

# Exam Questions Professional-Cloud-Architect

Google Certified Professional - Cloud Architect (GCP)

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



### NEW QUESTION 1

- (Topic 1)

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

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

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

**Answer:** A

#### Explanation:

From Scenario:

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

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

### NEW QUESTION 2

- (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 20 million vehicles are scattered around the world. Based on the vehicle's location its telemetry data is stored in a Google Cloud Storage (GCS) regional bucket (US, Europe, or Asia). The CTO has asked you to run a report on the raw telemetry data to determine why vehicles are breaking down after 100 K miles. You want to run this job on all the data. What is the most cost-effective way to run this job?

- A. Move all the data into 1 zone, then launch a Cloud Dataproc cluster to run the job.
- B. Move all the data into 1 region, then launch a Google Cloud Dataproc cluster to run the job.
- C. Launch a cluster in each region to preprocess and compress the raw data, then move the data into a multi region bucket and use a Dataproc cluster to finish the job.
- D. Launch a cluster in each region to preprocess and compress the raw data, then move the data into a region bucket and use a Cloud Dataproc cluster to finish the job.

**Answer:** D

#### Explanation:

Storage guarantees 2 replicates which are geo diverse (100 miles apart) which can get better remote latency and availability.

More importantly, is that multiregional heavily leverages Edge caching and CDNs to provide the content to the end users.

All this redundancy and caching means that Multiregional comes with overhead to sync and ensure consistency between geo-diverse areas. As such, it's much better for write-once- read-many scenarios. This means frequently accessed (e.g. "hot" objects) around the world, such as website content, streaming videos, gaming or mobile applications.

References: <https://medium.com/google-cloud/google-cloud-storage-what-bucket-class-for-the-best-performance-5c847ac8f9f2>

### NEW QUESTION 4

- (Topic 2)

For this question refer to the TerramEarth case study.

Which of TerramEarth's legacy enterprise processes will experience significant change as a result of increased Google Cloud Platform adoption.

- A. Opex/capex allocation, LAN changes, capacity planning
- B. Capacity planning, TCO calculations, opex/capex allocation
- C. Capacity planning, utilization measurement, data center expansion
- D. Data Center expansion, TCO calculations, utilization measurement

**Answer:** B

#### Explanation:

Capacity planning, TCO calculations, opex/capex allocation From the case study, it can conclude that Management (CXO) all concern rapid provision of resources (infrastructure)

for growing as well as cost management, such as Cost optimization in Infrastructure, trade up front capital expenditures (Capex) for ongoing operating expenditures (Opex), and Total cost of ownership (TCO)

#### NEW QUESTION 5

- (Topic 2)

For this question refer to the TerramEarth case study

Operational parameters such as oil pressure are adjustable on each of TerramEarth's vehicles to increase their efficiency, depending on their environmental conditions. Your primary goal is to increase the operating efficiency of all 20 million cellular and unconnected vehicles in the field How can you accomplish this goal?

- A. Have your engineers inspect the data for patterns, and then create an algorithm with rules that make operational adjustments automatically.
- B. Capture all operating data, train machine learning models that identify ideal operations, and run locally to make operational adjustments automatically.
- C. Implement a Google Cloud Dataflow streaming job with a sliding window, and use Google Cloud Messaging (GCM) to make operational adjustments automatically.
- D. Capture all operating data, train machine learning models that identify ideal operations, and host in Google Cloud Machine Learning (ML) Platform to make operational adjustments automatically.

**Answer:** B

#### NEW QUESTION 6

- (Topic 3)

For this question, refer to the JencoMart case study.

JencoMart has built a version of their application on Google Cloud Platform that serves traffic to Asia. You want to measure success against their business and technical goals.

Which metrics should you track?

- A. Error rates for requests from Asia
- B. Latency difference between US and Asia
- C. Total visits, error rates, and latency from Asia
- D. Total visits and average latency for users in Asia
- E. The number of character sets present in the database

**Answer:** D

#### NEW QUESTION 7

- (Topic 3)

For this question, refer to the JencoMart case study.

JencoMart has decided to migrate user profile storage to Google Cloud Datastore and the application servers to Google Compute Engine (GCE). During the migration, the existing infrastructure will need access to Datastore to upload the data. What service account key- management strategy should you recommend?

- A. Provision service account keys for the on-premises infrastructure and for the GCE virtual machines (VMs).
- B. Authenticate the on-premises infrastructure with a user account and provision service account keys for the VMs.
- C. Provision service account keys for the on-premises infrastructure and use Google Cloud Platform (GCP) managed keys for the VMs
- D. Deploy a custom authentication service on GCE/Google Container Engine (GKE) for the on-premises infrastructure and use GCP managed keys for the VMs.

**Answer:** A

#### Explanation:

<https://cloud.google.com/iam/docs/understanding-service-accounts>

Migrating data to Google Cloud Platform

Let's say that you have some data processing that happens on another cloud provider and you want to transfer the processed data to Google Cloud Platform. You can use a service account from the virtual machines on the external cloud to push the data to Google Cloud Platform. To do this, you must create and download a service account key when you create the service account and then use that key from the external process to call the Cloud Platform APIs.

References: [https://cloud.google.com/iam/docs/understanding-service-accounts#migrating\\_data\\_to\\_google\\_cloud\\_platform](https://cloud.google.com/iam/docs/understanding-service-accounts#migrating_data_to_google_cloud_platform)

#### NEW QUESTION 8

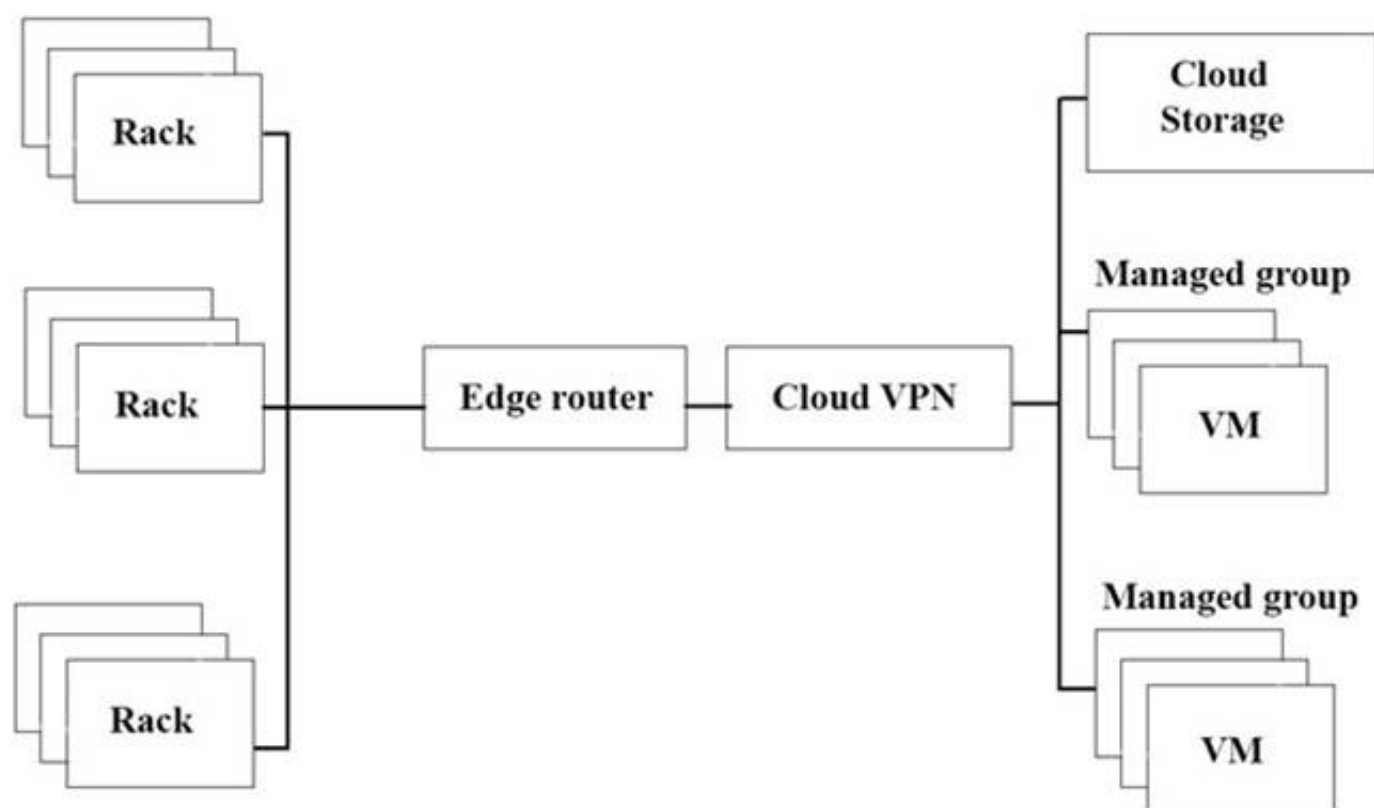
- (Topic 3)

