



# Google

## Exam Questions Professional-Cloud-Architect

Google Certified Professional - Cloud Architect (GCP)

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### NEW QUESTION 1

- (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 2

- (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 3

- (Topic 2)

For this question refer to the TerramEarth case study.

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

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

**Answer:** B

#### Explanation:

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

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

### NEW QUESTION 4

- (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.-1712523161.1522785064](https://cloud.google.com/endpoints/docs/openapi/about-cloud-endpoints?hl=en_US&_ga=2.21787131.-1712523161.1522785064)

<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

- (Topic 3)

For this question, refer to the JencoMart case study.

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

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

**Answer: A**

#### Explanation:

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

Migrating data to Google Cloud Platform

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

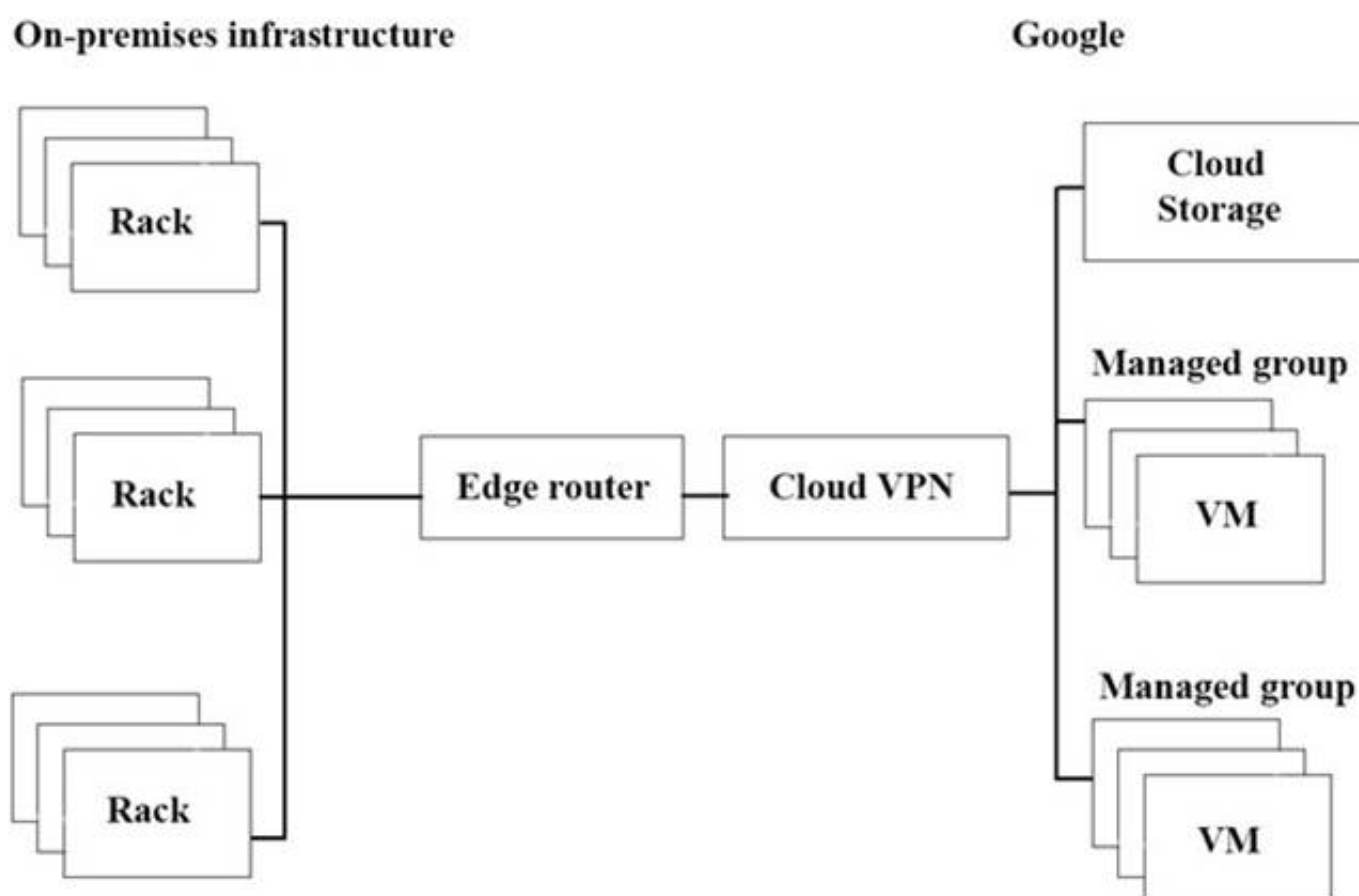
References: [https://cloud.google.com/iam/docs/understanding-service-accounts#migrating\\_data\\_to\\_google\\_cloud\\_platform](https://cloud.google.com/iam/docs/understanding-service-accounts#migrating_data_to_google_cloud_platform)

