



# Google

## Exam Questions Professional-Cloud-Architect

Google Certified Professional - Cloud Architect (GCP)

#### NEW QUESTION 1

- (Exam Topic 1)

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

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

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

**Answer:** A

#### Explanation:

From Scenario:

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

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

#### NEW QUESTION 2

- (Exam Topic 1)

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

Mountkirk Games' gaming servers are not automatically scaling properly. Last month, they rolled out a new feature, which suddenly became very popular. A record number of users are trying to use the service, but many of them are getting 503 errors and very slow response times. What should they investigate first?

- A. Verify that the database is online.
- B. Verify that the project quota hasn't been exceeded.
- C. Verify that the new feature code did not introduce any performance bugs.
- D. Verify that the load-testing team is not running their tool against production.

**Answer:** B

#### Explanation:

\* 503 is service unavailable error. If the database was online everyone would get the 503 error. [https://cloud.google.com/docs/quota#capping\\_usage](https://cloud.google.com/docs/quota#capping_usage)

#### NEW QUESTION 3

- (Exam Topic 1)

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

Mountkirk Games wants to set up a continuous delivery pipeline. Their architecture includes many small services that they want to be able to update and roll back quickly. Mountkirk Games has the following requirements:

- Services are deployed redundantly across multiple regions in the US and Europe.
- Only frontend services are exposed on the public internet.
- They can provide a single frontend IP for their fleet of services.
- Deployment artifacts are immutable. Which set of products should they use?

- A. Google Cloud Storage, Google Cloud Dataflow, Google Compute Engine
- B. Google Cloud Storage, Google App Engine, Google Network Load Balancer
- C. Google Kubernetes Registry, Google Container Engine, Google HTTP(S) Load Balancer
- D. Google Cloud Functions, Google Cloud Pub/Sub, Google Cloud Deployment Manager

**Answer:** C

#### NEW QUESTION 4

- (Exam Topic 2)

For this question, refer to the TerramEarth case study.

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

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

**Answer:** A

#### Explanation:

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

<https://cloud.google.com/endpoints/docs/openapi/architecture-overview>

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

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

From scenario: Business Requirements

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

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

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

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

#### NEW QUESTION 5

- (Exam Topic 2)

For this question refer to the TerramEarth case study

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

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

**Answer:** B

#### NEW QUESTION 6

- (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 7

- (Exam Topic 5)

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

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

**Answer:** BC

#### Explanation:

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

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

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

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

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

References:

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

#### NEW QUESTION 8

- (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 9

- (Exam Topic 5)

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

what should you do?

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

**Answer:** B

**Explanation:**

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

#### NEW QUESTION 10

- (Exam Topic 5)

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

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

**Answer:** AE

#### NEW QUESTION 10

- (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 14

- (Exam Topic 5)

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

Which feature of Kubernetes should you use to accomplish this?

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

**Answer:** A

**Explanation:**

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

#### NEW QUESTION 15

- (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 20

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 23**

- (Exam Topic 5)

Auditors visit your teams every 12 months and ask to review all the Google Cloud Identity and Access Management (Cloud IAM) policy changes in the previous 12 months. You want to streamline and expedite the analysis and audit process. What should you do?

- A. Create custom Google Stackdriver alerts and send them to the auditor.
- B. Enable Logging export to Google BigQuery and use ACLs and views to scope the data shared with the auditor.
- C. Use cloud functions to transfer log entries to Google Cloud SQL and use ACLS and views to limit an auditor's view.
- D. Enable Google Cloud Storage (GCS) log export to audit logs Into a GCS bucket and delegate access to the bucket.

**Answer:** D

**Explanation:**

Export the logs to Google Cloud Storage bucket - Archive Storage, as it will not be used for 1 year, price for which is \$0.004 per GB per Month. The price for long term storage in BigQuery is \$0.01 per GB per Month (250% more). Also for analysis purpose, whenever Auditors are there(once per year), you can use BigQuery and use GCS bucket as external data source. BigQuery supports querying Cloud Storage data from these storage classes:  
Standard Nearline Coldline Archive

**NEW QUESTION 27**

- (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 29**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

`--enable-autoscaling`

Enables autoscaling for a node pool.

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

Where:

`--max-nodes=MAX_NODES`

Maximum number of nodes in the node pool.

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

**NEW QUESTION 33**

- (Exam Topic 5)

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

- A. Add each tier to a different subnetwork.