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.)

## On-premises infrastructure

## Google



- 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 9

- (Topic 4)

For this question, refer to the Dress4Win case study.

As part of their new application experience, Dress4Win allows customers to upload images of themselves. The customer has exclusive control over who may view these images. Customers should be able to upload images with minimal latency and also be shown their images quickly on the main application page when they log in. Which configuration should Dress4Win use?

- A. Store image files in a Google Cloud Storage bucket
- B. Use Google Cloud Datastore to maintain metadata that maps each customer's ID and their image files.
- C. Store image files in a Google Cloud Storage bucket
- D. Add custom metadata to the uploaded images in Cloud Storage that contains the customer's unique ID.
- E. Use a distributed file system to store customers' image
- F. As storage needs increase, add more persistent disks and/or node
- G. Assign each customer a unique ID, which sets each file's owner attribute, ensuring privacy of images.
- H. Use a distributed file system to store customers' image
- I. As storage needs increase, add more persistent disks and/or node
- J. Use a Google Cloud SQL database to maintain metadata that maps each customer's ID to their image files.

**Answer:** A

### NEW QUESTION 10

- (Topic 4)

For this question, refer to the Dress4Win case study.

The Dress4Win security team has disabled external SSH access into production virtual machines (VMs) on Google Cloud Platform (GCP). The operations team needs to remotely manage the VMs, build and push Docker containers, and manage Google Cloud Storage objects. What can they do?

- A. Grant the operations engineers access to use Google Cloud Shell.
- B. Configure a VPN connection to GCP to allow SSH access to the cloud VMs.
- C. Develop a new access request process that grants temporary SSH access to cloud VMs when an operations engineer needs to perform a task.
- D. Have the development team build an API service that allows the operations team to execute specific remote procedure calls to accomplish their tasks.

**Answer:** A

### 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 12**

- (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 14**

- (Topic 5)

Your company captures all web traffic data in Google Analytics 260 and stores it in BigQuery. Each country has its own dataset. Each dataset has multiple tables.

You want analysts from each country

to be able to see and query only the data for their respective countries. How should you configure the access rights?

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

**Answer:** A

**NEW QUESTION 16**

- (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 1AM 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 departmentand grant the respective group the required 1AM permissions at the folder level Add the projects under the respective folders
- B. Grant all department members the required 1AM permissions for their respective projects
- C. Create a Google Group per department and add all department members to theirrespective groups Grant each group the required I AM permissions for their respective projects
- D. Create a folder per department and grant the respective members of the department the required 1AM permissions at the folder leve
- 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 20

- (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 use preemptible 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 25

- (Topic 5)

Your company has an application running on Compute Engine that allows users to play their favorite music. There are a fixed number of instances. Files are stored in Cloud Storage and data is streamed directly to users. Users are reporting that they sometimes need to attempt to play popular songs multiple times before they are successful. You need to improve the performance of the application. What should you do?

A.

- \* 1. Copy popular songs into CloudSQL as a blob
- \* 2. Update application code to retrieve data from CloudSQL when Cloud Storage is overloaded

B.

- \* 1. Create a managed instance group with Compute Engine instances
- \* 2. Create a global load balancer and configure it with two backends
  - \* Managed instance group
  - \* Cloud Storage bucket
- \* 3. Enable Cloud CDN on the bucket backend

C.

- \* 1. Mount the Cloud Storage bucket using `gcsfuse` on all backend Compute Engine instances
- \* 2. Serve music files directly from the backend Compute Engine instance

D.

- \* 1. Create a Cloud Filestore NFS volume and attach it to the backend Compute Engine instances
- \* 2. Download popular songs in Cloud Filestore
- \* 3. Serve music files directly from the backend Compute Engine instance

A.

**Answer:** B

#### NEW QUESTION 27

- (Topic 5)

Your company has a networking team and a development team. The development team runs applications on Compute Engine instances that contain sensitive data. The development team requires administrative permissions for Compute Engine. Your company requires all network resources to be managed by the networking team. The development team does not want the networking team to have access to the sensitive data on the instances. What should you do?

- A. \* 1. Create a project with a standalone VPC and assign the Network Admin role to the networking team.\* 2. Create a second project with a standalone VPC and assign the Compute Admin role to the development team.\* 3. Use Cloud VPN to join the two VPCs.
- B. \* 1. Create a project with a standalone Virtual Private Cloud (VPC), assign the Network Admin role to the networking team, and assign the Compute Admin role to the development team.
- C. \* 1. Create a project with a Shared VPC and assign the Network Admin role to the networking team.\* 2. Create a second project without a VPC, configure it as a Shared VPC service project, and assign the Compute Admin role to the development team.
- D. \* 1. Create a project with a standalone VPC and assign the Network Admin role to the networking team.\* 2. Create a second project with a standalone VPC and assign the Compute Admin role to the development team.\* 3. Use VPC Peering to join the two VPCs.

**Answer:** C

#### Explanation:

In this scenario, a large organization has a central team that manages security and networking controls for the entire organization. Developers do not have permissions to make changes to any network or security settings defined by the security and networking team but they are granted permission to create resources such as virtual machines in shared subnets. To facilitate this the organization makes use of a shared VPC (Virtual Private Cloud). A shared VPC allows creation of a VPC network of RFC 1918 IP spaces that associated projects (service projects) can then use. Developers using the associated projects can create VM instances in the shared VPC network spaces. The organization's network and security admins can create subnets, VPNs, and firewall rules usable by all the projects in the VPC network. [https://cloud.google.com/iam/docs/job-functions/networking#single\\_team\\_manages\\_security\\_network\\_for\\_organization](https://cloud.google.com/iam/docs/job-functions/networking#single_team_manages_security_network_for_organization)

Reference: <https://cloud.google.com/vpc/docs/shared-vpc>

#### NEW QUESTION 29

- (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 for 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 31

- (Topic 5)

Your company has a Google Workspace account and Google Cloud Organization. Some developers in the company have created Google Cloud projects outside of the Google Cloud Organization.

You want to create an Organization structure that allows developers to create projects, but prevents them from modifying production projects. You want to manage policies for all projects centrally and be able to set more restrictive policies for production projects.

You want to minimize disruption to users and developers when business needs change in the future. You want to follow Google-recommended practices. How should you design the Organization structure?

