



# Google

## Exam Questions Professional-Cloud-Architect

Google Certified Professional - Cloud Architect (GCP)

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### NEW QUESTION 1

- (Exam Topic 1)

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

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

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

**Answer:** A

#### Explanation:

From scenario: Requirements for Game Backend Platform

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

### NEW QUESTION 2

- (Exam Topic 2)

For this question, refer to the TerramEarth case study.

TerramEarth plans to connect all 20 million vehicles in the field to the cloud. This increases the volume to 20 million 600 byte records a second for 40 TB an hour. How should you design the data ingestion?

- A. Vehicles write data directly to GCS.
- B. Vehicles write data directly to Google Cloud Pub/Sub.
- C. Vehicles stream data directly to Google BigQuery.
- D. Vehicles continue to write data using the existing system (FTP).

**Answer:** B

#### Explanation:

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

<https://cloud.google.com/solutions/designing-connected-vehicle-platform>

### NEW QUESTION 3

- (Exam Topic 2)

For this question, refer to the TerramEarth case study.

TerramEarth has equipped unconnected trucks with servers and sensors to collect telemetry data. Next year they want to use the data to train machine learning models. They want to store this data in the cloud while reducing costs. What should they do?

- A. Have the vehicle's computer compress the data in hourly snapshots, and store it in a Google Cloud storage (GCS) Nearline bucket.
- B. Push the telemetry data in Real-time to a streaming dataflow job that compresses the data, and store it in Google BigQuery.
- C. Push the telemetry data in real-time to a streaming dataflow job that compresses the data, and store it in Cloud Bigtable.
- D. Have the vehicle's computer compress the data in hourly snapshots, and store it in a GCS Coldline bucket.

**Answer:** D

#### Explanation:

Coldline Storage is the best choice for data that you plan to access at most once a year, due to its slightly lower availability, 90-day minimum storage duration, costs for data access, and higher per-operation costs. For example:

Cold Data Storage - Infrequently accessed data, such as data stored for legal or regulatory reasons, can be stored at low cost as Coldline Storage, and be available when you need it.

Disaster recovery - In the event of a disaster recovery event, recovery time is key. Cloud Storage provides low latency access to data stored as Coldline Storage.

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

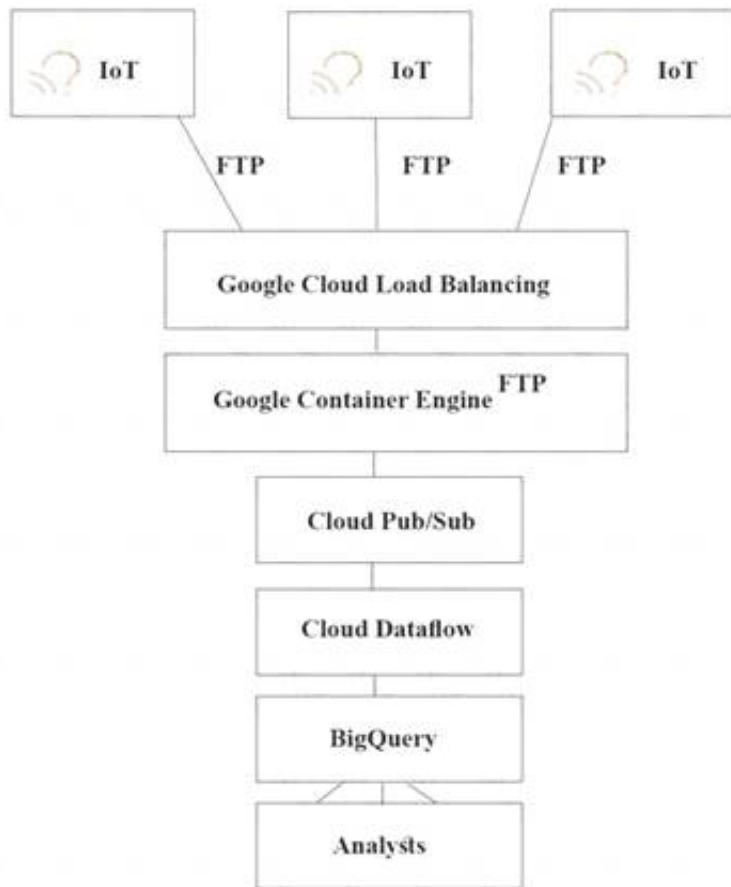
### NEW QUESTION 4

- (Exam Topic 2)

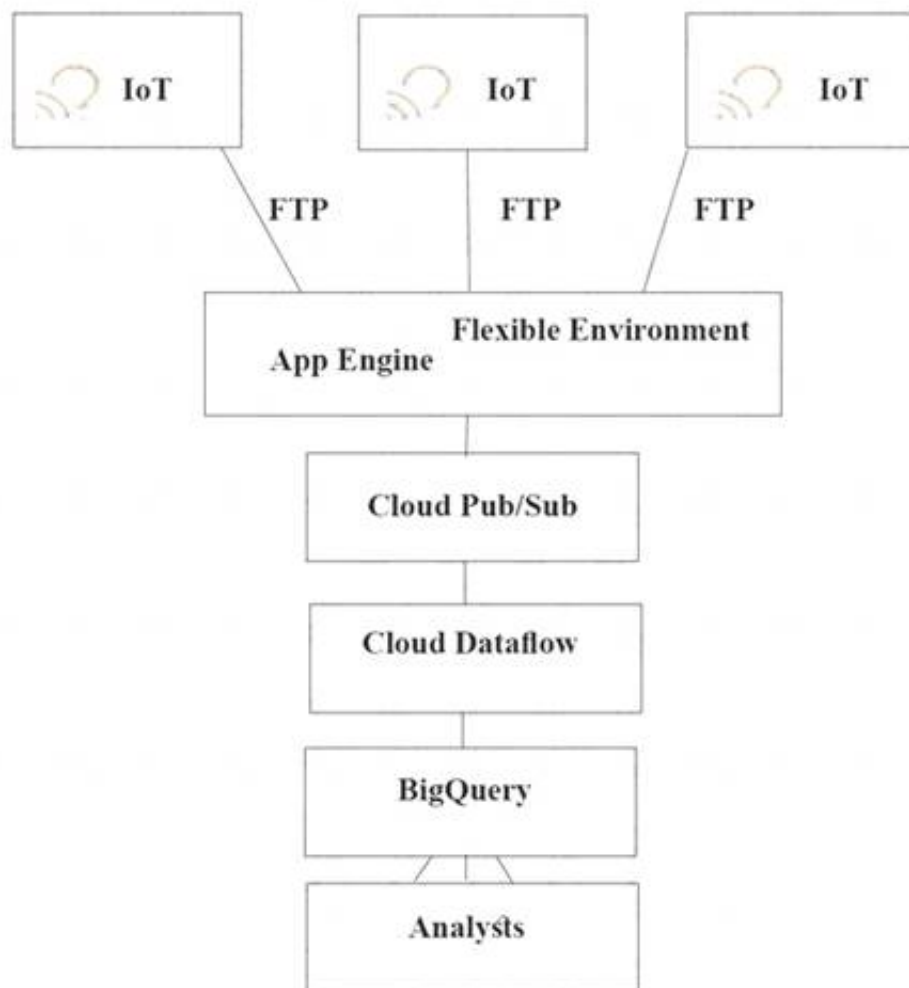
For this question, refer to the TerramEarth case study.

