic 5)

You are working with a data warehousing team that performs data analysis. The team needs to process data from external partners, but the data contains personally identifiable information (PII). You need to process and store the data without storing any of the PII data. What should you do?

- A. Create a Dataflow pipeline to retrieve the data from the external source
- B. As part of the pipeline use the Cloud Data Loss Prevention (Cloud DLP) API to remove any PII data Store the result in BigQuery
- C. Create a Dataflow pipeline to retrieve the data from the external source
- D. As part of the pipeline store all non-PII data in BigQuery and store all PII data in a Cloud Storage bucket that has a retention policy set.
- E. Ask the external partners to upload an data on Cloud Storage Configure Bucket Lock for the bucket Create a Dataflow pipeline to read the data from the bucket As part of the pipeline, use the Cloud Data Loss Prevention (Cloud DIP) API to remove any PII data Store the result in BigQuery
- F. Ask the external partners to import ail data in your BigQuery dataset Create a dataflow pipeline to copy the data into a new table As part of the Dataflow bucket skip all data in columns that have PII data

**Answer:** A

#### Explanation:

Create a Dataflow pipeline to retrieve the data from the external sources, he did not specify the way he is going to create it, it might be a pub/sub or external table or whatever.

#### NEW QUESTION 147

- (Topic 5)

You have an application that runs in Google Kubernetes Engine (GKE). Over the last 2 weeks, customers have reported that a specific part of the application returns errors very frequently. You currently have no logging or monitoring solution enabled on your GKE cluster. You want to diagnose the problem, but you have not been able to replicate the issue. You want to cause minimal disruption to the application. What should you do?

- A. \* 1. Update your GKE cluster to use Cloud Operations for GKE.\* 2. Use the GKE Monitoring dashboard to investigate logs from affected Pods.
- B. \* 1. Create a new GKE cluster with Cloud Operations for GKE enabled.\* 2. Migrate the affected Pods to the new cluster, and redirect traffic for those Pods to the new cluster.\* 3. Use the GKE Monitoring dashboard to investigate logs from affected Pods.
- C. \* 1. Update your GKE cluster to use Cloud Operations for GKE, and deploy Prometheus.\* 2. Set an alert to trigger whenever the application returns an error.
- D. \* 1. Create a new GKE cluster with Cloud Operations for GKE enabled, and deploy Prometheus.\* 2. Migrate the affected Pods to the new cluster, and redirect



traffic for those Pods to the new cluster.\* 3. Set an alert to trigger whenever the application returns an error.

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/blog/products/management-tools/using-logging-your-apps-running-kubernetes-engine>

#### NEW QUESTION 150

- (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.pro

At

Sun.securityutil.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 154

- (Topic 5)

You are deploying an application to Google Cloud. The application is part of a system. The application in Google Cloud must communicate over a private network with applications in a non-Google Cloud environment. The expected average throughput is 200 kbps. The business requires:

- 99.99% system availability
- cost optimization

You need to design the connectivity between the locations to meet the business requirements. What should you provision?

- A. A Classic Cloud VPN gateway connected with one tunnel to an on-premises VPN gateway.
- B. A Classic Cloud VPN gateway connected with two tunnels to an on-premises VPN gateway.
- C. An HA Cloud VPN gateway connected with two tunnels to an on-premises VPN gateway.
- D. Two HA Cloud VPN gateways connected to two on-premises VPN gateway
- E. Configure each HA CloudVPN gateway to have two tunnels, each connected to different on-premises VPN gateways.

**Answer:** C

**Explanation:**

[https://cloud.google.com/network-connectivity/docs/vpn/concepts/topologies#configurations\\_that\\_support\\_9999\\_availability](https://cloud.google.com/network-connectivity/docs/vpn/concepts/topologies#configurations_that_support_9999_availability)

#### NEW QUESTION 158

- (Topic 5)

Your team will start developing a new application using microservices architecture on Kubernetes Engine. As part of the development lifecycle, any code change that has been pushed to the remote develop branch on your GitHub repository should be built and tested automatically. When the build and test are successful, the



relevant microservice will be deployed automatically in the development environment. You want to ensure that all code deployed in the development environment follows this process. What should you do?

- A. Have each developer install a pre-commit hook on their workstation that tests the code and builds the container when committing on the development branch
- B. After a successful commit, have the developer deploy the newly built container image on the development cluster.
- C. Install a post-commit hook on the remote git repository that tests the code and builds the container when code is pushed to the development branch
- D. After a successful commit, have the developer deploy the newly built container image on the development cluster.
- E. Create a Cloud Build trigger based on the development branch that tests the code, builds the container, and stores it in Container Registry
- F. Create a deployment pipeline that watches for new images and deploys the new image on the development cluster
- G. Ensure only the deployment tool has access to deploy new versions.
- H. Create a Cloud Build trigger based on the development branch to build a new container image and store it in Container Registry
- I. Rely on Vulnerability Scanning to ensure the code tests succeed
- J. As the final step of the Cloud Build process, deploy the new container image on the development cluster
- K. Ensure only Cloud Build has access to deploy new versions.

**Answer: C**

**Explanation:**

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

Create a Cloud Build trigger based on the development branch that tests the code, builds the container, and stores it in Container Registry. Create a deployment pipeline that watches for new images and deploys the new image on the development cluster. Ensure only the deployment tool has access to deploy new versions.

**NEW QUESTION 159**

- (Topic 5)

You are running a cluster on Kubernetes Engine to serve a web application. Users are reporting that a specific part of the application is not responding anymore. You notice that all pods of your deployment keep restarting after 2 seconds. The application writes logs to standard output. You want to inspect the logs to find the cause of the issue. Which approach can you take?