- A. \* 1 Create a second Google Workspace account and Organization. \* 2 Grant all developers the Project Creator IAM role on the new Organization. \* 3 Move the developer projects into the new Organization. \* 4 Set the policies for all projects on both Organizations. \* 5 Additionally set the production policies on the original Organization.
- B. \* 1 Create a folder under the Organization resource named "Production". \* 2 Grant all developers the Project Creator IAM role on the Organization. \* 3. Move the developer projects into the Organization. \* 4 Set the policies for all projects on the Organization. \* 5 Additionally set the production policies on the "Production" folder.
- C. \* 1 Create folders under the Organization resource named "Development" and "Production". \* 2 Grant all developers the Project Creator IAM role on the "Development" folder. \* 3. Move the developer projects into the "Development" folder. \* 4 Set the policies for all projects on the Organization. \* 5 Additionally set the production policies on the "Production" folder.
- D. \* 1 Designate the Organization for production projects only. \* 2 Ensure that developers do not have the Project Creator IAM role on the Organization. \* 3 Create development projects outside of the Organization using the developer Google Workspace accounts. \* 4 Set the policies for all projects on the Organization. \* 5 Additionally set the production policies on the individual production projects.

**Answer: C**

#### Explanation:

This option can help create an organization structure that allows developers to create projects, but prevents them from modifying production projects. Folders are containers for projects and other folders within Google Cloud organizations. Folders allow resources to be structured hierarchically and inherit policies from their parent resources. By creating folders under the organization resource named "Development" and "Production", you can organize your projects by environment and apply different policies to them. By granting all developers the Project Creator IAM role on the "Development" folder, you can allow them to create projects under that folder, but not under the "Production" folder. By moving the developer projects into the "Development" folder, you can ensure that they are subject to the policies set on that folder. By setting the policies for all projects on the organization, you can manage policies centrally and efficiently. By additionally setting the production policies on the "Production" folder, you can enforce more restrictive policies for production projects and prevent developers from modifying them. The other options are not optimal for this scenario, because they either create a second Google Workspace account and organization, which increases complexity and cost (A), or do not use folders to organize projects by environment, which makes it harder to manage policies and permissions (B, D). References:

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

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

#### NEW QUESTION 33

- (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 34

- (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 38**

- (Topic 5)

Your company has just recently activated Cloud Identity to manage users. The Google Cloud Organization has been configured as wed. The security learn 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 o 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 me IAM rules of all projects within the organization• Deletes all users that do not belong to the company domainCreate a Compute Engine instance m 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 43**

- (Topic 5)

You are developing your microservices application on Google Kubernetes Engine. During testing, you want to validate the behavior of your application in case a specific microservice should suddenly crash. What should you do?

- A. Add a taint to one of the nodes of the Kubernetes cluste
- B. For the specific microservice, configure a pod anti-affinity label that has the name of the tainted node as a value.
- C. Use Istio's fault injection on the particular microservice whose faulty behavior you want to simulate.
- D. Destroy one of the nodes of the Kubernetes cluster to observe the behavior.
- E. Configure Istio's traffic management features to steer the traffic away from a crashing microservice.

**Answer:** B

**Explanation:**

Microservice runs on all nodes. The Micro service runs on Pod, Pod runs on Nodes. Nodes is nothing but Virtual machines. Once deployed the application microservices will get deployed across all Nodes. Destroying one node may not mimic the behaviour of microservice crashing as it may be running in other nodes. link: <https://istio.io/latest/docs/tasks/traffic-management/fault-injection/>

**NEW QUESTION 46**

- (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 returndatabase values from memcache before issuing a query to Cloud SQL.
- C. Set the memcache service level to dedicate
- 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 databasevalues 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 51**

- (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 52**



- (Topic 5)

Your application needs to process credit card transactions. You want the smallest scope of Payment Card Industry (PCI) compliance without compromising the ability to analyze transactional data and trends relating to which payment methods are used. How should you design your architecture?

- A. Create a tokenizer service and store only tokenized data.
- B. Create separate projects that only process credit card data.
- C. Create separate subnetworks and isolate the components that process credit card data.
- D. Streamline the audit discovery phase by labeling all of the virtual machines (VMs) that process PCI data.
- E. Enable Logging export to Google BigQuery and use ACLs and views to scope the data shared with the auditor.

**Answer:** A

**Explanation:**

<https://cloud.google.com/solutions/pci-dss-compliance-in-gcp>

#### NEW QUESTION 57

- (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 58

- (Topic 5)

Your solution is producing performance bugs in production that you did not see in staging and test environments. You want to adjust your test and deployment procedures to avoid this problem in the future. What should you do?

- A. Deploy fewer changes to production.
- B. Deploy smaller changes to production.
- C. Increase the load on your test and staging environments.
- D. Deploy changes to a small subset of users before rolling out to production.

**Answer:** C

#### NEW QUESTION 60

- (Topic 5)

You are using Cloud CDN to deliver static HTTP(S) website content hosted on a Compute Engine instance group. You want to improve the cache hit ratio. What should you do?

- A. Customize the cache keys to omit the protocol from the key.
- B. Shorten the expiration time of the cached objects.
- C. Make sure the HTTP(S) header "Cache-Region" points to the closest region of your users.
- D. Replicate the static content in a Cloud Storage bucket.
- E. Point CloudCDN toward a load balancer on that bucket.

**Answer:** A

**Explanation:**

Reference: [https://cloud.google.com/cdn/docs/bestpractices#using\\_custom\\_cache\\_keys\\_to\\_improve\\_cache\\_hit\\_ratio](https://cloud.google.com/cdn/docs/bestpractices#using_custom_cache_keys_to_improve_cache_hit_ratio)

#### NEW QUESTION 63

- (Topic 5)

Your operations team currently stores 10 TB of data in an object storage service from a third-party provider. They want to move this data to a Cloud Storage bucket as quickly as possible, following Google-recommended practices. They want to minimize the cost of this data migration. Which approach should they use?

- A. Use the `gsutil mv` command to move the data.
- B. Use the Storage Transfer Service to move the data.
- C. Download the data to a Transfer Appliance and ship it to Google.
- D. Download the data to the on-premises data center and upload it to the Cloud Storage bucket.

**Answer:** B

**Explanation:**

<https://cloud.google.com/architecture/migration-to-google-cloud-transferring-your-large-datasets#transfer-options>

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

#### NEW QUESTION 65

- (Topic 5)

Your company is using Google Cloud. You have two folders under the Organization: Finance and Shopping. The members of the development team are in a Google Group. The development team group has been assigned the Project Owner role on the Organization. You want to prevent the development team from creating resources in projects in the Finance folder. What should you do?

- A. Assign the development team group the Project Viewer role on the Finance folder, and assign the development team group the Project Owner role on the Shopping folder.
- B. Assign the development team group only the Project Viewer role on the Finance folder.
- C. Assign the development team group the Project Owner role on the Shopping folder, and remove the development team group Project Owner role from the Organization.
- D. Assign the development team group only the Project Owner role on the Shopping folder.

**Answer: C**

**Explanation:**

<https://cloud.google.com/resource-manager/docs/cloud-platform-resource-hierarchy>

"Roles are always inherited, and there is no way to explicitly remove a permission for a lower-level resource that is granted at a higher level in the resource hierarchy. Given the above example, even if you were to remove the Project Editor role from Bob on the "Test GCP Project", he would still inherit that role from the "Dept Y" folder, so he would still have the permissions for that role on "Test GCP Project"."

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

#### NEW QUESTION 68

- (Topic 5)

Your customer runs a web service used by e-commerce sites to offer product recommendations to users. The company has begun experimenting with a machine learning model on Google Cloud Platform to improve the quality of results.