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

**Answer:** D

**Explanation:**

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

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

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

**NEW QUESTION 34**

- (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 36**

- (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 37**

- (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 38**

- (Exam Topic 5)

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

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

app = Flask(__name__)
sessions = {}

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

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

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

    return news.render(news_articles)

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

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

**Answer:** A

**Explanation:**

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

#### NEW QUESTION 39

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

#### NEW QUESTION 44

- (Exam Topic 5)

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

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

**Answer:** B

#### NEW QUESTION 49

- (Exam Topic 5)

Your organization wants to control IAM policies for different departments independently, but centrally. Which approach should you take?

- A. Multiple Organizations with multiple Folders
- B. Multiple Organizations, one for each department
- C. A single Organization with Folder for each department
- D. A single Organization with multiple projects, each with a central owner

**Answer:** C

**Explanation:**

Folders are nodes in the Cloud Platform Resource Hierarchy. A folder can contain projects, other folders, or a combination of both. You can use folders to group projects under an organization in a hierarchy. For example, your organization might contain multiple departments, each with its own set of GCP resources. Folders allow you to group these resources on a per-department basis. Folders are used to group resources that share common IAM policies. While a folder can contain multiple folders or resources, a given folder or resource can have exactly one parent.

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

**NEW QUESTION 53**

- (Exam Topic 5)

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

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

**Answer:** AC

**Explanation:**

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

**NEW QUESTION 56**

- (Exam Topic 5)

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

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

**Answer:** A

**Explanation:**

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

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

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

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

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

**NEW QUESTION 58**

- (Exam Topic 5)

You are using Cloud SQL as the database backend for a large CRM deployment. You want to scale as usage increases and ensure that you don't run out of storage, maintain 75% CPU usage cores, and keep replication lag below 60 seconds. What are the correct steps to meet your requirements?

- A. 1) Enable automatic storage increase for the instance. 2) Create a Stackdriver alert when CPU usage exceeds 75%, and change the instance type to reduce CPU usage. 3) Create a Stackdriver alert for replication lag, and shard the database to reduce replication time.
- B. 1) Enable automatic storage increase for the instance. 2) Change the instance type to a 32-core machine type to keep CPU usage below 75%. 3) Create a Stackdriver alert for replication lag, and shard the database to reduce replication time.
- C. 1) Create a Stackdriver alert when storage exceeds 75%, and increase the available storage on the instance to create more space. 2) Deploy memcached to reduce CPU load. 3) Change the instance type to a 32-core machine type to reduce replication lag.
- D. 1) Create a Stackdriver alert when storage exceeds 75%, and increase the available storage on the instance to create more space. 2) Deploy memcached to reduce CPU load. 3) Create a Stackdriver alert for replication lag, and change the instance type to a 32-core machine type to reduce replication lag.

**Answer:** A

**NEW QUESTION 62**

- (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 file.
- B. Use `gsutil` to upload the files.
- C. Supply the encryption key using `gcloud config`.
- D. Use `gsutil` to upload the files to that bucket.
- E. Use `gsutil` to upload the files, and use the flag `--encryption-key` to supply the encryption key.



- F. Use gsutil to create a bucket, and use the flag --encryption-key to supply the encryption key
- G. Use gsutil to upload the files to that bucket.

**Answer:** A

**Explanation:**

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

**NEW QUESTION 64**

- (Exam Topic 5)

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

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

**Answer:** B

**NEW QUESTION 68**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

The error is most likely caused by the access scope issue. When creating a new instance, you have the default Compute engine default service account but most services access including BigQuery is not enabled. Create an instance. Most access is not enabled by default. You have a default service account but don't have the permission (scope) you can stop the instance, edit, change scope and restart it to enable the scope access. Of course, if you run your script on a new virtual machine with the BigQuery access scope enabled, it also works.

<https://cloud.google.com/compute/docs/access/service-accounts>

**NEW QUESTION 71**

- (Exam Topic 5)

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

- A. Write a lifecycle management rule in XML and push it to the bucket with gsutil.
- B. Write a lifecycle management rule in JSON and push it to the bucket with gsutil.
- C. Schedule a cron script using gsutil ls -lr gs://backups/\*\* to find and remove items older than 90 days.
- D. Schedule a cron script using gsutil ls -1 gs://backups/\*\* to find and remove items older than 90 days and schedule it with cron.