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

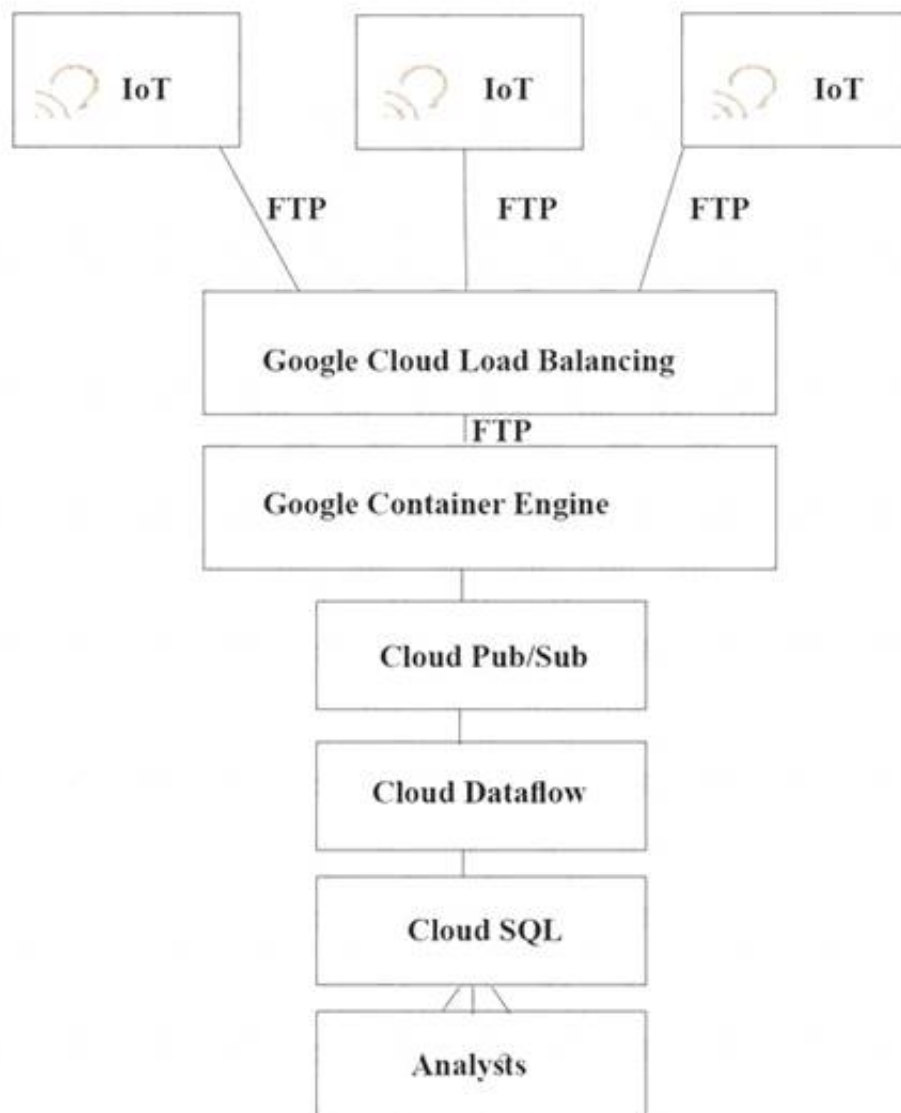
A)



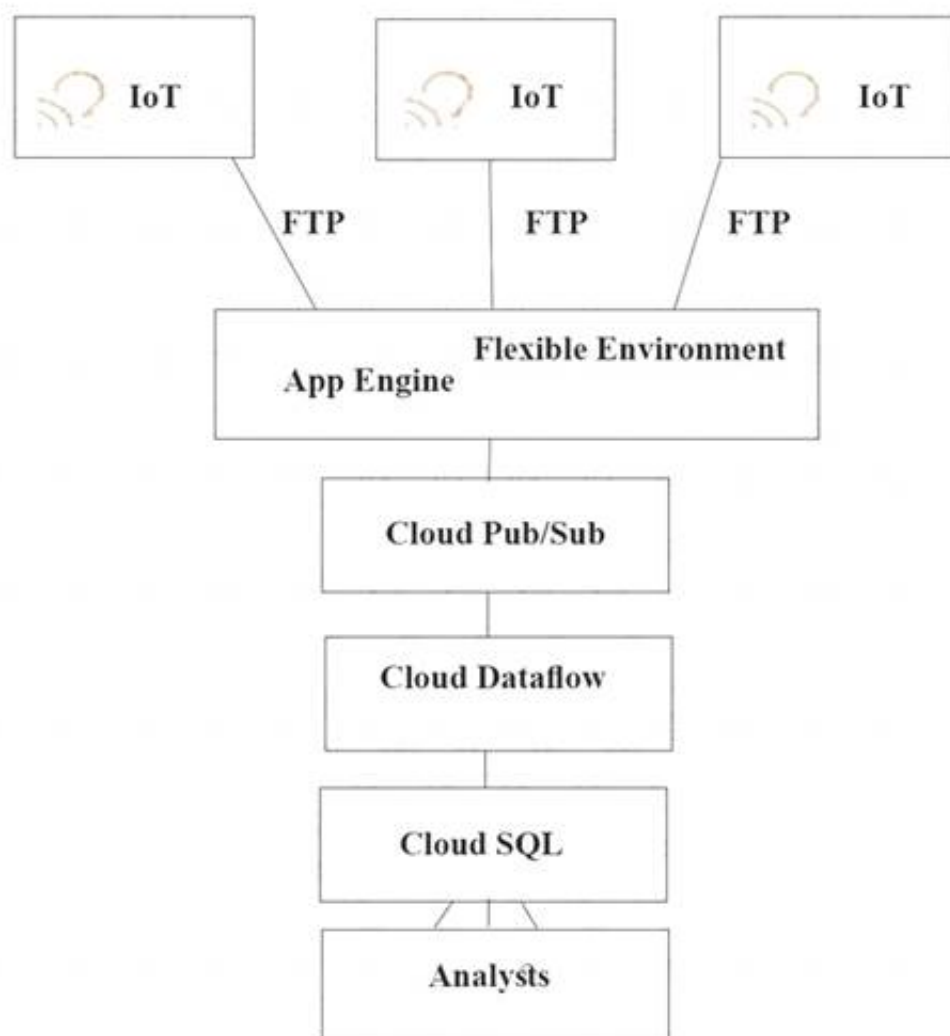
B)



C)



D)