### NEW QUESTION 6

- (Topic 3)

For this question, refer to the JencoMart case study.

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



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

**Answer: ADF**

### NEW QUESTION 7

- (Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 8**

- (Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** A

**NEW QUESTION 9**

- (Topic 4)

For this question, refer to the Dress4Win case study.

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 10**

- (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 10**

- (Topic 5)

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

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

**Answer:** A

**Explanation:**

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

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

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

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



### NEW QUESTION 13

- (Topic 5)

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

A.

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

B.

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

C.

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

D.

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

A.

**Answer: B**

### NEW QUESTION 14

- (Topic 5)

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

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

**Answer: D**

#### Explanation:

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

### NEW QUESTION 17

- (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 20

- (Topic 5)

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

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

**Answer: C**

#### Explanation:

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

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

### NEW QUESTION 23

- (Topic 5)

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

A.

\* 1. Create a Cloud Logging sink to export BigQuery data access logs to Cloud Storage.

\* 2. Develop a Dataflow pipeline to compute the cost of queries split by users.

B.

\* 1. Create a Cloud Logging sink to export BigQuery data access logs to BigQuery.

\* 2. Perform a BigQuery query on the generated table to extract the information you need.

C.

\* 1. Activate billing export into BigQuery.

\* 2. Perform a BigQuery query on the billing table to extract the information you need.

D.

\* 1. In the BigQuery dataset that contains all the tables to be queried, add a label for each user that can launch a query.

\* 2. Open the Billing page of the project.

\* 3. Select Reports.

\* 4. Select BigQuery as the product and filter by the user you want to check.

A.

**Answer: C**

#### Explanation:

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

### NEW QUESTION 25

- (Topic 5)

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

A. \* 1. Define a migration plan based on the list of the applications and their dependencies.\* 2. Migrate all virtual machines into Compute Engine individually with Migrate for Compute Engine.

B. \* 1. Perform an assessment of virtual machines running in the current VMware environment.\* 2. Create images of all disk

C. Import disks on Compute Engine.\* 3. Create standard virtual machines where the boot disks are the ones you have imported.

D. \* 1. Perform an assessment of virtual machines running in the current VMware environment.\* 2. Define a migration plan, prepare a Migrate for Compute Engine migration RunBook, and execute the migration.

E. \* 1. Perform an assessment of virtual machines running in the current VMware environment.\* 2.Install a third-party agent on all selected virtual machine

F. 3.Migrate all virtual machines into Compute Engine.

**Answer: C**

#### Explanation:

The framework illustrated in the preceding diagram has four phases:

•Assess. In this phase, you assess your source environment, assess the workloads that you want to migrate to Google Cloud, and assess which VMs support each workload.

•Plan. In this phase, you create the basic infrastructure for Migrate for Compute Engine, such as provisioning the resource hierarchy and setting up network access.

•Deploy. In this phase, you migrate the VMs from the source environment to Compute Engine.

•Optimize. In this phase, you begin to take advantage of the cloud technologies and capabilities.

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

### NEW QUESTION 27

- (Topic 5)

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

A. Set the memcache service level to dedicate

B. Create a key from the hash of the query, and returndatabase values from memcache before issuing a query to Cloud SQL.

C. Set the memcache service level to dedicate

D. Create a cron task that runs every minute to populate the cache with keys containing query results.

E. Set the memcache service level to share

F. Create a cron task that runs every minute to save all expected queries to a key called “cached-queries”.

G. Set the memcache service level to share

H. Create a key called “cached-queries”, and return databasevalues from the key before using a query to Cloud SQL.

**Answer: A**

#### Explanation:

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

### NEW QUESTION 29

- (Topic 5)

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

A. Use Spinnaker to deploy builds to production using the red/black deployment strategy so that changes can easily be rolled back.