- A. Review the Stackdriver logs for each Compute Engine instance that is serving as a node in the cluster.
- B. Review the Stackdriver logs for the specific Kubernetes Engine container that is serving the unresponsive part of the application.
- C. Connect to the cluster using gcloud credentials and connect to a container in one of the pods to read the logs.
- D. Review the Serial Port logs for each Compute Engine instance that is serving as a node in the cluster.

**Answer: B**

**NEW QUESTION 164**

- (Topic 5)

Your development team has installed a new Linux kernel module on the batch servers in Google Compute Engine (GCE) virtual machines (VMs) to speed up the nightly batch process. Two days after the installation, 50% of web application deployed in the same nightly batch run. You want to collect details on the failure to pass back to the development team. Which three actions should you take? Choose 3 answers

- A. Use Stackdriver Logging to search for the module log entries.
- B. Read the debug GCE Activity log using the API or Cloud Console.
- C. Use gcloud or Cloud Console to connect to the serial console and observe the logs.
- D. Identify whether a live migration event of the failed server occurred, using the activity log.
- E. Adjust the Google Stackdriver timeline to match the failure time, and observe the batch server metrics.
- F. Export a debug VM into an image, and run the image on a local server where kernel log messages will be displayed on the native screen.

**Answer: ACE**

**Explanation:**

<https://www.flexera.com/blog/cloud/2013/12/google-compute-engine-live-migration-passes-the-test/>

"With live migration, the virtual machines are moved without any downtime or noticeable service degradation"

**NEW QUESTION 166**

- (Topic 5)

Your company has an application running as a Deployment in a Google Kubernetes Engine (GKE) cluster. When releasing new versions of the application via a rolling deployment, the team has been causing outages. The root cause of the outages is misconfigurations with parameters that are only used in production. You want to put preventive measures for this in the platform to prevent outages. What should you do?

- A. Configure liveness and readiness probes in the Pod specification
- B. Configure an uptime alert in Cloud Monitoring
- C. Create a Scheduled Task to check whether the application is available
- D. Configure health checks on the managed instance group

**Answer: D**

**Explanation:**

This option can help prevent outages caused by misconfigurations with parameters that are only used in production. Liveness and readiness probes are mechanisms to check the health and availability of the Pods and containers in a GKE cluster. Liveness probes determine if a container is still running, and if not, restart it. Readiness probes determine if a container is ready to serve requests, and if not, remove it from the load balancer. By configuring liveness and readiness probes in the Pod specification, you can ensure that your application can handle traffic and recover from failures gracefully during a rolling update. The other options are not optimal for this scenario, because they either do not prevent outages, but only alert or monitor them (B, C), or do not apply to GKE clusters, but to Compute Engine instances (D). References:

? <https://cloud.google.com/kubernetes-engine/docs/how-to/updating-apps>

? <https://cloud.google.com/blog/products/containers-kubernetes/kubernetes-best-practices-setting-up-health-checks-with-readiness-and-liveness-probes>

**NEW QUESTION 168**

- (Topic 5)

Your company has a Google Cloud project that uses BigQuery for data warehousing. The VPN tunnel between the on-premises environment and Google Cloud is configured with Cloud VPN. Your security team wants to avoid data exfiltration by malicious insiders, compromised code, and accidental oversharing. What should you do?

- A. Configure VPC Service Controls and configure Private Google Access for on-premises hosts.
- B. Create a service account, grant the BigQuery JobUser role and Storage Object Viewer role to the service account, and remove all other Identity and Access Management (IAM) access from the project.
- C. Configure Private Google Access.
- D. Configure Private Service Connect.

**Answer:** A

#### NEW QUESTION 170

- (Topic 5)

You are configuring the cloud network architecture for a newly created project in Google Cloud that will host applications in Compute Engine. 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

#### Explanation:

Cloud NAT (network address translation) lets Google Cloud virtual machine (VM) instances without external IP addresses and private Google Kubernetes Engine (GKE) clusters send outbound packets to the internet and receive any corresponding established inbound response packets<sup>1</sup>. By configuring Cloud NAT and selecting sub-b in the NAT mapping section, you can allow instances in sub-b to access the external repository without exposing them to the internet<sup>1</sup>.

#### NEW QUESTION 171

- (Topic 5)

Your company has announced that they will be outsourcing operations functions. You want to allow developers to easily stage new versions of a cloud-based application in the production environment and allow the outsourced operations team to autonomously promote staged versions to production. You want to minimize the operational overhead of the solution. Which Google Cloud product should you migrate to?

- A. App Engine
- B. GKE On-Prem
- C. Compute Engine
- D. Google Kubernetes Engine

**Answer:** A

#### Explanation:

Reference: <https://cloud.google.com/security/compliance/eba-outsourcing-mapping-gcp>

#### NEW QUESTION 174

- (Topic 5)

Your company is running a stateless application on a Compute Engine instance. The application is used heavily during regular business hours and lightly outside of business hours. Users are reporting that the application is slow during peak hours. You need to optimize the application's performance. What should you do?

- A. Create a snapshot of the existing disk
- B. Create an instance template from the snapshot. Create an autoscaled managed instance group from the instance template.
- C. Create a snapshot of the existing disk
- D. Create a custom image from the snapshot
- E. Create an autoscaled managed instance group from the custom image.
- F. Create a custom image from the existing disk
- G. Create an instance template from the custom image
- H. Create an autoscaled managed instance group from the instance template.
- I. Create an instance template from the existing disk
- J. Create a custom image from the instance template. Create an autoscaled managed instance group from the custom image.