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

**Answer:** A

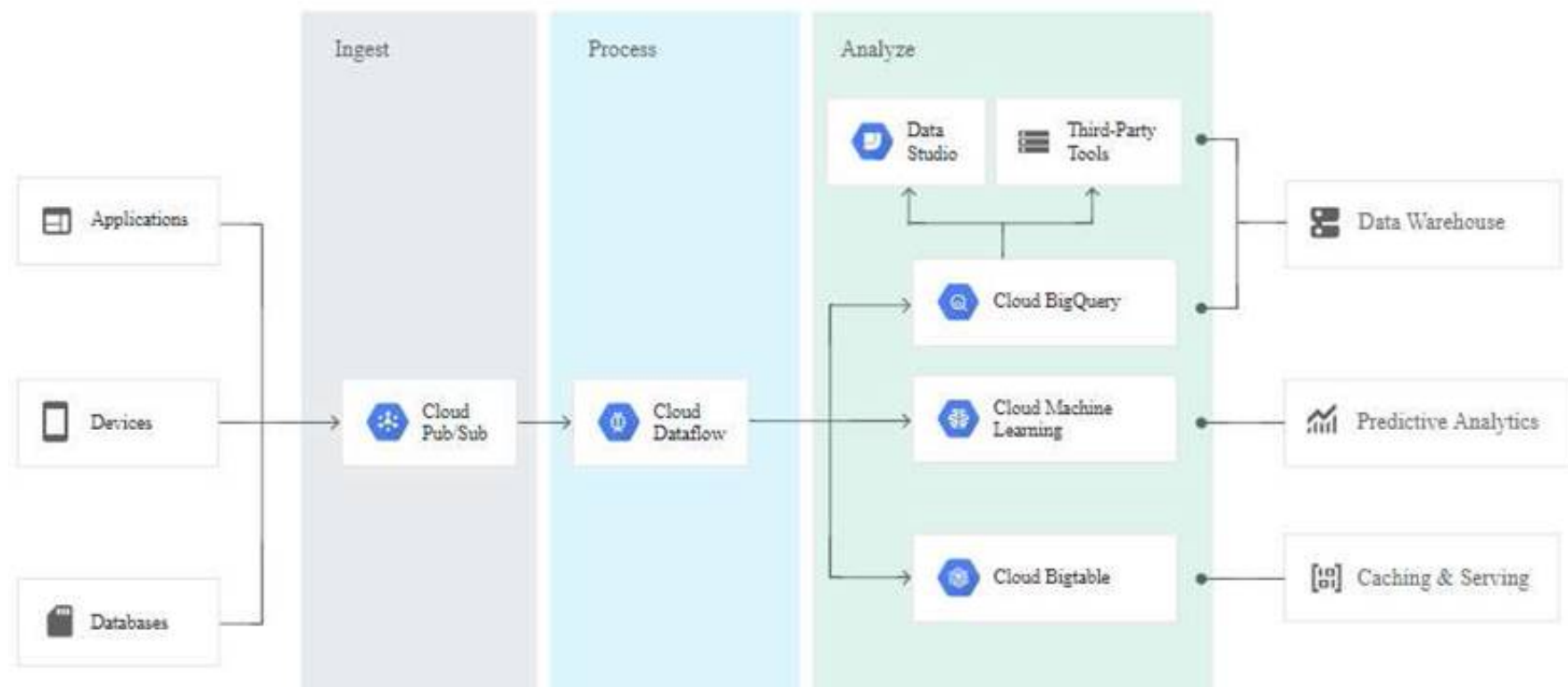
**Explanation:**

<https://cloud.google.com/solutions/iot/> <https://cloud.google.com/solutions/designing-connected-vehicle-platform>

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

<http://www.eweek.com/big-data-and-analytics/google-touts-value-of-cloud-iot-core-for-analyzing-connected-car-data>

<https://cloud.google.com/solutions/iot/> The push endpoint can be a load balancer. A container cluster can be used. Cloud Pub/Sub for Stream Analytics



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

### NEW QUESTION 5

- (Exam Topic 2)

For this question, refer to the TerramEarth case study

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

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

**Answer: C**

#### Explanation:

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

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

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

### NEW QUESTION 6

- (Exam Topic 2)

For this question, refer to the TerramEarth case study.

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

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

**Answer: D**

#### Explanation:

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

### NEW QUESTION 7

- (Exam 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 8

- (Exam Topic 4)

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

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

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

**Answer:** A

#### NEW QUESTION 9

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** B

#### NEW QUESTION 10

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** B

#### NEW QUESTION 10

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 11

- (Exam Topic 4)

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

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

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

- A. They should run the end to end tests in the cloud staging environment to determine if the code is working as intended.
- B. They should enable google stack driver debugger on the application code to show errors in the code

- C. They should add additional unit tests and production scale load tests on their cloud staging environment.  
D. They should add canary tests so developers can measure how much of an impact the new release causes to latency

**Answer:** B

#### NEW QUESTION 14

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** B

#### NEW QUESTION 16

- (Exam 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 nodes  
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 nodes  
J. Use a Google Cloud SQL database to maintain metadata that maps each customer's ID to their image files.

**Answer:** A

#### NEW QUESTION 21

- (Exam Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 25

- (Exam 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 27

- (Exam 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 28

- (Exam Topic 5)

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

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

**Answer:** CF

**Explanation:**

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

#### NEW QUESTION 31

- (Exam Topic 5)

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

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

**Answer:** D

**Explanation:**

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

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

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

#### NEW QUESTION 34

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

#### NEW QUESTION 37

- (Exam Topic 5)

A recent audit that a new network was created in Your GCP project. In this network, a GCE instance has an SSH port open to the world. You want to discover this network's origin. What should you do?

- A. Search for Create VM entry in the Stackdriver alerting console.
- B. Navigate to the Activity page in the Home section.
- C. Set category to Data Access and search for Create VM entry.
- D. In the logging section of the console, specify GCE Network as the logging section.
- E. Search for the Create Instance entry.
- F. Connect to the GCE instance using project SSH Key.
- G. Identify previous logins in system logs, and match these with the project owners list.

**Answer:** C

#### NEW QUESTION 38

- (Exam Topic 5)

Your company has multiple on-premises systems that serve as sources for reporting. The data has not been maintained well and has become degraded over time. You want to use Google-recommended practices to detect anomalies in your company data. What should you do?

- A. Upload your files into Cloud Storag
- B. Use Cloud Datalab to explore and clean your data.
- C. Upload your files into Cloud Storag
- D. Use Cloud Dataprep to explore and clean your data.
- E. Connect Cloud Datalab to your on-premises system
- F. Use Cloud Datalab to explore and clean your data.
- G. Connect Cloud Dataprep to your on-premises system
- H. Use Cloud Dataprep to explore and clean your data.