What should the customer do to improve their model's results over time?

- A. Export Cloud Machine Learning Engine performance metrics from Stackdriver to BigQuery, to be used to analyze the efficiency of the model.
- B. Build a roadmap to move the machine learning model training from Cloud GPUs to Cloud TPUs, which offer better results.
- C. Monitor Compute Engine announcements for availability of newer CPU architectures, and deploy the model to them as soon as they are available for additional performance.
- D. Save a history of recommendations and results of the recommendations in BigQuery, to be used as training data.

**Answer: D**

**Explanation:**

<https://cloud.google.com/solutions/building-a-serverless-ml-model>

#### NEW QUESTION 73

- (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 Failover Cluster in
- D. Place nodes in different subnets.
- E. Set up SQL Server Always On Availability Groups using Windows Failover Cluster in
- F. Place nodes in different zones.

**Answer: D**

**Explanation:**

<https://cloud.google.com/sql/docs/sqlserver/configure-ha>

#### NEW QUESTION 76

- (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 79

- (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 rul
- F. Configure SSL proxy balancing.

**Answer: B**

#### Explanation:

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

#### NEW QUESTION 82

- (Topic 5)

All compute Engine instances in your VPC should be able to connect to an Active Directory server on specific ports. Any other traffic emerging from your instances is not allowed. You want to enforce this using VPC firewall rules.

How should you configure the firewall rules?

- A. Create an egress rule with priority 1000 to deny all traffic for all instance
- B. Create another egress rule with priority 100 to allow the Active Directory traffic for all instances.
- C. Create an egress rule with priority 100 to deny all traffic for all instance
- D. Create another egress rule with priority 1000 to allow the Active Directory traffic for all instances.
- E. Create an egress rule with priority 1000 to allow the Active Directory traffi
- F. Rely on the implied denyegress rule with priority 100 to block all traffic for all instances.

- G. Create an egress rule with priority 100 to allow the Active Directory traffic.
- H. Rely on the implied deny egress rule with priority 1000 to block all traffic for all instances.

**Answer:** B

**Explanation:**

<https://cloud.google.com/vpc/docs/firewalls>

#### NEW QUESTION 87

- (Topic 5)

You are creating an App Engine application that uses Cloud Datastore as its persistence layer. You need to retrieve several root entities for which you have the identifiers. You want to minimize the overhead in operations performed by Cloud Datastore. What should you do?

- A. Create the Key object for each Entity and run a batch get operation
- B. Create the Key object for each Entity and run multiple get operations, one operation for each entity
- C. Use the identifiers to create a query filter and run a batch query operation
- D. Use the identifiers to create a query filter and run multiple query operations, one operation for each entity

**Answer:** C

**Explanation:**

<https://cloud.google.com/datastore/docs/concepts/entities#datastore-datastore-batch-upsert-nodejs>

#### NEW QUESTION 90

- (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 95

- (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 in 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 98

- (Topic 5)

Google Cloud Platform resources are managed hierarchically using organization, folders, and projects. When Cloud Identity and Access Management (IAM) policies exist at these different levels, what is the effective policy at a particular node of the hierarchy?

- A. The effective policy is determined only by the policy set at the node
- B. The effective policy is the policy set at the node and restricted by the policies of its ancestors
- C. The effective policy is the union of the policy set at the node and policies inherited from its ancestors
- D. The effective policy is the intersection of the policy set at the node and policies inherited from its ancestors

**Answer:** B

**Explanation:**

Reference: <https://cloud.google.com/resource-manager/docs/cloud-platform-resource-hierarchy>

#### NEW QUESTION 102

- (Topic 5)



Your company and one of its partners each have a Google Cloud project in separate organizations. Your company's project (prj-a) runs in Virtual Private Cloud (vpc-a). The partner's project (prj-b) runs in vpc-b. There are two instances running on vpc-a and one instance running on vpc-b. Subnets defined in both VPCs are not overlapping. You need to ensure that all instances communicate with each other via internal IPs minimizing latency and maximizing throughput. What should you do?

- A. Set up a network peering between vpc-a and vpc-b
- B. Set up a VPN between vpc-a and vpc-b using Cloud VPN
- C. Configure IAP TCP forwarding on the instance in vpc-b and then launch the following gcloud command from one of the instances in vpc-a: `gcloud compute start-tcp-tunnel INSTANCE_NAME_VPC_B 22 --local-host-port=localhost:22`
- \* 1. Create an additional instance in vpc-a\* 2. Create an additional instance in vpc-b\* 3. Install OpenVPN in newly created instances\* 4. Configure a VPN tunnel between vpc-a and vpc-b with the help of OpenVPN

**Answer: C**

#### NEW QUESTION 105

- (Topic 5)

Your company is building a new architecture to support its data-centric business focus. You are responsible for setting up the network. Your company's mobile and web-facing applications will be deployed on-premises, and all data analysis will be conducted in GCP. The plan is to process and load 7 years of archived .csv files totaling 900 TB of data and then continue loading 10 TB of data daily. You currently have an existing 100-MB internet connection. What actions will meet your company's needs?

- A. Compress and upload both archived files and files uploaded daily using the gsutil -m option.
- B. Lease a Transfer Appliance, upload archived files to it, and send it to Google to transfer archived data to Cloud Storage
- C. Establish a connection with Google using a Dedicated Interconnect or Direct Peering connection and use it to upload files daily.
- D. Lease a Transfer Appliance, upload archived files to it, and send it to Google to transfer archived data to Cloud Storage
- E. Establish one Cloud VPN Tunnel to VPC networks over the public internet, and compress and upload files daily using the gsutil -m option.
- F. Lease a Transfer Appliance, upload archived files to it, and send it to Google to transfer archived data to Cloud Storage
- G. Establish a Cloud VPN Tunnel to VPC networks over the public internet, and compress and upload files daily.

**Answer: B**

#### Explanation:

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

#### NEW QUESTION 110

- (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 114

- (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 116

- (Topic 5)

Your customer support tool logs all email and chat conversations to Cloud Bigtable for retention and analysis. What is the recommended approach for sanitizing this data of personally identifiable information or payment card information before initial storage?

- A. Hash all data using SHA256
- B. Encrypt all data using elliptic curve cryptography
- C. De-identify the data with the Cloud Data Loss Prevention API
- D. Use regular expressions to find and redact phone numbers, email addresses, and credit card numbers

**Answer: A**

#### Explanation:

Reference: <https://cloud.google.com/solutions/pai-dss-compliance-ingcp#>

#### NEW QUESTION 120

- (Topic 5)

Your web application must comply with the requirements of the European Union's General Data Protection Regulation (GDPR). You are responsible for the technical architecture of your web application. What should you do?

- A. Ensure that your web application only uses native features and services of Google Cloud Platform, because Google already has various certifications and provides "pass-on" compliance when you use native features.
- B. Enable the relevant GDPR compliance setting within the GCP Console for each of the services in use within your application.
- C. Ensure that Cloud Security Scanner is part of your test planning strategy in order to pick up any compliance gaps.
- D. Define a design for the security of data in your web application that meets GDPR requirements.

**Answer:** D

#### Explanation:

<https://cloud.google.com/security/gdpr/?tab=tab4>

Reference: <https://www.mobiloud.com/blog/gdpr-compliant-mobile-app/>

#### NEW QUESTION 121

- (Topic 5)

Your company acquired a healthcare startup and must retain its customers' medical information for up to 4 more years, depending on when it was created. Your corporate policy is to securely retain this data, and then delete it as soon as regulations allow.

Which approach should you take?