**Answer:** B

**Explanation:**

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

**NEW QUESTION 73**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 75**

- (Exam Topic 5)

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 79

- (Exam Topic 5)

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

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

**Answer: C**

#### NEW QUESTION 81

- (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 86

- (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 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 sectio
- 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 sectio
- E. Search for the Create Insert 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 90

- (Exam Topic 5)

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

```
Java.lang.SecurityException : SHA1 digest

    at com.google.appengine.runtime.Request.pr
    at
    at
    at Sun.security.util.ManifestEntryVerifier.ver
    at java.net.URLClassLoader.defineCla
    at sun.reflect.GeneratedMethodAccessor
    at
    at Sun.reflect.DelegatingMethodAccessorImpl.
    at java.lang.reflect.Method.invoke
```

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

**Answer: B**

#### NEW QUESTION 91

- (Exam Topic 5)

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

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

**Answer: AC**

#### NEW QUESTION 95

- (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 100

- (Exam Topic 5)

You need to develop procedures to test a disaster plan for a mission-critical application. You want to use Google-recommended practices and native capabilities within GCP.

What should you do?

- A. Use Deployment Manager to automate service provisionin
- B. Use Activity Logs to monitor and debug your tests.
- C. Use Deployment Manager to automate provisionin
- D. Use Stackdriver to monitor and debug your tests.
- E. Use gcloud scripts to automate service provisionin
- F. Use Activity Logs monitor and debug your tests.
- G. Use automated scripts to automate service provisionin
- H. Use Activity Logs monitor and debug your tests.

**Answer: B**

#### Explanation:

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

#### NEW QUESTION 105

- (Exam Topic 5)

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 107

- (Exam Topic 5)

Your company is forecasting a sharp increase in the number and size of Apache Spark and Hadoop jobs being run on your local datacenter. You want to utilize the cloud to help you scale this upcoming demand with the least amount of operations work and code change. Which product should you use?

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

**Answer:** B

#### Explanation:

Google Cloud Dataproc is a fast, easy-to-use, low-cost and fully managed service that lets you run the Apache Spark and Apache Hadoop ecosystem on Google Cloud Platform. Cloud Dataproc provisions big or small clusters rapidly, supports many popular job types, and is integrated with other Google Cloud Platform services, such as Google Cloud Storage and Stackdriver Logging, thus helping you reduce TCO.

References: <https://cloud.google.com/dataproc/docs/resources/faq>

#### NEW QUESTION 110

- (Exam Topic 5)

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

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

**Answer:** C

#### Explanation:

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

#### NEW QUESTION 111

- (Exam Topic 5)

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

- A. Ensure that VM service accounts are granted the appropriate Cloud Pub/Sub IAM roles.
- B. Ensure that VM service accounts do not have access to Cloud Pub/Sub, and use VM access scopes to grant the appropriate Cloud Pub/Sub IAM roles.
- C. Generate an OAuth2 access token for accessing Cloud Pub/Sub, encrypt it, and store it in Cloud Storage for access from each VM.
- D. Create a gateway to Cloud Pub/Sub using a Cloud Function, and grant the Cloud Function service account the appropriate Cloud Pub/Sub IAM roles.

**Answer:** A

#### NEW QUESTION 115

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

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

Good for:

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

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

**NEW QUESTION 119**

- (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 Loggin
- 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 `kubect1` to restart all pods.

**Answer:** C

**NEW QUESTION 120**

- (Exam Topic 5)

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

What should you do?

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

**Answer:** C

**NEW QUESTION 123**

- (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 dependencie
- 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 124**

- (Exam Topic 5)

Your company wants to start using Google Cloud resources but wants to retain their on-premises Active Directory domain controller for identity management. What should you do?

- A. Use the Admin Directory API to authenticate against the Active Directory domain controller.
- B. Use Google Cloud Directory Sync to synchronize Active Directory usernames with cloud identities and configure SAML SSO.
- C. Use Cloud Identity-Aware Proxy configured to use the on-premises Active Directory domain controller as an identity provider.
- D. Use Compute Engine to create an Active Directory (AD) domain controller that is a replica of the onpremises AD domain controller using Google Cloud Directory Sync.



**Answer:** B

**Explanation:**

[https://cloud.google.com/solutions/federating-gcp-with-active-directory-introduction#implementing\\_federation](https://cloud.google.com/solutions/federating-gcp-with-active-directory-introduction#implementing_federation)

**NEW QUESTION 125**

- (Exam Topic 5)

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 128**

- (Exam Topic 5)

You are using a single Cloud SQL instance to serve your application from a specific zone. You want to introduce high availability. What should you do?