**Answer:** B

#### Explanation:

<https://cloud.google.com/compute/docs/instance-templates/create-instance-templates>

#### NEW QUESTION 177

- (Topic 5)

You are working at a financial institution that stores mortgage loan approval documents on Cloud Storage. Any change to these approval documents must be uploaded as a separate approval file, so you want to ensure that these documents cannot be deleted or overwritten for the next 5 years. What should you do?

- A. Create a retention policy on the bucket for the duration of 5 years
- B. Create a lock on the retention policy.
- C. Create the bucket with uniform bucket-level access, and grant a service account the role of Object Write

- D. Use the service account to upload new files.
- E. Use a customer-managed key for the encryption of the bucket
- F. Rotate the key after 5 years.
- G. Create the bucket with fine-grained access control, and grant a service account the role of Object Write
- H. Use the service account to upload new files.

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/storage/docs/using-bucket-lock>

**NEW QUESTION 179**

- (Topic 5)

As part of implementing their disaster recovery plan, your company is trying to replicate their production MySQL database from their private data center to their GCP project using a Google Cloud VPN connection. They are experiencing latency issues and a small amount of packet loss that is disrupting the replication. What should they do?

- A. Configure their replication to use UDP.
- B. Configure a Google Cloud Dedicated Interconnect.
- C. Restore their database daily using Google Cloud SQL.
- D. Add additional VPN connections and load balance them.
- E. Send the replicated transaction to Google Cloud Pub/Sub.

**Answer:** B

**NEW QUESTION 181**

- (Topic 5)

An application development team has come to you for advice. They are planning to write and deploy an HTTP(S) API using Go 1.12. The API will have a very unpredictable workload and must remain reliable during peaks in traffic. They want to minimize operational overhead for this application. What approach should you recommend?

- A. Use a Managed Instance Group when deploying to Compute Engine
- B. Develop an application with containers, and deploy to Google Kubernetes Engine (GKE)
- C. Develop the application for App Engine standard environment
- D. Develop the application for App Engine Flexible environment using a custom runtime

**Answer:** C

**Explanation:**

<https://cloud.google.com/appengine/docs/the-appengine-environments>

**NEW QUESTION 182**

- (Topic 5)

You have created several preemptible Linux virtual machine instances using Google Compute Engine. You want to properly shut down your application before the virtual machines are preempted. What should you do?

- A. Create a shutdown script named k99.shutdown in the /etc/rc.6.d/ directory.
- B. Create a shutdown script registered as a xinetd service in Linux and configure a Stackdriver endpoint check to call the service.
- C. Create a shutdown script and use it as the value for a new metadata entry with the key shutdown-script in the Cloud Platform Console when you create the new virtual machine instance.
- D. Create a shutdown script, registered as a xinetd service in Linux, and use the gcloud compute instances add-metadata command to specify the service URL as the value for a new metadata entry with the key shutdown-script-url

**Answer:** C

**NEW QUESTION 183**

- (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-engine-with-kubemci>

**NEW QUESTION 184**

- (Topic 5)

You need to deploy an application to Google Cloud. The application receives traffic via TCP and reads and writes data to the filesystem. The application does not support horizontal scaling. The application process requires full control over the data on the file system because concurrent access causes corruption. The

business is willing to accept a downtime when an incident occurs, but the application must be available 24/7 to support their business operations. You need to design the architecture of this application on Google Cloud.  
What should you do?

- A. Use a managed instance group with instances in multiple zones, use Cloud Filestore, and use an HTTP load balancer in front of the instances.
- B. Use a managed instance group with instances in multiple zones, use Cloud Filestore, and use a network load balancer in front of the instances.
- C. Use an unmanaged instance group with an active and standby instance in different zones, use a regional persistent disk, and use an HTTP load balancer in front of the instances.
- D. Use an unmanaged instance group with an active and standby instance in different zones, use a regional persistent disk, and use a network load balancer in front of the instances.

**Answer:** D

**Explanation:**

Reference: <https://cloud.google.com/compute/docs/instance-groups>

#### NEW QUESTION 188

- (Topic 5)

You are designing an application for use only during business hours. For the minimum viable product release, you'd like to use a managed product that automatically "scales to zero" so you don't incur costs when there is no activity.  
Which primary compute resource should you choose?

- A. Cloud Functions
- B. Compute Engine
- C. Kubernetes Engine
- D. AppEngine flexible environment

**Answer:** A

**Explanation:**

<https://cloud.google.com/serverless-options>

#### NEW QUESTION 190

- (Topic 5)

A small number of API requests to your microservices-based application take a very long time. You know that each request to the API can traverse many services. You want to know which service takes the longest in those cases. What should you do?

- A. Set timeouts on your application so that you can fail requests faster.
- B. Send custom metrics for each of your requests to Stackdriver Monitoring.
- C. Use Stackdriver Monitoring to look for insights that show when your API latencies are high.
- D. Instrument your application with Stackdriver Trace in order to break down the request latencies at each microservice.

**Answer:** D

**Explanation:**

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

#### NEW QUESTION 191

- (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 193

- (Topic 5)

Your company plans to migrate a multi-petabyte data set to the cloud. The data set must be available 24hrs a day. Your business analysts have experience only with using a SQL interface. How should you store the data to optimize it for ease of analysis?

- A. Load data into Google BigQuery.
- B. Insert data into Google Cloud SQL.
- C. Put flat files into Google Cloud Storage.
- D. Stream data into Google Cloud Datastore.

**Answer:** A

**Explanation:**

Google Big Query is for multi peta byte storage , HA(High availability) which means 24 hours, SQL interface .