- A. Store the data in Google Drive and manually delete records as they expire.
- B. Anonymize the data using the Cloud Data Loss Prevention API and store it indefinitely.
- C. Store the data using the Cloud Storage and use lifecycle management to delete files when they expire.
- D. Store the data in Cloud Storage and run a nightly batch script that deletes all expired data.

**Answer:** C

#### Explanation:

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

#### NEW QUESTION 125

- (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 129

- (Topic 5)

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

What should you do?

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

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 134

- (Topic 5)

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

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

app = Flask(__name__)
sessions = {}

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

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

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

    return news.render(news_articles)

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 136**

- (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 139**

- (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 scrip
- 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 instanc
- 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 proces
- 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 142**

- (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 146**

- (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 151**

- (Topic 5)

Your company has an enterprise application running on Compute Engine that requires high availability and high performance. The application has been deployed on two instances in two zones in the same region in active-passive mode. The application writes data to a persistent disk in the case of a single zone outage that data should be immediately made available to the other instance in the other zone. You want to maximize performance while minimizing downtime and data loss. What should you do?

- A.
  - \* 1. Attach a persistent SSD disk to the first instance
  - \* 2. Create a snapshot every hour
  - \* 3. In case of a zone outage, recreate a persistent SSD disk in the second instance where data is coming from the created snapshot
- B.
  - \* 1. Create a Cloud Storage bucket
  - \* 2. Mount the bucket into the first instance with gcs-fuse
  - \* 3. In case of a zone outage, mount the Cloud Storage bucket to the second instance with gcs-fuse
- C.
  - \* 1. Attach a local SSD to the first instance disk
  - \* 2. Execute an rsync command every hour where the target is a persistent SSD disk attached to the second instance
  - \* 3. In case of a zone outage, use the second instance
- D.
  - \* 1. Attach a regional SSD persistent disk to the first instance
  - \* 2. In case of a zone outage, force-attach the disk to the other instance

A.

**Answer:** D

**NEW QUESTION 155**

- (Topic 5)

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

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

**Answer:** B

**Explanation:**



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

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

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

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

#### NEW QUESTION 160

- (Topic 5)

Your team is developing a web application that will be deployed on Google Kubernetes Engine (GKE). Your CTO expects a successful launch and you need to ensure your application can handle the expected load of tens of thousands of users. You want to test the current deployment to ensure the latency of your application stays below a certain threshold. What should you do?

- A. Use a load testing tool to simulate the expected number of concurrent users and total requests to your application, and inspect the results.
- B. Enable autoscaling on the GKE cluster and enable horizontal pod autoscaling on your application deployment
- C. Send curl requests to your application, and validate if the auto scaling works.
- D. Replicate the application over multiple GKE clusters in every Google Cloud region. Configure a global HTTP(S) load balancer to expose the different clusters over a single global IP address.
- E. Use Cloud Debugger in the development environment to understand the latency between the different microservices.

**Answer:** B

#### NEW QUESTION 165

- (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 166

- (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 169

- (Topic 5)

Your company has an application running on Google Cloud that is collecting data from thousands of physical devices that are globally distributed. Data is published to Pub/Sub and streamed in real time into an SSO Cloud Bigtable cluster via a Dataflow pipeline. The operations team informs you that your Cloud Bigtable cluster has a hot-spot and queries are taking longer than expected. You need to resolve the problem and prevent it from happening in the future. What should you do?

- A. Advise your clients to use HBase APIs instead of NodeJS APIs.
- B. Review your RowKey strategy and ensure that keys are evenly spread across the alphabet.
- C. Delete records older than 30 days.
- D. Double the number of nodes you currently have.

**Answer:** B

#### NEW QUESTION 172

- (Topic 5)

Your company pushes batches of sensitive transaction data from its application server VMs to Cloud Pub/Sub for processing and storage. What is the Google-recommended way for your application to authenticate to the required Google Cloud services?

- A. Ensure that VM service accounts are granted the appropriate Cloud Pub/Sub IAM roles.
- B. Ensure that VM service accounts do not have access to Cloud Pub/Sub, and use VM access scopes to grant the appropriate Cloud Pub/Sub IAM roles.

- C. Generate an OAuth2 access token for accessing Cloud Pub/Sub, encrypt it, and store it in Cloud Storage for access from each VM.
- D. Create a gateway to Cloud Pub/Sub using a Cloud Function, and grant the Cloud Function service account the appropriate Cloud Pub/Sub IAM roles.

**Answer:** A

#### NEW QUESTION 177

- (Topic 5)

You are using a single Cloud SQL instance to serve your application from a specific zone.

You want to

introduce high availability. What should you do?

- A. Create a read replica instance in a different region
- B. Create a failover replica instance in a different region
- C. Create a read replica instance in the same region, but in a different zone
- D. Create a failover replica instance in the same region, but in a different zone

**Answer:** B

#### Explanation:

<https://cloud.google.com/sql/docs/mysql/high-availability>

#### NEW QUESTION 182

- (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 186

- (Topic 5)

Your company places a high value on being responsive and meeting customer needs quickly. Their primary business objectives are release speed and agility. You want to reduce the chance of security errors being accidentally introduced. Which two actions can you take? Choose 2 answers

- A. Ensure every code check-in is peer reviewed by a security SME.
- B. Use source code security analyzers as part of the CI/CD pipeline.
- C. Ensure you have stubs to unit test all interfaces between components.
- D. Enable code signing and a trusted binary repository integrated with your CI/CD pipeline.
- E. Run a vulnerability security scanner as part of your continuous-integration /continuous- delivery (CI/CD) pipeline.

**Answer:** BE

#### Explanation:

<https://docs.microsoft.com/en-us/vsts/articles/security-validation-cicd-pipeline?view=vsts>

#### NEW QUESTION 189

- (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 193

- (Topic 5)

You have an application that will run on Compute Engine. You need to design an architecture that takes into account a disaster recovery plan that requires your application to fail over to another region in case of a regional outage. What should you do?

- A. Deploy the application on two Compute Engine instances in the same project but in a different regio
- B. Use the first instance to serve traffic, and use the HTTP load balancing service to fail over to the standby instance in case of a disaster.
- C. Deploy the application on a Compute Engine instanc
- D. Use the instance to serve traffic, and use the HTTP load balancing service to fail over to an instance on your premises in case of a disaster.
- E. Deploy the application on two Compute Engine instance groups, each in the same project but in a different regio
- F. Use the first instance group to serve traffic, and use the HTTP load balancing service to fail over to the standby instance group in case of a disaster.
- G. Deploy the application on two Compute Engine instance groups, each in separate project and a different regio
- H. Use the first instance group to server traffic, and use the HTTP load balancing service to fail over to the standby instance in case of a disaster.

**Answer:** C

#### NEW QUESTION 194

- (Topic 5)

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

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

**Answer:** C

#### Explanation:

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

[https://cloud.google.com/compute/docs/nodes/provisioning-sole-tenant-vms#gcloud\\_2](https://cloud.google.com/compute/docs/nodes/provisioning-sole-tenant-vms#gcloud_2) When you create a VM, you request sole-tenancy by specifying node affinity or anti-affinity, referencing one or more node affinity labels. You specify custom node affinity labels when you create a node template, and Compute Engine automatically includes some default affinity labels on each node. By specifying affinity when you create a VM, you can schedule VMs together on a specific node or nodes in a node group. By specifying anti-affinity when you create a VM, you can ensure that certain VMs are not scheduled together on the same node or nodes in a node group.