**Answer:** B

**Explanation:**

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

#### NEW QUESTION 41

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

#### NEW QUESTION 42

- (Exam Topic 5)

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

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

**Answer:** C

#### NEW QUESTION 46

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

**Answer:** B

**Explanation:**

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

Subnet primary IP address range (used by nodes)

Subnet secondary IP address range used for Pods in the cluster Subnet secondary IP address range used for Services in the cluster

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

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

#### NEW QUESTION 49

- (Exam 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 52**

- (Exam 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 56**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 61**

- (Exam Topic 5)

Your organization has stored sensitive data in a Cloud Storage bucket. For regulatory reasons, your company must be able to rotate the encryption key used to encrypt the data in the bucket. The data will be processed in Dataproc. You want to follow Google-recommended practices for security. What should you do?

- A. Create a key with Cloud Key Management Service (KMS). Encrypt the data using the encrypt method of Cloud KMS.
- B. Create a key with Cloud Key Management Service (KMS). Set the encryption key on the bucket to the Cloud KMS key.
- C. Generate a GPG key pair.
- D. Encrypt the data using the GPG key.
- E. Upload the encrypted data to the bucket.
- F. Generate an AES-256 encryption key.
- G. Encrypt the data in the bucket using the customer-supplied encryption keys feature.

**Answer:** B

**Explanation:**

<https://cloud.google.com/storage/docs/encryption/using-customer-managed-keys#add-object-key> <https://cloud.google.com/storage/docs/encryption/using-customer-managed-keys>

**NEW QUESTION 65**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

#### NEW QUESTION 68

- (Exam Topic 5)

Your customer is moving their corporate applications to Google Cloud Platform. The security team wants detailed visibility of all projects in the organization. You provision the Google Cloud Resource Manager and set up yourself as the org admin. What Google Cloud Identity and Access Management (Cloud IAM) roles should you give to the security team'?

- A. Org viewer, project owner
- B. Org viewer, project viewer
- C. Org admin, project browser
- D. Project owner, network admin

**Answer:** B

#### Explanation:

<https://cloud.google.com/iam/docs/using-iam-securely>

#### NEW QUESTION 70

- (Exam Topic 5)

Your architecture calls for the centralized collection of all admin activity and VM system logs within your project. How should you collect these logs from both VMs and services?

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

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 75

- (Exam Topic 5)

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 78

- (Exam Topic 5)

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

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

**Answer:** C

#### Explanation:

Google Cloud Platform (GCP) HTTP(S) load balancing provides global load balancing for HTTP(S) requests destined for your instances. The HTTP(S) load balancer has native support for the WebSocket protocol.

#### NEW QUESTION 83

- (Exam 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 85

- (Exam Topic 5)

You are analyzing and defining business processes to support your startup's trial usage of GCP, and you don't yet know what consumer demand for your product will be. Your manager requires you to minimize GCP service costs and adhere to Google best practices. What should you do?

- A. Utilize free tier and sustained use discount
- B. Provision a staff position for service cost management.
- C. Utilize free tier and sustained use discount
- D. Provide training to the team about service cost management.
- E. Utilize free tier and committed use discount
- F. Provision a staff position for service cost management.
- G. Utilize free tier and committed use discount
- H. Provide training to the team about service cost management.

**Answer:** D

**Explanation:**

[https://cloud.google.com/docs/enterprise/best-practices-for-enterprise-organizations#billing\\_and\\_management](https://cloud.google.com/docs/enterprise/best-practices-for-enterprise-organizations#billing_and_management)

#### NEW QUESTION 87

- (Exam Topic 5)

Your company is migrating its on-premises data center into the cloud. As part of the migration, you want to integrate Kubernetes Engine for workload orchestration. Parts of your architecture must also be PCI DSScompliant. Which of the following is most accurate?

- A. App Engine is the only compute platform on GCP that is certified for PCI DSS hosting.
- B. Kubernetes Engine cannot be used under PCI DSS because it is considered shared hosting.
- C. Kubernetes Engine and GCP provide the tools you need to build a PCI DSS-compliant environment.
- D. All Google Cloud services are usable because Google Cloud Platform is certified PCI-compliant.

**Answer:** D

**Explanation:**

<https://cloud.google.com/security/compliance/pci-dss>

#### NEW QUESTION 89

- (Exam 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 thatbucket

**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 92

- (Exam 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 95

- (Exam 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 96

- (Exam 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 98

- (Exam Topic 5)

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

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

**Answer:** D

#### Explanation:

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

#### NEW QUESTION 100

- (Exam Topic 5)

Your company is planning to perform a lift and shift migration of their Linux RHEL 6.5+ virtual machines. The virtual machines are running in an on-premises VMware environment. You want to migrate them to Compute Engine following Google-recommended practices. What should you do?

- A. \* 1. Define a migration plan based on the list of the applications and their dependencies.\* 2. Migrate all virtual machines into Compute Engine individually with Migrate for Compute Engine.
- B. \* 1. Perform an assessment of virtual machines running in the current VMware environment.\* 2. Create images of all disk
- C. Import disks on Compute Engine.\* 3. Create standard virtual machines where the boot disks are the ones you have imported.
- D. \* 1. Perform an assessment of virtual machines running in the current VMware environment.\* 2. Define a migration plan, prepare a Migrate for Compute Engine migration RunBook, and execute the migration.
- E. \* 1. Perform an assessment of virtual machines running in the current VMware environment.\* 2. Install a third-party agent on all selected virtual machine
- F. 3.Migrate all virtual machines into Compute Engine.

**Answer:** C

#### Explanation:

The framework illustrated in the preceding diagram has four phases:

- Assess. In this phase, you assess your source environment, assess the workloads that you want to migrate to Google Cloud, and assess which VMs support each workload.
- Plan. In this phase, you create the basic infrastructure for Migrate for Compute Engine, such as provisioning the resource hierarchy and setting up network access.
- Deploy. In this phase, you migrate the VMs from the source environment to Compute Engine.
- Optimize. In this phase, you begin to take advantage of the cloud technologies and capabilities.

Reference: <https://cloud.google.com/architecture/migrating-vms-migrate-for-compute-engine-getting-started>

#### NEW QUESTION 102



- (Exam Topic 5)

You are tasked with building an online analytical processing (OLAP) marketing analytics and reporting tool. This requires a relational database that can operate on hundreds of terabytes of data. What is the Google recommended tool for such applications?

- A. Cloud Spanner, because it is globally distributed
- B. Cloud SQL, because it is a fully managed relational database
- C. Cloud Firestore, because it offers real-time synchronization across devices
- D. BigQuery, because it is designed for large-scale processing of tabular data

**Answer:** A

**Explanation:**

Reference: <https://cloud.google.com/files/BigQueryTechnicalWP.pdf>

#### NEW QUESTION 106

- (Exam Topic 5)

Your company's user-feedback portal comprises a standard LAMP stack replicated across two zones. It is deployed in the us-central1 region and uses autoscaled managed instance groups on all layers, except the database. Currently, only a small group of select customers have access to the portal. The portal meets a 99.99% availability SLA under these conditions. However, next quarter, your company will be making the portal available to all users, including unauthenticated users. You need to develop a resiliency testing strategy to ensure the system maintains the SLA once they introduce additional user load. What should you do?