<https://medium.com/google-cloud/the-12-components-of-google-bigquery-c2b49829a7c7> <https://cloud.google.com/solutions/bigquery-data-warehouse>



<https://cloud.google.com/bigquery/>

BigQuery is Google's serverless, highly scalable, low cost enterprise data warehouse designed to make all your data analysts productive. Because there is no infrastructure to manage, you can focus on analyzing data to find meaningful insights using familiar SQL and you don't need a database administrator. BigQuery enables you to analyze all your data by creating a logical data warehouse over managed, columnar storage as well as data from object storage, and spreadsheets.

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

#### NEW QUESTION 196

- (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 201

- (Topic 5)

An application development team believes their current logging tool will not meet their needs for their new cloud-based product. They want a better tool to capture errors and help them analyze their historical log data. You want to help them find a solution that meets their needs, what should you do?

- A. Direct them to download and install the Google StackDriver logging agent.
- B. Send them a list of online resources about logging best practices.
- C. Help them define their requirements and assess viable logging tools.
- D. Help them upgrade their current tool to take advantage of any new features.

**Answer: C**

#### Explanation:

Help them define their requirements and assess viable logging tools. They know the requirements and the existing tools' problems. While it's true StackDriver Logging and Error Reporting possibly meet all their requirements, there might be other tools also meet their need. They need you to provide expertise to make assessment for new tools, specifically, logging tools that can "capture errors and help them analyze their historical log data".

References: <https://cloud.google.com/logging/docs/agent/installation>

#### NEW QUESTION 202

- (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 206

- (Topic 5)

Your company has an application deployed on Anthos clusters (formerly Anthos GKE) that is running multiple microservices. The cluster has both Anthos Service Mesh and Anthos Config Management configured. End users inform you that the application is responding very slowly. You want to identify the microservice that is causing the delay. What should you do?

- A. Use the Service Mesh visualization in the Cloud Console to inspect the telemetry between the microservices.
- B. Use Anthos Config Management to create a ClusterSelector selecting the relevant cluster
- C. On the Google Cloud Console page for Google Kubernetes Engine, view the Workloads and filter on the cluster
- D. Inspect the configurations of the filtered workloads.
- E. Use Anthos Config Management to create a namespaceSelector selecting the relevant cluster namespace
- F. On the Google Cloud Console page for Google Kubernetes Engine, visit the workloads and filter on the namespace
- G. Inspect the configurations of the filtered workloads.
- H. Reinstall Istio using the default Istio profile in order to collect request latency
- I. Evaluate the telemetry between the microservices in the Cloud Console.

**Answer: A**

#### Explanation:

The Anthos Service Mesh pages in the Google Cloud Console provide both summary and in-depth metrics, charts, and graphs that enable you to observe service



behavior. You can monitor the overall health of your services, or drill down on a specific service to set a service level objective (SLO) or troubleshoot an issue.  
<https://cloud.google.com/service-mesh/docs/observability/explore-dashboard> <https://cloud.google.com/anthos/service-mesh>

#### NEW QUESTION 210

- (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 211

- (Topic 5)

You write a Python script to connect to Google BigQuery from a Google Compute Engine virtual machine. The script is printing errors that it cannot connect to BigQuery. What should you do to fix the script?

- A. Install the latest BigQuery API client library for Python
- B. Run your script on a new virtual machine with the BigQuery access scope enabled
- C. Create a new service account with BigQuery access and execute your script with that user
- D. Install the bq component for gcloud with the command gcloud components install bq.

**Answer:** B

#### Explanation:

The error is most like caused by the access scope issue. When create new instance, you have the default Compute engine default service account but most serves access including BigQuery is not enable. Create an instance Most access are not enabled by default You have default service account but don't have the permission (scope) you can stop the instance, edit, change scope and restart it to enable the scope access. Of course, if you Run your script on a new virtual machine with the BigQuery access scope enabled, it also works  
<https://cloud.google.com/compute/docs/access/service-accounts>

#### NEW QUESTION 213

- (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 215

- (Topic 5)

A lead engineer wrote a custom tool that deploys virtual machines in the legacy data center. He wants to migrate the custom tool to the new cloud environment You want to advocate for the adoption of Google Cloud Deployment Manager What are two business risks of migrating to Cloud Deployment Manager? Choose 2 answers

- A. Cloud Deployment Manager uses Python.
- B. Cloud Deployment Manager APIs could be deprecated in the future.
- C. Cloud Deployment Manager is unfamiliar to the company's engineers.
- D. Cloud Deployment Manager requires a Google APIs service account to run.
- E. Cloud Deployment Manager can be used to permanently delete cloud resources.
- F. Cloud Deployment Manager only supports automation of Google Cloud resources.

**Answer:** CF

#### Explanation:

<https://cloud.google.com/deployment-manager/docs/deployments/deleting-deployments>

#### NEW QUESTION 219

- (Topic 5)

You are managing several internal applications that are deployed on Compute Engine. Business users inform you that an application has become very slow over

the past few days. You want to find the underlying cause in order to solve the problem. What should you do first?

- A. Inspect the logs and metrics from the instances in Cloud Logging and Cloud Monitoring.
- B. Restore a backup of the application database from a time before the application became slow.
- C. Deploy the applications on a managed instance group with autoscaling enable
- D. Add a load balancer in front of the managed instance group, and have the users connect to the IP of the load balancer.
- E. Change the Compute Engine Instances behind the application to a machine type with more CPU and memory.