#### NEW QUESTION 196

- (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 individua
- 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 informatio
- D. As part of the DLP scan, save the result to Data Catalo
- 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 dat
- G. Upon a deletion request, exclude the rows that affect the subject's data from this vie
- H. Use this view instead of the source table for all analysis tasks.
- I. Use a unique identifier for each individua
- 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 197

- (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 regio
- 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 202



- (Topic 5)

Your company wants to migrate their 10-TB on-premises database export into Cloud Storage. You want to minimize the time it takes to complete this activity, the overall cost and database load. The bandwidth between the on-premises environment and Google Cloud is 1 Gbps. You want to follow Google-recommended practices. What should you do?

- A. Use the Data Transfer appliance to perform an offline migration.
- B. Use a commercial partner ETL solution to extract the data from the on-premises database and upload it into Cloud Storage.
- C. Develop a Dataflow job to read data directly from the database and write it into Cloud Storage.
- D. Compress the data and upload it with `gsutil -m` to enable multi-threaded copy.

**Answer: A**

**Explanation:**

The Data Transfer appliance is a Google-provided hardware device that can be used to transfer large amounts of data from on-premises environments to Cloud Storage. It is suitable for scenarios where the bandwidth between the on-premises environment and Google Cloud is low or insufficient, and the data size is large. The Data Transfer appliance can minimize the time it takes to complete the migration, the overall cost and database load, by avoiding network bottlenecks and reducing bandwidth consumption. The Data Transfer appliance also encrypts the data at rest and in transit, ensuring data security and privacy. The other options are not optimal for this scenario, because they either require a high-bandwidth network connection (B, C, D), or incur additional costs and complexity (B, C). References:

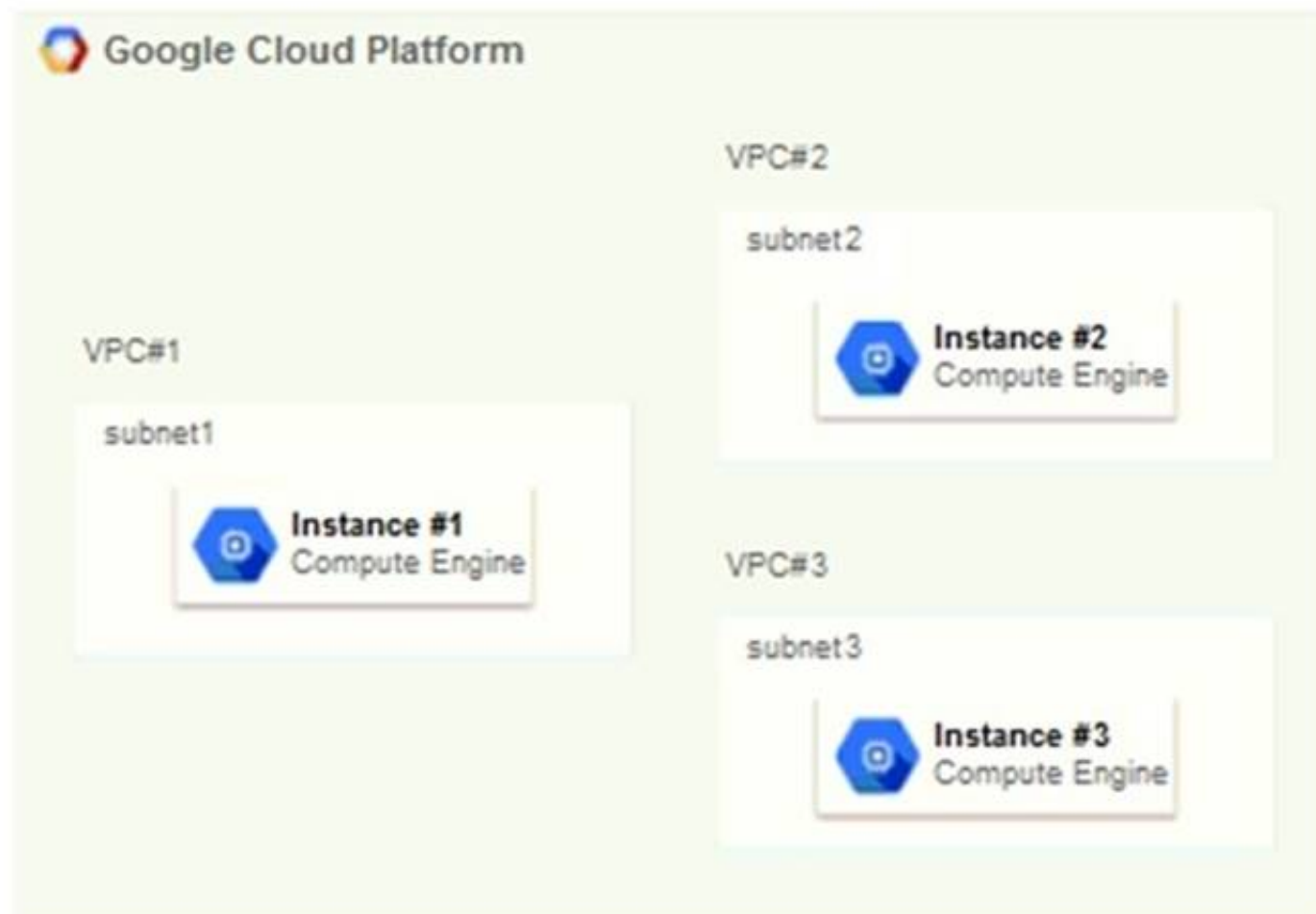
? <https://cloud.google.com/data-transfer-appliance/docs/overview>

? <https://cloud.google.com/blog/products/storage-data-transfer/introducing-storage-transfer-service-for-on-premises-data>

**NEW QUESTION 204**

- (Topic 5)

Your company has a project in Google Cloud with three Virtual Private Clouds (VPCs). There is a Compute Engine instance on each VPC. Network subnets do not overlap and must remain separated. The network configuration is shown below.



Instance #1 is an exception and must communicate directly with both Instance #2 and Instance #3 via internal IPs. How should you accomplish this?

- A. Create a cloud router to advertise subnet #2 and subnet #3 to subnet #1.
- B. Add two additional NICs to Instance #1 with the following configuration:  
 •NIC1VPC: VPC #2SUBNETWORK: subnet #2  
 •NIC2VPC: VPC #3SUBNETWORK: subnet #3  
 Update firewall rules to enable traffic between instances.
- C. Create two VPN tunnels via CloudVPN:  
 •1 between VPC #1 and VPC #2.  
 •1 between VPC #2 and VPC #3.  
 Update firewall rules to enable traffic between the instances.
- D. Peer all three VPCs:  
 •Peer VPC #1 with VPC #2.  
 •Peer VPC #2 with VPC #3.  
 Update firewall rules to enable traffic between the instances.

**Answer: B**

**Explanation:**

As per GCP documentation: "By default, every instance in a VPC network has a single network interface. Use these instructions to create additional network interfaces. Each interface is attached to a different VPC network, giving that instance access to different VPC networks in Google Cloud. You cannot attach multiple network interfaces to the same VPC network." Refer to: <https://cloud.google.com/vpc/docs/create-use-multiple-interfaces>  
[https://cloud.google.com/vpc/docs/create-use-multiple-interfaces#i\\_am\\_not\\_able\\_to\\_connect\\_to\\_secondary\\_interfaces\\_internal\\_ip](https://cloud.google.com/vpc/docs/create-use-multiple-interfaces#i_am_not_able_to_connect_to_secondary_interfaces_internal_ip)

**NEW QUESTION 209**

- (Topic 5)

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

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



the files to the new disk.

E. In the Cloud Platform Console, create a snapshot of the persistent disk, restore the snapshot to a new larger disk, unmount the old disk, mount the new disk, and restart the database service.