- A. Capture existing users input, and replay captured user load until autoscale is triggered on all layer
- B. At the same time, terminate all resources in one of the zones.
- C. Create synthetic random user input, replay synthetic load until autoscale logic is triggered on at least one layer, and introduce "chaos" to the system by terminating random resources on both zones.
- D. Expose the new system to a larger group of users, and increase group ' size each day until autoscale logic is triggered on all layer
- E. At the same time, terminate random resources on both zones.
- F. Capture existing users input, and replay captured user load until resource utilization crosses 80%. Also, derive estimated number of users based on existing users usage of the app, and deploy enough resources to handle 200% of expected load.

**Answer:** A

#### NEW QUESTION 109

- (Exam Topic 5)

You are migrating third-party applications from optimized on-premises virtual machines to Google Cloud. You are unsure about the optimum CPU and memory options. The application have a consistent usage patterns across multiple weeks. You want to optimize resource usage for the lowest cost. What should you do?

- A. Create a Compute engine instance with CPU and Memory options similar to your application's current on-premises virtual machine
- B. Install the cloud monitoring agent, and deploy the third party application
- C. Run a load with normal traffic levels on third party application and follow the Rightsizing Recommendations in the Cloud Console
- D. Create an App Engine flexible environment, and deploy the third party application using a Docker file and a custom runtime
- E. Set CPU and memory options similar to your application's current on-premises virtual machine in the app.yaml file.
- F. Create an instance template with the smallest available machine type, and use an image of the third party application taken from the current on-premises virtual machine
- G. Create a managed instance group that uses average CPU to autoscale the number of instances in the group
- H. Modify the average CPU utilization threshold to optimize the number of instances running.
- I. Create multiple Compute Engine instances with varying CPU and memory option
- J. Install the cloud monitoring agent and deploy the third-party application on each of the
- K. Run a load test with high traffic levels on the application and use the results to determine the optimal settings.

**Answer:** A

**Explanation:**

Create a Compute engine instance with CPU and Memory options similar to your application's current on-premises virtual machine. Install the cloud monitoring agent, and deploy the third party application. Run a load with normal traffic levels on third party application and follow the Rightsizing Recommendations in the Cloud Console

<https://cloud.google.com/migrate/compute-engine/docs/4.9/concepts/planning-a-migration/cloud-instance-rights>

#### NEW QUESTION 114

- (Exam Topic 5)

You have an application that makes HTTP requests to Cloud Storage. Occasionally the requests fail with HTTP status codes of 5xx and 429. How should you handle these types of errors?

- A. Use gRPC instead of HTTP for better performance.
- B. Implement retry logic using a truncated exponential backoff strategy.
- C. Make sure the Cloud Storage bucket is multi-regional for geo-redundancy.
- D. Monitor <https://status.cloud.google.com/feed.atom> and only make requests if Cloud Storage is not reporting an incident.

**Answer:** A

**Explanation:**

Reference [https://cloud.google.com/storage/docs/json\\_api/v1/status-codes](https://cloud.google.com/storage/docs/json_api/v1/status-codes)

#### NEW QUESTION 115

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

Cloud Filestore: Cloud Filestore is a scalable and highly available shared file service fully managed by

Google. Cloud Filestore provides persistent storage ideal for shared workloads. It is best suited for enterprise applications requiring persistent, durable, shared storage which is accessed by NFS or requires a POSIX compliant file system.

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

**NEW QUESTION 118**

- (Exam Topic 5)

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

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

**Answer:** A

**Explanation:**

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

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

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

BigQuery is Google's serverless, highly scalable, low cost enterprise data warehouse designed to make all your data analysts productive. Because there is no infrastructure to manage, you can focus on analyzing data to find meaningful insights using familiar SQL and you don't need a database administrator.

BigQuery enables you to analyze all your data by creating a logical data warehouse over managed, columnar storage as well as data from object storage, and spreadsheets.

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

**NEW QUESTION 121**

- (Exam Topic 5)

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

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

**Answer:** D

**Explanation:**

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

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

**NEW QUESTION 122**

- (Exam Topic 5)

You want to make a copy of a production Linux virtual machine in the US-Central region. You want to manage and replace the copy easily if there are changes on the production virtual machine. You will deploy the copy as a new instances in a different project in the US-East region. What steps must you take?

- A. Use the Linux dd and netcat command to copy and stream the root disk contents to a new virtual machine instance in the US-East region.
- B. Create a snapshot of the root disk and select the snapshot as the root disk when you create a new virtual machine instance in the US-East region.
- C. Create an image file from the root disk with Linux dd command, create a new disk from the image file, and use it to create a new virtual machine instance in the US-East region
- D. Create a snapshot of the root disk, create an image file in Google Cloud Storage from the snapshot, and create a new virtual machine instance in the US-East region using the image file for the root disk.

**Answer:** D

**Explanation:**

<https://stackoverflow.com/questions/36441423/migrate-google-compute-engine-instance-to-a-different-region>

**NEW QUESTION 126**

- (Exam Topic 5)