**Answer:** A

**Explanation:**

When an application becomes slow, the first step you should take is to gather information about the underlying cause of the problem. One way to do this is by inspecting the logs and metrics from the instances where the application is deployed. Google Cloud Platform (GCP) provides tools such as Cloud Logging and Cloud Monitoring that can help you to collect and analyze this information. By reviewing the logs and metrics from the instances, you may be able to identify issues such as resource shortages (e.g. CPU, memory, or disk), network problems, or application errors that are causing the performance issues. Once you have identified the underlying cause of the problem, you can take steps to resolve it.

**NEW QUESTION 220**

- (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 223**

- (Topic 5)

Your web application uses Google Kubernetes Engine to manage several workloads. One workload requires a consistent set of hostnames even after pod scaling and relaunches.

Which feature of Kubernetes should you use to accomplish this?

- A. StatefulSets
- B. Role-based access control
- C. Container environment variables
- D. Persistent Volumes

**Answer:** A

**Explanation:**

<https://kubernetes.io/docs/tutorials/stateful-application/basic-stateful-set/>

**NEW QUESTION 228**

- (Topic 5)

Your company uses the Firewall Insights feature in the Google Network Intelligence Center. You have several firewall rules applied to Compute Engine instances. You need to evaluate the efficiency of the applied firewall ruleset. When you bring up the Firewall Insights page in the Google Cloud Console, you notice that there are no log rows to display. What should you do to troubleshoot the issue?

- A. Enable Virtual Private Cloud (VPC) flow logging.
- B. Enable Firewall Rules Logging for the firewall rules you want to monitor.
- C. Verify that your user account is assigned the `compute.networkAdmin` Identity and Access Management (IAM) role.
- D. Install the Google Cloud SDK, and verify that there are no Firewall logs in the command line output.

**Answer:** B

**Explanation:**

Reference: <https://cloud.google.com/network-intelligence-center/docs/firewall-insights/how-to/using-firewall-insights>

**NEW QUESTION 233**

- (Topic 5)

Your company has an application running on a deployment in a GKE cluster. You have a separate cluster for development, staging and production. You have discovered that the team is able to deploy a Docker image to the production cluster without first testing the deployment in development and then staging. You want to allow the team to have autonomy but want to prevent this from happening. You want a Google Cloud solution that can be implemented quickly with minimal effort. What should you do?

- A. Create a Kubernetes admission controller to prevent the container from starting if it is not approved for usage in the given environment
- B. Configure a Kubernetes lifecycle hook to prevent the container from starting if it is not approved for usage in the given environment
- C. Implement a corporate policy to prevent teams from deploying Docker image to an environment unless the Docker image was tested in an earlier environment
- D. Configure the binary authorization policies for the development, staging and production cluster
- E. Create attestations as part of the continuous integration pipeline

**Answer:** D

**Explanation:**

<https://cloud.google.com/architecture/prep-kubernetes-engine-for-prod#binary-authorization>

The most common Binary Authorization use cases involve attestations. An attestation certifies that a specific image has completed a previous stage, as described previously. You configure the Binary Authorization policy to verify the attestation before allowing the image to be deployed. At deploy time, instead of redoing activities that were completed in earlier stages, Binary Authorization only needs to verify the attestation. <https://cloud.google.com/binary-authorization/docs/overview>

**NEW QUESTION 238**

- (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 242**

- (Topic 5)

Your company has decided to build a backup replica of their on-premises user authentication PostgreSQL database on Google Cloud Platform. The database is 4 TB, and large updates are frequent. Replication requires private address space communication. Which networking approach should you use?

- A. Google Cloud Dedicated Interconnect
- B. Google Cloud VPN connected to the data center network
- C. A NAT and TLS translation gateway installed on-premises
- D. A Google Compute Engine instance with a VPN server installed connected to the data center network

**Answer:** A

**Explanation:**

<https://cloud.google.com/docs/enterprise/best-practices-for-enterprise-organizations>

Google Cloud Dedicated Interconnect provides direct physical connections and RFC 1918 communication between your on-premises network and Google's network. Dedicated Interconnect enables you to transfer large amounts of data between networks, which can be more cost effective than purchasing additional bandwidth over the public Internet or using VPN tunnels.

Benefits:

? Traffic between your on-premises network and your VPC network doesn't traverse the public Internet. Traffic traverses a dedicated connection with fewer hops, meaning there are less points of failure where traffic might get dropped or disrupted.

? Your VPC network's internal (RFC 1918) IP addresses are directly accessible from your on-premises network. You don't need to use a NAT device or VPN tunnel to reach internal IP addresses. Currently, you can only reach internal IP addresses over a dedicated connection. To reach Google external IP addresses, you must use a separate connection.

? You can scale your connection to Google based on your needs. Connection capacity is delivered over one or more 10 Gbps Ethernet connections, with a maximum of eight connections (80 Gbps total per interconnect).

? The cost of egress traffic from your VPC network to your on-premises network is reduced. A dedicated connection is generally the least expensive method if you have a high-volume of traffic to and from Google's network.

References: <https://cloud.google.com/interconnect/docs/details/dedicated>

**NEW QUESTION 246**

- (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 mod
- 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.vmExternallpAcces
- 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 247**

- (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 250**

- (Topic 5)

Your customer is moving an existing corporate application to Google Cloud Platform from an on-premises data center. The business owners require minimal user disruption. There are strict security team requirements for storing passwords. What authentication strategy should they use?

- A. Use G Suite Password Sync to replicate passwords into Google.
- B. Federate authentication via SAML 2.0 to the existing Identity Provider.
- C. Provision users in Google using the Google Cloud Directory Sync tool.
- D. Ask users to set their Google password to match their corporate password.