**Answer:** A

**Explanation:**

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

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

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

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

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

**NEW QUESTION 210**

- (Topic 5)

You are designing a large distributed application with 30 microservices. Each of your distributed microservices needs to connect to a database back-end. You want to store the credentials securely. Where should you store the credentials?

- A. In the source code
- B. In an environment variable
- C. In a secret management system
- D. In a config file that has restricted access through ACLs

**Answer:** C

**Explanation:**

[https://cloud.google.com/docs/authentication/production#providing\\_credentials\\_to\\_your\\_application](https://cloud.google.com/docs/authentication/production#providing_credentials_to_your_application)

**NEW QUESTION 212**

- (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 215**

- (Topic 5)

The operations team in your company wants to save Cloud VPN log events (or one year You need to configure the cloud infrastructure to save the logs What should you do?

- A. Set up a filter in Cloud Logging and a topic in Pub/Sub to publish the logs
- B. Set up a Cloud Logging Dashboard titled Cloud VPN Logs, and then add a chart that queries for the VPN metrics over a one-year time period
- C. Enable the Compute Engine API and then enable logging on the firewall rules that match the traffic you want to save
- D. Set up a filter in Cloud Logging and a Cloud Storage bucket as an export target for the logs you want to save

**Answer:** D

**NEW QUESTION 219**

- (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 220**

- (Topic 5)

You have an application deployed on Kubernetes Engine using a Deployment named echo- deployment. The deployment is exposed using a Service called echo-service. You need to perform an update to the application with minimal downtime to the application. What should you do?

- A. Use kubectl set image deployment/echo-deployment <new-image>
- B. Use the rolling update functionality of the Instance Group behind the Kubernetes cluster
- C. Update the deployment yaml file with the new container image
- D. Use kubectl delete deployment/echo-deployment and kubectl create -f <yaml-file>
- E. Update the service yaml file with the new container image
- F. Use kubectl delete service/echoservice and kubectl create -f <yaml-file>

**Answer:** A

**Explanation:**

[https://cloud.google.com/kubernetes-engine/docs/how-to/updating-apps#updating\\_an\\_application](https://cloud.google.com/kubernetes-engine/docs/how-to/updating-apps#updating_an_application)

**NEW QUESTION 223**

- (Topic 5)

Your company has a Google Cloud project that uses BigQuery for data warehousing. There are some tables that contain personally identifiable information (PII). Only the compliance team may access the PII. The other information in the tables must be available to the data science team. You want to minimize cost and the time it takes to assign appropriate access to the tables. What should you do?

- A. \* 1 From the dataset where you have the source data, create views of tables that you want to share, excluding PII. \* 2 Assign an appropriate project-level IAM role to the members of the data science team. \* 3 Assign access controls to the dataset that contains the view.
- B. \* 1 From the dataset where you have the source data, create materialized views of tables that you want to share, excluding PII. \* 2 Assign an appropriate project-level IAM role to the members of the data science team. \* 3 Assign access controls to the dataset that contains the view.
- C. \* 1 Create a dataset for the data science team. \* 2 Create views of tables that you want to share, excluding PII. \* 3 Assign an appropriate project-level IAM role to the members of the data science team. \* 4 Assign access controls to the dataset that contains the view. \* 5 Authorize the view to access the source dataset.
- D. \* 1 Create a dataset for the data science team. \* 2 Create materialized views of tables that you want to share, excluding PII. \* 3 Assign an appropriate project-level IAM role to the members of the data science team. \* 4 Assign access controls to the dataset that contains the view. \* 5 Authorize the view to access the source dataset.

**Answer:** C

**Explanation:**

This option can help minimize cost and time by using views and authorized datasets. Views are virtual tables defined by a SQL query that can exclude PII columns from the source tables. Views do not incur storage costs and do not duplicate data. Authorized datasets are datasets that have access to another dataset's data without granting direct access to individual users or groups. By creating a dataset for the data science team and creating views of tables that exclude PII, you can share only the relevant information with the team. By assigning an appropriate project-level IAM role to the members of the data science team, you can grant them access to the BigQuery service and resources. By assigning access controls to the dataset that contains the view, you can grant them access to query the views. By authorizing the view to access the source dataset, you can enable the view to read data from the source tables without exposing PII. The other options are not optimal for this scenario, because they either use materialized views instead of views, which incur storage costs and duplicate data (B, D), or do not create a separate dataset for the data science team, which makes it harder to manage access controls (A). References:

? <https://cloud.google.com/bigquery/docs/views>

? <https://cloud.google.com/bigquery/docs/authorized-datasets>

**NEW QUESTION 228**

- (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 232**

- (Topic 5)

Your organization has a 3-tier web application deployed in the same network on Google Cloud Platform. Each tier (web, API, and database) scales independently of the others. Network traffic should flow through the web to the API tier and then on to the database tier. Traffic should not flow between the web and the database tier. How should you configure the network?

- A. Add each tier to a different subnet.
- B. Set up software-based firewalls on individual VMs.
- C. Add tags to each tier and set up routes to allow the desired traffic flow.
- D. Add tags to each tier and set up firewall rules to allow the desired traffic flow.

**Answer:** D

**Explanation:**

<https://aws.amazon.com/blogs/aws/building-three-tier-architectures-with-security-groups/>

Google Cloud Platform (GCP) enforces firewall rules through rules and tags. GCP rules and tags can be defined once and used across all regions.

References: <https://cloud.google.com/docs/compare/openstack/> <https://aws.amazon.com/it/blogs/aws/building-three-tier-architectures-with-security-groups/>

#### NEW QUESTION 234

- (Topic 5)

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

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

**Answer: B**

#### Explanation:

Dataflow is for processing both the Batch and Stream.

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

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

#### NEW QUESTION 238

- (Topic 6)

For this question, refer to the Dress4Win case study. You are responsible for the security of data stored in Cloud Storage for your company, Dress4Win. You have already created a set of Google Groups and assigned the appropriate users to those groups. You should use Google best practices and implement the simplest design to meet the requirements. Considering Dress4Win's business and technical requirements, what should you do?

- A. Assign custom IAM roles to the Google Groups you created in order to enforce security requirements. Encrypt data with a customer-supplied encryption key when storing files in Cloud Storage.
- B. Assign custom IAM roles to the Google Groups you created in order to enforce security requirements. Enable default storage encryption before storing files in Cloud Storage.
- C. Assign predefined IAM roles to the Google Groups you created in order to enforce security requirements. Utilize Google's default encryption at rest when storing files in Cloud Storage.
- D. Assign predefined IAM roles to the Google Groups you created in order to enforce security requirement
- E. Ensure that the default Cloud KMS key is set before storing files in Cloud Storage.

**Answer: D**

#### Explanation:

<https://cloud.google.com/iam/docs/understanding-service-accounts>

#### NEW QUESTION 240

- (Topic 7)

TerramEarth has a legacy web application that you cannot migrate to cloud. However, you still want to build a cloud-native way to monitor the application. If the application goes down, you want the URL to point to a "Site is unavailable" page as soon as possible. You also want your Ops team to receive a notification for the issue. You need to build a reliable solution for minimum cost. What should you do?

- A. Create a scheduled job in Cloud Run to invoke a container every minut
- B. The container will check the application URL. If the application is down, switch the URL to the "Site is unavailable" page, and notify the Ops team.
- C. Create a cron job on a Compute Engine VM that runs every minut
- D. The cron job invokes a Python program to check the application URL. If the application is down, switch the URL to the "Site is unavailable" page, and notify the Ops team.
- E. Create a Cloud Monitoring uptime check to validate the application URL. If it fails, put a message in a Pub/Sub queue that triggers a Cloud Function to switch the URL to the "Site is unavailable" page, and notify the Ops team.
- F. Use Cloud Error Reporting to check the application URL. If the application is down, switch the URL to the "Site is unavailable" page, and notify the Ops team.