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 129**

- (Exam Topic 5)

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

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

**Answer:** D

**Explanation:**

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

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

**NEW QUESTION 132**

- (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 Storage
- B. Use Cloud Datalab to explore and clean your data.
- C. Upload your files into Cloud Storage
- 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 137**

- (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 138**

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#### NEW QUESTION 1

- (Exam Topic 1)

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

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

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

**Answer:** A

#### Explanation:

From Scenario:

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

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

#### NEW QUESTION 2

- (Exam Topic 1)

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

Mountkirk Games' gaming servers are not automatically scaling properly. Last month, they rolled out a new feature, which suddenly became very popular. A record number of users are trying to use the service, but many of them are getting 503 errors and very slow response times. What should they investigate first?

- A. Verify that the database is online.
- B. Verify that the project quota hasn't been exceeded.
- C. Verify that the new feature code did not introduce any performance bugs.
- D. Verify that the load-testing team is not running their tool against production.

**Answer:** B

#### Explanation:

\* 503 is service unavailable error. If the database was online everyone would get the 503 error. [https://cloud.google.com/docs/quota#capping\\_usage](https://cloud.google.com/docs/quota#capping_usage)

#### NEW QUESTION 3

- (Exam Topic 1)

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

Mountkirk Games wants to set up a continuous delivery pipeline. Their architecture includes many small services that they want to be able to update and roll back quickly. Mountkirk Games has the following requirements:

- Services are deployed redundantly across multiple regions in the US and Europe.
- Only frontend services are exposed on the public internet.
- They can provide a single frontend IP for their fleet of services.
- Deployment artifacts are immutable. Which set of products should they use?

- A. Google Cloud Storage, Google Cloud Dataflow, Google Compute Engine
- B. Google Cloud Storage, Google App Engine, Google Network Load Balancer
- C. Google Kubernetes Registry, Google Container Engine, Google HTTP(S) Load Balancer
- D. Google Cloud Functions, Google Cloud Pub/Sub, Google Cloud Deployment Manager

**Answer:** C

#### NEW QUESTION 4

- (Exam Topic 2)

For this question, refer to the TerramEarth case study.

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

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

**Answer:** A

#### Explanation:

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

<https://cloud.google.com/endpoints/docs/openapi/architecture-overview>

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

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

From scenario: Business Requirements

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

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

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

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

#### NEW QUESTION 5

- (Exam Topic 2)

For this question refer to the TerramEarth case study

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

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

**Answer: B**

#### NEW QUESTION 6

- (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 7

- (Exam Topic 5)

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

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

**Answer: BC**

#### Explanation:

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

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

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

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

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

References:

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

#### NEW QUESTION 8

- (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 9

- (Exam Topic 5)

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



what should you do?

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

**Answer:** B

**Explanation:**

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

#### NEW QUESTION 10

- (Exam Topic 5)

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

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

**Answer:** AE

#### NEW QUESTION 10

- (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 14

- (Exam Topic 5)

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

Which feature of Kubernetes should you use to accomplish this?

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

**Answer:** A

**Explanation:**

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

#### NEW QUESTION 15

- (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 20

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 23**

- (Exam Topic 5)

Auditors visit your teams every 12 months and ask to review all the Google Cloud Identity and Access Management (Cloud IAM) policy changes in the previous 12 months. You want to streamline and expedite the analysis and audit process. What should you do?

- A. Create custom Google Stackdriver alerts and send them to the auditor.
- B. Enable Logging export to Google BigQuery and use ACLs and views to scope the data shared with the auditor.
- C. Use cloud functions to transfer log entries to Google Cloud SQL and use ACLS and views to limit an auditor's view.
- D. Enable Google Cloud Storage (GCS) log export to audit logs Into a GCS bucket and delegate access to the bucket.

**Answer:** D

**Explanation:**

Export the logs to Google Cloud Storage bucket - Archive Storage, as it will not be used for 1 year, price for which is \$0.004 per GB per Month. The price for long term storage in BigQuery is \$0.01 per GB per Month (250% more). Also for analysis purpose, whenever Auditors are there(once per year), you can use BigQuery and use GCS bucket as external data source. BigQuery supports querying Cloud Storage data from these storage classes:  
Standard Nearline Coldline Archive

**NEW QUESTION 27**

- (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 29**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

`--enable-autoscaling`

Enables autoscaling for a node pool.

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

Where:

`--max-nodes=MAX_NODES`

Maximum number of nodes in the node pool.

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

**NEW QUESTION 33**

- (Exam Topic 5)

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

- A. Add each tier to a different subnetwork.