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

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

**Answer:** A

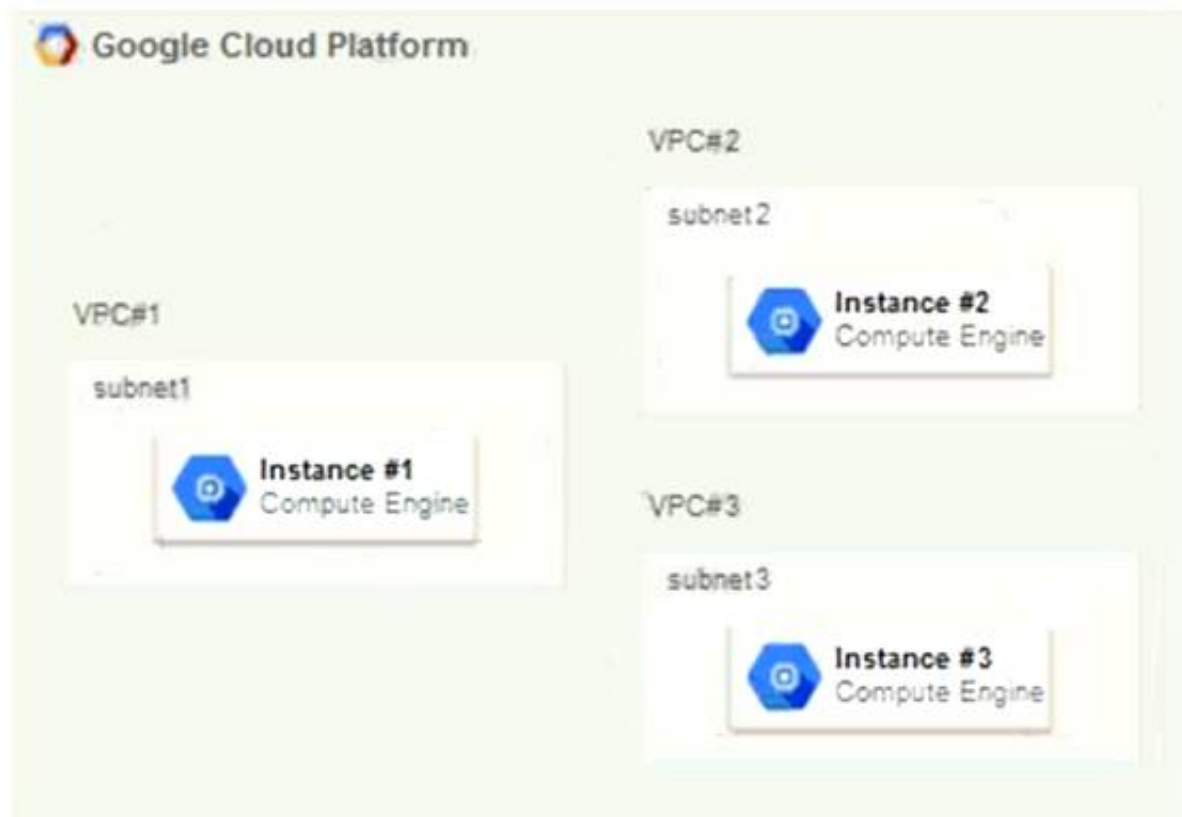
**Explanation:**

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

**NEW QUESTION 127**

- (Exam 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 #3Update 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\\_inte](https://cloud.google.com/vpc/docs/create-use-multiple-interfaces#i_am_not_able_to_connect_to_secondary_inte)

**NEW QUESTION 132**

- (Exam 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 135**

- (Exam Topic 5)

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

- A. 1) Use gsutil -m to upload all the files to Cloud Storage.2) Use gsutil cp to download the uploaded files3) Use Linux diff to compare the content of the files

B. 1) Use gsutil -m to upload all the files to Cloud Storage.2) Develop a custom Java application that computes CRC32C hashes3) Use gsutil ls -L gs://[YOUR\_BUCKET\_NAME] to collect CRC32C hashes of the uploaded files 4)Compare the hashes  
C. 1) Use Linux shasum to compute a digest of files you want to upload2) Use gsutil -m to upload all the files to the Cloud Storage3) Use gsutil cp to download the uploaded files4) Use Linux shasum to compute a digest of the downloaded files 5.Compare the hashes  
D. 1)Use gsutil -m to upload all the files to Cloud Storage.2) Use gsutil hash -c FILE\_NAME to generate CRC32C hashes of all on-premises files3) Use gsutil ls -L gs://[YOUR\_BUCKET\_NAME] to collect CRC32C hashes of the uploaded files 4)Compare the hashes

**Answer:** D

**Explanation:**

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

#### NEW QUESTION 138

- (Exam Topic 5)

Your company wants to track whether someone is present in a meeting room reserved for a scheduled meeting. There are 1000 meeting rooms across 5 offices on 3 continents. Each room is equipped with a motion sensor that reports its status every second. The data from the motion detector includes only a sensor ID and several different discrete items of information. Analysts will use this data, together with information about account owners and office locations. Which database type should you use?

- A. Flat file
- B. NoSQL
- C. Relational
- D. Blobstore

**Answer:** B

**Explanation:**

Relational databases were not designed to cope with the scale and agility challenges that face modern applications, nor were they built to take advantage of the commodity storage and processing power available today.

NoSQL fits well for:

\_ Developers are working with applications that create massive volumes of new, rapidly changing data types — structured, semi-structured, unstructured and polymorphic data.

#### NEW QUESTION 140

- (Exam 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 cluste
- E. \* 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 141

- (Exam 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 144

- (Exam Topic 5)

You created a pipeline that can deploy your source code changes to your infrastructure in instance groups for self healing. One of the changes negatively affects your key performance indicator. You are not sure how to fix it and investigation could take up to a week. What should you do

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



**Answer:** C

#### NEW QUESTION 146

- (Exam Topic 5)

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

What should you do?

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

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 150

- (Exam 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 152

- (Exam Topic 5)

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

What should you do?

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

**Answer:** B

#### Explanation:

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

#### NEW QUESTION 153

- (Exam 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 region. 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.
- B. Deploy the application on a Compute Engine instance
- C. 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.
- D. Deploy the application on two Compute Engine instance groups, each in the same project but in a different region
- E. 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.
- F. Deploy the application on two Compute Engine instance groups, each in separate project and a different region
- G. Use the first instance group to serve traffic, and use the HTTP load balancing service to fail over to the standby instance in case of a disaster.

**Answer:** C

#### NEW QUESTION 155

- (Exam Topic 5)

The operations manager asks you for a list of recommended practices that she should consider when migrating a J2EE application to the cloud. Which three practices should you recommend? Choose 3 answers

- A. Port the application code to run on Google App Engine.
- B. Integrate Cloud Dataflow into the application to capture real-time metrics.
- C. Instrument the application with a monitoring tool like Stackdriver Debugger.
- D. Select an automation framework to reliably provision the cloud infrastructure.
- E. Deploy a continuous integration tool with automated testing in a staging environment.
- F. Migrate from MySQL to a managed NoSQL database like Google Cloud Datastore or Bigtable.

**Answer:** AEF

**Explanation:**

References: <https://cloud.google.com/appengine/docs/standard/java/tools/uploadinganapp> <https://cloud.google.com/appengine/docs/standard/java/building-app/cloud-sql>

**NEW QUESTION 159**

- (Exam Topic 5)

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 161**

- (Exam Topic 5)

You want your Google Kubernetes Engine cluster to automatically add or remove nodes based on CPUload. What should you do?

- A. Configure a HorizontalPodAutoscaler with a target CPU usag
- B. Enable the Cluster Autoscaler from the GCP Console.
- C. Configure a HorizontalPodAutoscaler with a target CPU usag
- D. Enable autoscaling on the managed instance group for the cluster using the gcloud command.
- E. Create a deployment and set the maxUnavailable and maxSurge propertie
- F. Enable the Cluster Autoscaler using the gcloud command.
- G. Create a deployment and set the maxUnavailable and maxSurge propertie
- H. Enable autoscaling on the cluster managed instance group from the GCP Console.

**Answer:** B

**NEW QUESTION 166**

- (Exam Topic 5)

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

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

**Answer:** A

**NEW QUESTION 170**

- (Exam Topic 5)

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



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

**Answer:** B

#### NEW QUESTION 174

- (Exam Topic 5)

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

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

**Answer:** C

#### Explanation:

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

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

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

#### NEW QUESTION 176

- (Exam Topic 5)

You have deployed an application to Kubernetes Engine, and are using the Cloud SQL proxy container to make the Cloud SQL database available to the services running on Kubernetes. You are notified that the application is reporting database connection issues. Your company policies require a post-mortem. What should you do?

- A. Use gcloud sql instances restart.
- B. Validate that the Service Account used by the Cloud SQL proxy container still has the Cloud Build Editor role.
- C. In the GCP Console, navigate to Stackdriver Login
- D. Consult logs for Kubernetes Engine and Cloud SQL.
- E. In the GCP Console, navigate to Cloud SQ
- F. Restore the latest backu
- G. Use kubectl to restart all pods.