**Answer:** B

**Explanation:**

<https://cloud.google.com/solutions/authenticating-corporate-users-in-a-hybrid-environment>

**NEW QUESTION 252**

- (Topic 5)

You want to establish a Compute Engine application in a single VPC across two regions. The application must communicate over VPN to an on-premises network. How should you deploy the VPN?

- A. Use VPC Network Peering between the VPC and the on-premises network.
- B. Expose the VPC to the on-premises network using IAM and VPC Sharing.
- C. Create a global Cloud VPN Gateway with VPN tunnels from each region to the on-premises peer gateway.
- D. Deploy Cloud VPN Gateway in each region
- E. Ensure that each region has at least one VPN tunnel to the on-premises peer gateway.

**Answer:** C

**Explanation:**

<https://cloud.google.com/vpn/docs/how-to/creating-static-vpns>

**NEW QUESTION 254**

- (Topic 5)

Your company wants to try out the cloud with low risk. They want to archive approximately 100 TB of their log data to the cloud and test the analytics features available to them there, while also retaining that data as a long-term disaster recovery backup. Which two steps should they take? Choose 2 answers

- A. Load logs into Google BigQuery.
- B. Load logs into Google Cloud SQL.
- C. Import logs into Google Stackdriver.
- D. Insert logs into Google Cloud Bigtable.
- E. Upload log files into Google Cloud Storage.

**Answer:** AE

**NEW QUESTION 258**

- (Topic 5)

Your customer wants to capture multiple GBs of aggregate real-time key performance indicators (KPIs) from their game servers running on Google Cloud Platform and monitor the KPIs with low latency. How should they capture the KPIs?

- A. Store time-series data from the game servers in Google Bigtable, and view it using Google Data Studio.
- B. Output custom metrics to Stackdriver from the game servers, and create a Dashboard in StackdriverMonitoring Console to view them.
- C. Schedule BigQuery load jobs to ingest analytics files uploaded to Cloud Storage every ten minutes, and visualize the results in Google Data Studio.
- D. Insert the KPIs into Cloud Datastore entities, and run ad hoc analysis and visualizations of them in Cloud Datalab.

**Answer:** A

**Explanation:**

<https://cloud.google.com/monitoring/api/v3/metrics-details#metric-kinds>



#### NEW QUESTION 261

- (Topic 5)

Your architecture calls for the centralized collection of all admin activity and VM system logs within your project.

How should you collect these logs from both VMs and services?

- A. All admin and VM system logs are automatically collected by Stackdriver.
- B. Stackdriver automatically collects admin activity logs for most service
- C. The Stackdriver Logging agent must be installed on each instance to collect system logs.
- D. Launch a custom syslogd compute instance and configure your GCP project and VMs to forward all logs to it.
- E. Install the Stackdriver Logging agent on a single compute instance and let it collect all audit and access logs for your environment.

**Answer:** B

#### Explanation:

<https://cloud.google.com/logging/docs/agent/default-logs>

#### NEW QUESTION 262

- (Topic 5)

You want to enable your running Google Kubernetes Engine cluster to scale as demand for your application changes.

What should you do?

- A. Add additional nodes to your Kubernetes Engine cluster using the following command: `gcloud container clusters resize CLUSTER_Name --size 10`
- B. Add a tag to the instances in the cluster with the following command: `gcloud compute instances add-tags INSTANCE --tags enable-autoscaling max-nodes=10`
- C. Update the existing Kubernetes Engine cluster with the following command: `gcloud alpha container clusters update mycluster --enable-autoscaling --min-nodes=1 --max-nodes=10`
- D. Create a new Kubernetes Engine cluster with the following command: `gcloud alpha container clusters create mycluster --enable-autoscaling --min-nodes=1 --max-nodes=10` and redeploy your application

**Answer:** C

#### Explanation:

<https://cloud.google.com/kubernetes-engine/docs/concepts/cluster-autoscaler> To enable autoscaling for an existing node pool, run the following command:  
`gcloud container clusters update [CLUSTER_NAME] --enable-autoscaling --min-nodes 1 --max-nodes 10 --zone [COMPUTE_ZONE] --node-pool default-pool`

#### NEW QUESTION 264

- (Topic 5)

Your company has developed a monolithic, 3-tier application to allow external users to upload and share files. The solution cannot be easily enhanced and lacks reliability. The development team would like to re-architect the application to adopt microservices and a fully managed service approach, but they need to convince their leadership that the effort is worthwhile. Which advantage(s) should they highlight to leadership?

- A. The new approach will be significantly less costly, make it easier to manage the underlying infrastructure, and automatically manage the CI/CD pipelines.
- B. The monolithic solution can be converted to a container with Docker.
- C. The generated container can then be deployed into a Kubernetes cluster.
- D. The new approach will make it easier to decouple infrastructure from application, develop and release new features, manage the underlying infrastructure, manage CI/CD pipelines and perform A/B testing, and scale the solution if necessary.
- E. The process can be automated with Migrate for Compute Engine.

**Answer:** C

#### Explanation:

The new approach will make it easier to decouple infrastructure from an application, develop and release new features, manage the underlying infrastructure, manage CI/CD pipelines and perform A/B testing, and scale the solution if necessary.

#### NEW QUESTION 265

- (Topic 5)

A development team at your company has created a dockerized HTTPS web application. You need to deploy the application on Google Kubernetes Engine (GKE) and make sure that the application scales automatically.

How should you deploy to GKE?