**Answer: C**

#### Explanation:

<https://cloud.google.com/blog/products/management-tools/how-to-use-pubsub-as-a-cloud-monitoring-notification-channel>

#### NEW QUESTION 245

- (Topic 7)

For this question, refer to the TerramEarth case study. TerramEarth has decided to store data files in Cloud Storage. You need to configure Cloud Storage lifecycle rule to store 1 year of data and minimize file storage cost. Which two actions should you take?

- A. Create a Cloud Storage lifecycle rule with Age: "30", Storage Class: "Standard", and Action: "Set to Coldline", and create a second GCS life-cycle rule with Age: "365", Storage Class: "Coldline", and Action: "Delete".
- B. Create a Cloud Storage lifecycle rule with Age: "30", Storage Class: "Coldline", and Action: "Set to Nearline", and create a second GCS life-cycle rule with Age: "91", Storage Class: "Coldline", and Action: "Set to Nearline".
- C. Create a Cloud Storage lifecycle rule with Age: "90", Storage Class: "Standard", and Action: "Set to Nearline", and create a second GCS life-cycle rule with Age: "91", Storage Class: "Nearline", and Action: "Set to Coldline".
- D. Create a Cloud Storage lifecycle rule with Age: "30", Storage Class: "Standard", and Action: "Set to Coldline", and create a second GCS life-cycle rule with Age: "365", Storage Class: "Nearline", and Action: "Delete".

**Answer: A**

#### NEW QUESTION 247

- (Topic 7)

For this question, refer to the TerramEarth case study.

You start to build a new application that uses a few Cloud Functions for the backend. One use case requires a Cloud Function func\_display to invoke another Cloud Function func\_query. You want func\_query only to accept invocations from func\_display. You also want to follow Google's recommended best practices. What should you do?

- A. Create a token and pass it in as an environment variable to func\_display
- B. When invoking func\_query, include the token in the request. Pass the same token to func\_query and reject the invocation if the tokens are different.
- C. Make func\_query 'Require authentication.' Create a unique service account and associate it to func\_display
- D. Grant the service account invoker role for func\_query
- E. Create an id token in func\_display and include the token to the request when invoking func\_query.
- F. Make func\_query 'Require authentication' and only accept internal traffic
- G. Create those two functions in the same VPC
- H. Create an ingress firewall rule for func\_query to only allow traffic from func\_display.
- I. Create those two functions in the same project and VPC
- J. Make func\_query only accept internal traffic
- K. Create an ingress firewall for func\_query to only allow traffic from func\_display
- L. Also, make sure both functions use the same service account.

**Answer:** B

**Explanation:**

[https://cloud.google.com/functions/docs/securing/authenticating#authenticating\\_function\\_to\\_function\\_calls](https://cloud.google.com/functions/docs/securing/authenticating#authenticating_function_to_function_calls)

### NEW QUESTION 252

- (Topic 7)

You are migrating a Linux-based application from your private data center to Google Cloud. The TerramEarth security team sent you several recent Linux vulnerabilities published by Common Vulnerabilities and Exposures (CVE). You need assistance in understanding how these vulnerabilities could impact your migration. What should you do?

- A. Open a support case regarding the CVE and chat with the support engineer.
- B. Read the CVEs from the Google Cloud Status Dashboard to understand the impact.
- C. Read the CVEs from the Google Cloud Platform Security Bulletins to understand the impact
- D. Post a question regarding the CVE in Stack Overflow to get an explanation
- E. Post a question regarding the CVE in a Google Cloud discussion group to get an explanation

**Answer:** AC

**Explanation:**

<https://cloud.google.com/support/bulletins>

### NEW QUESTION 256

- (Topic 7)

TerramEarth has about 1 petabyte (PB) of vehicle testing data in a private data center. You want to move the data to Cloud Storage for your machine learning team. Currently, a 1-Gbps interconnect link is available for you. The machine learning team wants to start using the data in a month. What should you do?

- A. Request Transfer Appliances from Google Cloud, export the data to appliances, and return the appliances to Google Cloud.
- B. Configure the Storage Transfer service from Google Cloud to send the data from your data center to Cloud Storage
- C. Make sure there are no other users consuming the 1 Gbps link, and use multi-thread transfer to upload the data to Cloud Storage.
- D. Export files to an encrypted USB device, send the device to Google Cloud, and request an import of the data to Cloud Storage

**Answer:** A

### NEW QUESTION 261

- (Topic 7)

For this question, refer to the TerramEarth case study. You need to implement a reliable, scalable GCP solution for the data warehouse for your company, TerramEarth. Considering the TerramEarth business and technical requirements, what should you do?

- A. Replace the existing data warehouse with BigQuery
- B. Use table partitioning.
- C. Replace the existing data warehouse with a Compute Engine instance with 96 CPUs.
- D. Replace the existing data warehouse with BigQuery
- E. Use federated data sources.
- F. Replace the existing data warehouse with a Compute Engine instance with 96 CPU
- G. Add an additional Compute Engine pre-emptible instance with 32 CPUs.

**Answer:** C

**Explanation:**

[https://cloud.google.com/solutions/bigquery-data-warehouse#external\\_sources](https://cloud.google.com/solutions/bigquery-data-warehouse#external_sources) <https://cloud.google.com/solutions/bigquery-data-warehouse>

### NEW QUESTION 265

- (Topic 8)

For this question, refer to the Mountkirk Games case study. Mountkirk Games wants to migrate from their current analytics and statistics reporting model to one that meets their technical requirements on Google Cloud Platform.

Which two steps should be part of their migration plan? (Choose two.)

- A. Evaluate the impact of migrating their current batch ETL code to Cloud Dataflow.



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

**Answer:** AB

**Explanation:**

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

**NEW QUESTION 266**

- (Topic 8)

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

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

**Answer:** A

**NEW QUESTION 269**

- (Topic 8)

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

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

**Answer:** C

**NEW QUESTION 274**

- (Topic 9)

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 279**

- (Topic 10)

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

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

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

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

**Answer:** A

**Explanation:**

The case does not call out the throughput being an issue. However, to achieve 99.99%, you need to have 4 connections as per Google recommendations. However, in the options only A has the option to add an additional Interconnect connection. <https://cloud.google.com/network-connectivity/docs/interconnect/concepts/dedicated-overview#availability>

**NEW QUESTION 281**

- (Topic 10)

For this question, refer to the EHR Healthcare case study. You need to define the technical architecture for securely deploying workloads to Google Cloud. You

also need to ensure that only verified containers are deployed using Google Cloud services. What should you do? (Choose two.)

- A. Enable Binary Authorization on GKE, and sign containers as part of a CI/CD pipeline.
- B. Configure Jenkins to utilize Kritis to cryptographically sign a container as part of a CI/CD pipeline.
- C. Configure Container Registry to only allow trusted service accounts to create and deploy containers from the registry.
- D. Configure Container Registry to use vulnerability scanning to confirm that there are no vulnerabilities before deploying the workload.

**Answer:** A

**Explanation:**

Binary Authorization to ensure only verified containers are deployed To ensure deployment are secure and and consistent, automatically scan images for vulnerabilities with container analysis ([https://cloud.google.com/docs/ci-cd/overview?hl=en&skip\\_cache=true](https://cloud.google.com/docs/ci-cd/overview?hl=en&skip_cache=true))

**NEW QUESTION 284**

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