**Answer:** C

#### NEW QUESTION 180

- (Exam Topic 5)

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

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

**Answer:** C

#### Explanation:

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

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

#### NEW QUESTION 183

- (Exam 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 186

- (Exam Topic 5)

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

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

**Answer:** C

#### Explanation:

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

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

#### NEW QUESTION 191

- (Exam Topic 5)

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

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

**Answer:** ABF

#### NEW QUESTION 195

- (Exam Topic 5)

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

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

**Answer:** C

#### Explanation:

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

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

#### NEW QUESTION 200

- (Exam Topic 5)

Your company is designing its application landscape on Compute Engine. Whenever a zonal outage occurs, the application should be restored in another zone as quickly as possible with the latest application data. You need to design the solution to meet this requirement. What should you do?

- A. Create a snapshot schedule for the disk containing the application data
- B. Whenever a zonal outage occurs, use the latest snapshot to restore the disk in the same zone.
- C. Configure the Compute Engine instances with an instance template for the application, and use a regional persistent disk for the application data
- D. Whenever a zonal outage occurs, use the instance template to spin up the application in another zone in the same region
- E. Use the regional persistent disk for the application data.
- F. Create a snapshot schedule for the disk containing the application data
- G. Whenever a zonal outage occurs, use the latest snapshot to restore the disk in another zone within the same region.

- H. Configure the Compute Engine instances with an instance template for the application, and use a regional persistent disk for the application data.
- I. Whenever a zonal outage occurs, use the instance template to spin up the application in another region.
- J. Use the regional persistent disk for the application data.

**Answer:** B

**Explanation:**

Regional persistent disk is a storage option that provides synchronous replication of data between two zones in a region. Regional persistent disks can be a good building block to use when you implement HA services in Compute Engine. <https://cloud.google.com/compute/docs/disks/high-availability-regional-persistent-disk>

**NEW QUESTION 205**

- (Exam Topic 6)

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

What should you do?

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 207**

- (Exam Topic 6)

For this question, refer to the Dress4Win case study. You want to ensure that your on-premises architecture meets business requirements before you migrate your solution.

What change in the on-premises architecture should you make?

- A. Replace RabbitMQ with Google Pub/Sub.
- B. Downgrade MySQL to v5.7, which is supported by Cloud SQL for MySQL.
- C. Resize compute resources to match predefined Compute Engine machine types.
- D. Containerize the micro services and host them in Google Kubernetes Engine.

**Answer:** C

**NEW QUESTION 210**

- (Exam Topic 6)

For this question, refer to the Dress4Win case study. Dress4Win is expected to grow to 10 times its size in 1 year with a corresponding growth in data and traffic that mirrors the existing patterns of usage. The CIO has set the target of migrating production infrastructure to the cloud within the next 6 months. How will you configure the solution to scale for this growth without making major application changes and still maximize the ROI?

- A. Migrate the web application layer to App Engine, and MySQL to Cloud Datastore, and NAS to Cloud Storage.
- B. Deploy RabbitMQ, and deploy Hadoop servers using Deployment Manager.
- C. Migrate RabbitMQ to Cloud Pub/Sub, Hadoop to BigQuery, and NAS to Compute Engine with Persistent Disk storage.
- D. Deploy Tomcat, and deploy Nginx using Deployment Manager.
- E. Implement managed instance groups for Tomcat and Nginx.
- F. Migrate MySQL to Cloud SQL, RabbitMQ to Cloud Pub/Sub, Hadoop to Cloud Dataproc, and NAS to Compute Engine with Persistent Disk storage.
- G. Implement managed instance groups for the Tomcat and Nginx.
- H. Migrate MySQL to Cloud SQL, RabbitMQ to Cloud Pub/Sub, Hadoop to Cloud Dataproc, and NAS to Cloud Storage.

**Answer:** D

**NEW QUESTION 214**

- (Exam Topic 6)

For this question, refer to the Dress4Win case study. Considering the given business requirements, how would you automate the deployment of web and transactional data layers?

- A. Deploy Nginx and Tomcat using Cloud Deployment Manager to Compute Engine.
- B. Deploy a Cloud SQL server to replace MySQL.
- C. Deploy Jenkins using Cloud Deployment Manager.
- D. Deploy Nginx and Tomcat using Cloud Launcher.
- E. Deploy a MySQL server using Cloud Launcher. Deploy Jenkins to Compute Engine using Cloud Deployment Manager scripts.
- F. Migrate Nginx and Tomcat to App Engine.
- G. Deploy a Cloud Datastore server to replace the MySQL server in a high-availability configuration.
- H. Deploy Jenkins to Compute Engine using Cloud Launcher.
- I. Migrate Nginx and Tomcat to App Engine.
- J. Deploy a MySQL server using Cloud Launcher.
- K. Deploy Jenkins to Compute Engine using Cloud Launcher.

**Answer:** A

**NEW QUESTION 216**

- (Exam Topic 7)

For this question, refer to the TerraEarth 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 BigQuer
- 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 BigQuer
- 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 219

- (Exam 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 224

- (Exam 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 226

- (Exam 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\_displa
- 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\_displa
- D. Grant the service account invoker role for func\_quer
- 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 traffi
- G. Create those two functions in the same VP
- 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 VP
- J. Make func\_query only accept internal traffic.Create an ingress firewall for func\_query to only allow traffic from func\_displa
- K. 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 230

- (Exam 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>

#### NEW QUESTION 235

- (Exam Topic 7)

You have broken down a legacy monolithic application into a few containerized RESTful microservices. You want to run those microservices on Cloud Run. You also want to make sure the services are highly available with low latency to your customers. What should you do?

A. Deploy Cloud Run services to multiple availability zone

B. Create Cloud Endpoints that point to the service

C. Create a global HTTP(S) Load Balancing instance and attach the Cloud Endpoints to its backend.

D. Deploy Cloud Run services to multiple regions. Create serverless network endpoint groups pointing to the service.

E. Add the serverless NEGs to a backend service that is used by a global HTTP(S) Load Balancing instance.

F. Deploy Cloud Run services to multiple regions.

G. In Cloud DNS, create a latency-based DNS name that points to the services.

H. Deploy Cloud Run services to multiple availability zones.

I. Create a TCP/IP global load balance.

J. Add the Cloud Run Endpoints to its backend service.

**Answer:** B

**Explanation:**

<https://cloud.google.com/run/docs/multiple-regions>

#### NEW QUESTION 238

- (Exam Topic 7)

You are migrating a Linux-based application from your private data center to Google Cloud. The TerraEarth 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 241

- (Exam Topic 7)

For this question, refer to the TerraEarth case study. To be compliant with European GDPR regulation, TerraEarth is required to delete data generated from its European customers after a period of 36 months when it contains personal data. In the new architecture, this data will be stored in both Cloud Storage and BigQuery. What should you do?

A. Create a BigQuery table for the European data, and set the table retention period to 36 months.

B. For Cloud Storage, use gsutil to enable lifecycle management using a DELETE action with an Age condition of 36 months.