- A. Use the Horizontal Pod Autoscaler and enable cluster autoscaling.
- B. Use an Ingress resource to load balance the HTTPS traffic.
- C. Use the Horizontal Pod Autoscaler and enable cluster autoscaling on the Kubernetes cluster.
- D. Use a Service resource of type LoadBalancer to load-balance the HTTPS traffic.
- E. Enable autoscaling on the Compute Engine instance group.
- F. Use an Ingress resource to load balance the HTTPS traffic.
- G. Enable autoscaling on the Compute Engine instance group.
- H. Use a Service resource of type LoadBalancer to load-balance the HTTPS traffic.

**Answer:** B

#### Explanation:

<https://cloud.google.com/kubernetes-engine/docs/tutorials/http-balancer> <https://cloud.google.com/kubernetes-engine/docs/concepts/network-overview#ext-lb>

#### NEW QUESTION 268

- (Topic 5)

You have deployed several instances on Compute Engine. As a security requirement, instances cannot have a public IP address. There is no VPN connection between Google

Cloud and your office, and you need to connect via SSH into a specific machine without violating the security requirements. What should you do?



- A. Configure Cloud NAT on the subnet where the instance is hosted
- B. Create an SSH connection to the Cloud NAT IP address to reach the instance.
- C. Add all instances to an unmanaged instance group
- D. Configure TCP Proxy Load Balancing with the instance group as a backend
- E. Connect to the instance using the TCP Proxy IP.
- F. Configure Identity-Aware Proxy (IAP) for the instance and ensure that you have the role of IAP-secured Tunnel User
- G. Use the gcloud command line tool to ssh into the instance.
- H. Create a bastion host in the network to SSH into the bastion host from your office location
- I. From the bastion host, SSH into the desired instance.

**Answer:** C

**Explanation:**

[https://cloud.google.com/iap/docs/using-tcp-forwarding#tunneling\\_with\\_ssh](https://cloud.google.com/iap/docs/using-tcp-forwarding#tunneling_with_ssh)

Leveraging the BeyondCorp security model. "This January, we enhanced context-aware access capabilities in Cloud Identity-Aware Proxy (IAP) to help you protect SSH and RDP access to your virtual machines (VMs)—without needing to provide your VMs with public IP addresses, and without having to set up bastion hosts. "

<https://cloud.google.com/blog/products/identity-security/cloud-iap-enables-context-aware-access-to-vms-via-ssh-and-rdp-without-bastion-hosts>

Reference: <https://cloud.google.com/solutions/connecting-securely>

**NEW QUESTION 273**

- (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 275**

- (Topic 5)

During a high traffic portion of the day, one of your relational databases crashes, but the replica is never promoted to a master. You want to avoid this in the future. What should you do?

- A. Use a different database.
- B. Choose larger instances for your database.
- C. Create snapshots of your database more regularly.
- D. Implement routinely scheduled failovers of your databases.

**Answer:** D

**Explanation:**

<https://cloud.google.com/solutions/dr-scenarios-planning-guide>

**NEW QUESTION 280**

- (Topic 5)

Your company is using BigQuery as its enterprise data warehouse. Data is distributed over several Google Cloud projects. All queries on BigQuery need to be billed on a single project. You want to make sure that no query costs are incurred on the projects that contain the data. Users should be able to query the datasets, but not edit them.

How should you configure users' access roles?

- A. Add all users to a group
- B. Grant the group the role of BigQuery user on the billing project and BigQuerydataViewer on the projects that contain the data.
- C. Add all users to a group
- D. Grant the group the roles of BigQuery dataViewer on the billing project andBigQuery user on the projects that contain the data.
- E. Add all users to a group
- F. Grant the group the roles of BigQuery jobUser on the billing project and BigQuery dataViewer on the projects that contain the data.
- G. Add all users to a group
- H. Grant the group the roles of BigQuery dataViewer on the billing project andBigQuery jobUser on the projects that contain the data.

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/bigquery/docs/running-queries>

**NEW QUESTION 284**

- (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

E. 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 287**

- (Topic 5)

Your web application has several VM instances running within a VPC. You want to restrict communications between instances to only the paths and ports you authorize, but you don't want to rely on static IP addresses or subnets because the app can autoscale. How should you restrict communications?

- A. Use separate VPCs to restrict traffic
- B. Use firewall rules based on network tags attached to the compute instances
- C. Use Cloud DNS and only allow connections from authorized hostnames
- D. Use service accounts and configure the web application particular service accounts to have access

**Answer:** B

**NEW QUESTION 291**

- (Topic 5)

Your company just finished a rapid lift and shift to Google Compute Engine for your compute needs. You have another 9 months to design and deploy a more cloud-native solution. Specifically, you want a system that is no-ops and auto-scaling. Which two compute products should you choose? Choose 2 answers

- A. Compute Engine with containers
- B. Google Kubernetes Engine with containers
- C. Google App Engine Standard Environment
- D. Compute Engine with custom instance types
- E. Compute Engine with managed instance groups

**Answer:** BC

**Explanation:**

B: With Container Engine, Google will automatically deploy your cluster for you, update, patch, secure the nodes.

Kubernetes Engine's cluster autoscaler automatically resizes clusters based on the demands of the workloads you want to run.

C: Solutions like Datastore, BigQuery, AppEngine, etc are truly NoOps.

App Engine by default scales the number of instances running up and down to match the load, thus providing consistent performance for your app at all times while minimizing idle instances and thus reducing cost.

Note: At a high level, NoOps means that there is no infrastructure to build out and manage during usage of the platform. Typically, the compromise you make with NoOps is that you lose control of the underlying infrastructure.