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

**Answer:** D

**Explanation:**

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

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

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

**NEW QUESTION 34**

- (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 36**

- (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 37**

- (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 38**

- (Exam Topic 5)

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

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

app = Flask(__name__)
sessions = {}

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

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

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

    return news.render(news_articles)

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

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

**Answer:** A

**Explanation:**

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

#### NEW QUESTION 39

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

#### NEW QUESTION 44

- (Exam Topic 5)

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

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

**Answer:** B

#### NEW QUESTION 49

- (Exam Topic 5)

Your organization wants to control IAM policies for different departments independently, but centrally. Which approach should you take?



- A. Multiple Organizations with multiple Folders
- B. Multiple Organizations, one for each department
- C. A single Organization with Folder for each department
- D. A single Organization with multiple projects, each with a central owner

**Answer:** C

**Explanation:**

Folders are nodes in the Cloud Platform Resource Hierarchy. A folder can contain projects, other folders, or a combination of both. You can use folders to group projects under an organization in a hierarchy. For example, your organization might contain multiple departments, each with its own set of GCP resources. Folders allow you to group these resources on a per-department basis. Folders are used to group resources that share common IAM policies. While a folder can contain multiple folders or resources, a given folder or resource can have exactly one parent.

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

**NEW QUESTION 53**

- (Exam Topic 5)

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

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

**Answer:** AC

**Explanation:**

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

**NEW QUESTION 56**

- (Exam Topic 5)

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

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

**Answer:** A

**Explanation:**

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

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

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

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

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

**NEW QUESTION 58**

- (Exam Topic 5)

You are using Cloud SQL as the database backend for a large CRM deployment. You want to scale as usage increases and ensure that you don't run out of storage, maintain 75% CPU usage cores, and keep replication lag below 60 seconds. What are the correct steps to meet your requirements?

- A. 1) Enable automatic storage increase for the instance. 2) Create a Stackdriver alert when CPU usage exceeds 75%, and change the instance type to reduce CPU usage. 3) Create a Stackdriver alert for replication lag, and shard the database to reduce replication time.
- B. 1) Enable automatic storage increase for the instance. 2) Change the instance type to a 32-core machine type to keep CPU usage below 75%. 3) Create a Stackdriver alert for replication lag, and shard the database to reduce replication time.
- C. 1) Create a Stackdriver alert when storage exceeds 75%, and increase the available storage on the instance to create more space. 2) Deploy memcached to reduce CPU load. 3) Change the instance type to a 32-core machine type to reduce replication lag.
- D. 1) Create a Stackdriver alert when storage exceeds 75%, and increase the available storage on the instance to create more space. 2) Deploy memcached to reduce CPU load. 3) Create a Stackdriver alert for replication lag, and change the instance type to a 32-core machine type to reduce replication lag.

**Answer:** A

**NEW QUESTION 62**

- (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 file.
- B. Use `gsutil` to upload the files.
- C. Supply the encryption key using `gcloud config`.
- D. Use `gsutil` to upload the files to that bucket.
- E. Use `gsutil` to upload the files, and use the flag `--encryption-key` to supply the encryption key.



- F. Use gsutil to create a bucket, and use the flag --encryption-key to supply the encryption key
- G. Use gsutil to upload the files to that bucket.

**Answer:** A

**Explanation:**

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

**NEW QUESTION 64**

- (Exam Topic 5)

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

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

**Answer:** B

**NEW QUESTION 68**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

The error is most likely caused by the access scope issue. When creating a new instance, you have the default Compute engine default service account but most services access including BigQuery is not enabled. Create an instance. Most access is not enabled by default. You have a default service account but don't have the permission (scope) you can stop the instance, edit, change scope and restart it to enable the scope access. Of course, if you run your script on a new virtual machine with the BigQuery access scope enabled, it also works.

<https://cloud.google.com/compute/docs/access/service-accounts>

**NEW QUESTION 71**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 73**

- (Exam Topic 5)

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 75**

- (Exam Topic 5)

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 79

- (Exam Topic 5)

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

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

**Answer: C**

#### NEW QUESTION 81

- (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 86

- (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 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 sectio
- 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 sectio
- E. Search for the Create Insert 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 90

- (Exam Topic 5)

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

```
Java.lang.SecurityException : SHA1 digest

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

    At

    Sun.security.util.ManifestEntryVerifier.ver

    At java.net.URLClassLoader.defineCla

    At sun.reflect.GeneratedMethodAccessors

    At

    Sun.reflect.DelegatingMethodAccessorImpl.

    At java.lang.reflect.Method.invoke
```

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

**Answer: B**

#### NEW QUESTION 91

- (Exam Topic 5)

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

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

**Answer: AC**

#### NEW QUESTION 95

- (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 100

- (Exam Topic 5)

You need to develop procedures to test a disaster plan for a mission-critical application. You want to use Google-recommended practices and native capabilities within GCP.