C. Create a BigQuery table for the European data, and set the table retention period to 36 months.

D. For Cloud Storage, use gsutil to create a SetStorageClass to NONE action with an Age condition of 36 months.

E. Create a BigQuery time-partitioned table for the European data, and set the partition expiration period to 36 months.

F. For Cloud Storage, use gsutil to enable lifecycle management using a DELETE action with an Age condition of 36 months.

G. Create a BigQuery time-partitioned table for the European data, and set the partition period to 36 months.

H. For Cloud Storage, use gsutil to create a SetStorageClass to NONE action with an Age condition of 36 months.

**Answer:** C

**Explanation:**

<https://cloud.google.com/bigquery/docs/managing-partitioned-tables#partition-expiration> <https://cloud.google.com/storage/docs/lifecycle>

#### NEW QUESTION 243

- (Exam Topic 8)

For this question, refer to the Mountkirk Games case study. Which managed storage option meets Mountkirk's technical requirement for storing game activity in a time series database service?

A. Cloud Bigtable

B. Cloud Spanner

C. BigQuery

D. Cloud Datastore

**Answer:** A

**Explanation:**

<https://cloud.google.com/blog/products/databases/getting-started-with-time-series-trend-predictions-using-gcp>

**NEW QUESTION 246**

- (Exam Topic 8)

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

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 249**

- (Exam Topic 8)

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

- A. Create network load balancer
- B. Use preemptible Compute Engine instances.
- C. Create network load balancer
- D. Use non-preemptible Compute Engine instances.
- E. Create a global load balancer with managed instance groups and autoscaling policies
- F. Use preemptible Compute Engine instances.
- G. Create a global load balancer with managed instance groups and autoscaling policies
- H. Use non-preemptible Compute Engine instances.

**Answer:** D

**NEW QUESTION 252**

- (Exam Topic 8)

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

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

**Answer:** C

**NEW QUESTION 254**

- (Exam Topic 8)

For this question, refer to the Mountkirk Games case study. Mountkirk Games wants to design their solution for the future in order to take advantage of cloud and technology improvements as they become available. Which two steps should they take? (Choose two.)

- A. Store as much analytics and game activity data as financially feasible today so it can be used to train machine learning models to predict user behavior in the future.
- B. Begin packaging their game backend artifacts in container images and running them on Kubernetes Engine to improve the availability to scale up or down based on game activity.
- C. Set up a CI/CD pipeline using Jenkins and Spinnaker to automate canary deployments and improve development velocity.
- D. Adopt a schema versioning tool to reduce downtime when adding new game features that require storing additional player data in the database.
- E. Implement a weekly rolling maintenance process for the Linux virtual machines so they can apply critical kernel patches and package updates and reduce the risk of 0-day vulnerabilities.

**Answer:** BC

**NEW QUESTION 257**

- (Exam Topic 8)

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

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

**Answer:** A



#### NEW QUESTION 261

- (Exam Topic 9)

For this question, refer to the Helicopter Racing League (HRL) case study. Recently HRL started a new regional racing league in Cape Town, South Africa. In an effort to give customers in Cape Town a better user experience, HRL has partnered with the Content Delivery Network provider, Fastly. HRL needs to allow traffic coming from all of the Fastly IP address ranges into their Virtual Private Cloud network (VPC network). You are a member of the HRL security team and you need to configure the update that will allow only the Fastly IP address ranges through the External HTTP(S) load balancer. Which command should you use?

- A. `gcloud compute firewall rules update hlr-policy --priority 1000 --target tags-sourceip-list fastly --allow tcp:443`
- B. `gcloud compute security policies rules update 1000 --security-policy hlr-policy --expression "evaluatePreconfiguredExpr('sourceip-list-fastly')"` `--action "allow"`
- C. `gcloud compute firewall rules update sourceip-list-fastly --priority 1000 --allow tcp: 443`
- D. `gcloud compute priority-policies rules update 1000 --security-policy from fastly--src- ip-ranges"-- action "allow"`

**Answer:** B

#### Explanation:

Reference: <https://cloud.google.com/load-balancing/docs/https> D18912E1457D5D1DDCBD40AB3BF70D5D

#### NEW QUESTION 266

- (Exam Topic 9)

For this question, refer to the Helicopter Racing League (HRL) case study. HRL wants better prediction accuracy from their ML prediction models. They want you to use Google's AI Platform so HRL can understand and interpret the predictions. What should you do?

- A. Use Explainable AI.
- B. Use Vision AI.
- C. Use Google Cloud's operations suite.
- D. Use Jupyter Notebooks.

**Answer:** A

#### Explanation:

Reference: <https://cloud.google.com/ai-platform/prediction/docs/aiExplanation:s/preparing-metadata>

#### NEW QUESTION 269

- (Exam Topic 9)

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

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

Which storage approach should you adopt for your tokenization service?

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

**Answer:** B

#### NEW QUESTION 272

- (Exam Topic 10)

For this question, refer to the EHR Healthcare case study. You are a developer on the EHR customer portal team. Your team recently migrated the customer portal application to Google Cloud. The load has increased on the application servers, and now the application is logging many timeout errors. You recently incorporated Pub/Sub into the application architecture, and the application is not logging any Pub/Sub publishing errors. You want to improve publishing latency. What should you do?

- A. Increase the Pub/Sub Total Timeout retry value.
- B. Move from a Pub/Sub subscriber pull model to a push model.
- C. Turn off Pub/Sub message batching.
- D. Create a backup Pub/Sub message queue.

**Answer:** C

#### Explanation:

<https://cloud.google.com/pubsub/docs/publisher?hl=en#batching>

#### NEW QUESTION 277

- (Exam Topic 10)

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 282**

- (Exam Topic 10)

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

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

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

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

**Answer:** A

**Explanation:**

The case does not call out the throughput being an issue. However, to achieve 99.99%, you need to have 4 connections as per Google recommendations.

However, in the options only A has the option to add an additional Interconnect connection.

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

**NEW QUESTION 287**

- (Exam Topic 10)

For this question, refer to the EHR Healthcare case study. You need to define the technical architecture for hybrid connectivity between EHR's on-premises systems and Google Cloud. You want to follow Google's recommended practices for production-level applications. Considering the EHR Healthcare business and technical requirements, what should you do?

- A. Configure two Partner Interconnect connections in one metro (City), and make sure the Interconnect connections are placed in different metro zones.
- B. Configure two VPN connections from on-premises to Google Cloud, and make sure the VPN devices on-premises are in separate racks.
- C. Configure Direct Peering between EHR Healthcare and Google Cloud, and make sure you are peering at least two Google locations.
- D. Configure two Dedicated Interconnect connections in one metro (City) and two connections in another metro, and make sure the Interconnect connections are placed in different metro zones.

**Answer:** D

**Explanation:**

based on the requirement of secure and high-performance connection between on-premises systems to Google Cloud

<https://cloud.google.com/network-connectivity/docs/interconnect/tutorials/partner-creating-9999-availability>

**NEW QUESTION 290**

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