References: <https://www.quora.com/How-well-does-Google-Container-Engine-support-Google-Cloud-Platform%E2%80%99s-NoOps-claim>

**NEW QUESTION 292**

- (Topic 5)

Your company has sensitive data in Cloud Storage buckets. Data analysts have Identity

Access Management (IAM) permissions to read the buckets. You want to prevent data analysts from retrieving the data in the buckets from outside the office network. What should you do?

- A. \* 1. Create a VPC Service Controls perimeter that includes the projects with the buckets.\* 2. Create an access level with the CIDR of the office network.
- B. \* 1. Create a firewall rule for all instances in the Virtual Private Cloud (VPC) network for source range.\* 2. Use the Classless Inter-domain Routing (CIDR) of the office network.
- C. \* 1. Create a Cloud Function to remove IAM permissions from the buckets, and another Cloud Function to add IAM permissions to the buckets.\* 2. Schedule the Cloud Functions with Cloud Scheduler to add permissions at the start of business and remove permissions at the end of business.
- D. \* 1. Create a Cloud VPN to the office network.\* 2. Configure Private Google Access for on-premises hosts.

**Answer:** A

**Explanation:**

For all Google Cloud services secured with VPC Service Controls, you can ensure that: Resources within a perimeter are accessed only from clients within authorized VPC networks using Private Google Access with either Google Cloud or on-premises. <https://cloud.google.com/vpc-service-controls/docs/overview>

<https://cloud.google.com/vpc-service-controls/docs/overview>. You create a service control

across your VPC and any cloud bucket or any project resource to restrict access. Anything outside of it can't access the resources within service control perimeter

**NEW QUESTION 294**

- (Topic 5)

Your company's test suite is a custom C++ application that runs tests throughout each day on Linux virtual machines. The full test suite takes several hours to complete, running on a limited number of on premises servers reserved for testing. Your company wants to move the testing infrastructure to the cloud, to reduce the amount of time it takes to fully test a change to the system, while changing the tests as little as possible. Which cloud infrastructure should you recommend?

- A. Google Compute Engine unmanaged instance groups and Network Load Balancer
- B. Google Compute Engine managed instance groups with auto-scaling
- C. Google Cloud Dataproc to run Apache Hadoop jobs to process each test
- D. Google App Engine with Google Stackdriver for logging

**Answer:** B

**Explanation:**

<https://cloud.google.com/compute/docs/instance-groups/>

Google Compute Engine enables users to launch virtual machines (VMs) on demand. VMs can be launched from the standard images or custom images created by users.

Managed instance groups offer autoscaling capabilities that allow you to automatically add or remove instances from a managed instance group based on increases or decreases in load. Autoscaling helps your applications gracefully handle increases in traffic and reduces cost when the need for resources is lower.

**NEW QUESTION 299**

- (Topic 5)

Your company has just acquired another company, and you have been asked to integrate their existing Google Cloud environment into your company's data center. Upon investigation, you discover that some of the RFC 1918 IP ranges being used in the new company's Virtual Private Cloud (VPC) overlap with your data center IP space. What should you do to enable connectivity and make sure that there are no routing conflicts when connectivity is established?

- A. Create a Cloud VPN connection from the new VPC to the data center, create a Cloud Router, and apply new IP addresses so there is no overlapping IP space.
- B. Create a Cloud VPN connection from the new VPC to the data center, and create a Cloud NAT instance to perform NAT on the overlapping IP space.
- C. Create a Cloud VPN connection from the new VPC to the data center, create a Cloud Router, and apply a custom route advertisement to block the overlapping IP space.
- D. Create a Cloud VPN connection from the new VPC to the data center, and apply a firewall rule that blocks the overlapping IP space.

**Answer:** A

**Explanation:**

To connect two networks together we need (1) either VPN or interconnect and (2) peering. When there is peering, you cannot have conflicting IP addresses. You can use either Cloud VPN or Cloud Interconnect to securely connect your on-premises network to your VPC network. (<https://cloud.google.com/vpc/docs/vpc-peering#transit-network>) At the time of peering, Google Cloud checks to see if there are any subnet IP ranges that overlap subnet IP ranges in the other network. If there is any overlap, peering is not established. (<https://cloud.google.com/vpc/docs/vpc-peering#considerations>) NAT is used to translate private to public IP and vice versa, however because we are connecting 2 networks together, they become private IPs. So it is not applicable.

**NEW QUESTION 303**

- (Topic 5)

You want to create a private connection between your instances on Compute Engine and your on-premises data center. You require a connection of at least 20 Gbps. You want to follow Google-recommended practices.

How should you set up the connection?

- A. Create a VPC and connect it to your on-premises data center using Dedicated Interconnect.
- B. Create a VPC and connect it to your on-premises data center using a single Cloud VPN.
- C. Create a Cloud Content Delivery Network (Cloud CDN) and connect it to your on- premises data center using Dedicated Interconnect.
- D. Create a Cloud Content Delivery Network (Cloud CDN) and connect it to your on- premises data center using a single Cloud VPN.

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/compute/docs/instances/connecting-advanced>

**NEW QUESTION 305**

- (Topic 6)

For this question, refer to the Dress4Win case study. To be legally compliant during an audit, Dress4Win must be able to give insights in all administrative actions that modify the configuration or metadata of resources on Google Cloud.

What should you do?

- A. Use Stackdriver Trace to create a trace list analysis.
- B. Use Stackdriver Monitoring to create a dashboard on the project's activity.
- C. Enable Cloud Identity-Aware Proxy in all projects, and add the group of Administrators as a member.
- D. Use the Activity page in the GCP Console and Stackdriver Logging to provide the required insight.

**Answer:** A

**Explanation:**

<https://cloud.google.com/logging/docs/audit/>

**NEW QUESTION 310**

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