What should you do?

- A. Use Deployment Manager to automate service provisionin
- B. Use Activity Logs to monitor and debug your tests.
- C. Use Deployment Manager to automate provisionin
- D. Use Stackdriver to monitor and debug your tests.
- E. Use gcloud scripts to automate service provisionin
- F. Use Activity Logs monitor and debug your tests.
- G. Use automated scripts to automate service provisionin
- H. Use Activity Logs monitor and debug your tests.

**Answer: B**

#### Explanation:

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

#### NEW QUESTION 105

- (Exam Topic 5)

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 107

- (Exam Topic 5)

Your company is forecasting a sharp increase in the number and size of Apache Spark and Hadoop jobs being run on your local datacenter. You want to utilize the cloud to help you scale this upcoming demand with the least amount of operations work and code change. Which product should you use?

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

**Answer:** B

#### Explanation:

Google Cloud Dataproc is a fast, easy-to-use, low-cost and fully managed service that lets you run the Apache Spark and Apache Hadoop ecosystem on Google Cloud Platform. Cloud Dataproc provisions big or small clusters rapidly, supports many popular job types, and is integrated with other Google Cloud Platform services, such as Google Cloud Storage and Stackdriver Logging, thus helping you reduce TCO.

References: <https://cloud.google.com/dataproc/docs/resources/faq>

#### NEW QUESTION 110

- (Exam Topic 5)

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

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

**Answer:** C

#### Explanation:

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

#### NEW QUESTION 111

- (Exam Topic 5)

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

- A. Ensure that VM service accounts are granted the appropriate Cloud Pub/Sub IAM roles.
- B. Ensure that VM service accounts do not have access to Cloud Pub/Sub, and use VM access scopes to grant the appropriate Cloud Pub/Sub IAM roles.
- C. Generate an OAuth2 access token for accessing Cloud Pub/Sub, encrypt it, and store it in Cloud Storage for access from each VM.
- D. Create a gateway to Cloud Pub/Sub using a Cloud Function, and grant the Cloud Function service account the appropriate Cloud Pub/Sub IAM roles.

**Answer:** A

#### NEW QUESTION 115

- (Exam Topic 5)

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

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

**Answer:** C

**Explanation:**

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

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

Good for:

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

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

**NEW QUESTION 119**

- (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 Loggin
- 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 `kubect1` to restart all pods.

**Answer:** C

**NEW QUESTION 120**

- (Exam Topic 5)

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

What should you do?

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

**Answer:** C

**NEW QUESTION 123**

- (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 dependencie
- 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 124**

- (Exam Topic 5)

Your company wants to start using Google Cloud resources but wants to retain their on-premises Active Directory domain controller for identity management. What should you do?

- A. Use the Admin Directory API to authenticate against the Active Directory domain controller.
- B. Use Google Cloud Directory Sync to synchronize Active Directory usernames with cloud identities and configure SAML SSO.
- C. Use Cloud Identity-Aware Proxy configured to use the on-premises Active Directory domain controller as an identity provider.
- D. Use Compute Engine to create an Active Directory (AD) domain controller that is a replica of the onpremises AD domain controller using Google Cloud Directory Sync.



**Answer:** B

**Explanation:**

[https://cloud.google.com/solutions/federating-gcp-with-active-directory-introduction#implementing\\_federation](https://cloud.google.com/solutions/federating-gcp-with-active-directory-introduction#implementing_federation)

#### NEW QUESTION 125

- (Exam Topic 5)

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

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

**Answer:** A

**Explanation:**

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

#### NEW QUESTION 128

- (Exam Topic 5)

You are using a single Cloud SQL instance to serve your application from a specific zone. You want to introduce high availability. What should you do?

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

**Answer:** B

**Explanation:**

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

#### NEW QUESTION 129

- (Exam Topic 5)

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

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

**Answer:** D

**Explanation:**

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

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

#### NEW QUESTION 132

- (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 Storage
- B. Use Cloud Datalab to explore and clean your data.
- C. Upload your files into Cloud Storage
- 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 137

- (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 138**

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## Relate Links

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