B. Use Spinnaker to deploy builds to production and run tests on production deployments.

C. Use Jenkins to build the staging branches and the master branc

D. Build and deploy changes to production for 10% of users before doing a complete rollout.

- E. Use Jenkins to monitor tags in the repositior
- F. Deploy staging tags to a staging environment for testing.After testing, tag the repository for production and deploy that to the production environment.

**Answer:** D

**Explanation:**

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

**NEW QUESTION 30**

- (Topic 5)

Your company has decided to make a major revision of their API in order to create better experiences for their developers. They need to keep the old version of the API available and deployable, while allowing new customers and testers to try out the new API. They want to keep the same SSL and DNS records in place to serve both APIs. What should they do?

- A. Configure a new load balancer for the new version of the API.
- B. Reconfigure old clients to use a new endpoint for the new API.
- C. Have the old API forward traffic to the new API based on the path.
- D. Use separate backend pools for each API path behind the load balancer.

**Answer:** D

**Explanation:**

<https://cloud.google.com/endpoints/docs/openapi/lifecycle-management>

**NEW QUESTION 34**

- (Topic 5)

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

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 36**

- (Topic 5)

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

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 39**

- (Topic 5)

Your company has an application that is running on multiple instances of Compute Engine. It generates 1 TB per day of logs. For compliance reasons, the logs need to be kept for at least two years. The logs need to be available for active query for 30 days. After that, they just need to be retained for audit purposes. You want to implement a storage solution that is compliant, minimizes costs, and follows Google-recommended practices. What should you do?

- A.
  - \* 1. Install the Cloud Ops agent on all instances.
  - \* 2. Create a sink to export logs into a partitioned BigQuery table.
  - \* 3. Set a time\_partitioning\_expiration of 30 days.
- B.
  - \* 1. Install the Cloud Ops agent on all instances.
  - \* 2. Create a sink to export logs into a regional Cloud Storage bucket.
  - \* 3. Create an Object Lifecycle rule to move files into a Coldline Cloud Storage bucket after one month.
  - \* 4. Configure a retention policy at the bucket level to create a lock.
- C.
  - \* 1. Create a daily cron job, running on all instances, that uploads logs into a partitioned BigQuery table.
  - \* 2. Set a time\_partitioning\_expiration of 30 days.
- D.
  - \* 1. Write a daily cron job, running on all instances, that uploads logs into a Cloud Storage bucket.
  - \* 2. Create a sink to export logs into a regional Cloud Storage bucket.
  - \* 3. Create an Object Lifecycle rule to move files into a Coldline Cloud Storage bucket after one month.



A.

**Answer:** B

**Explanation:**

The practice for managing logs generated on Compute Engine on Google Cloud is to install the Cloud Logging agent and send them to Cloud Logging. The sent logs will be aggregated into a Cloud Logging sink and exported to Cloud Storage. The reason for using Cloud Storage as the destination for the logs is that the requirement in question requires setting up a lifecycle based on the storage period. In this case, the log will be used for active queries for 30 days after it is saved, but after that, it needs to be stored for a longer period of time for auditing purposes. If the data is to be used for active queries, we can use BigQuery's Cloud Storage data query feature and move the data past 30 days to Coldline to build a cost-optimal solution. Therefore, the correct answer is as follows

- \* 1. Install the Cloud Logging agent on all instances.

Create a sync that exports the logs to the region's Cloud Storage bucket.

- \* 3. Create an Object Lifecycle rule to move the files to the Coldline Cloud Storage bucket after one month. \* 4.
- \* 4. set up a bucket-level retention policy using bucket locking."

**NEW QUESTION 42**

- (Topic 5)

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 45**

- (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 49**

- (Topic 5)

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

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

**Answer:** CD

**Explanation:**

Backups help you restore lost data to your Cloud SQL instance. Additionally, if an instance is having a problem, you can restore it to a previous state by using the backup to overwrite it. Enable automated backups for any instance that contains necessary data. Backups protect your data from loss or damage. Enabling automated backups, along with binary logging, is also required for some operations, such as clone and replica creation. Reference: <https://cloud.google.com/sql/docs/mysql/backup-recovery/backups>

**NEW QUESTION 51**

- (Topic 5)

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

- 99.99% system availability
- cost optimization

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 54**

- (Topic 5)

Your team will start developing a new application using microservices architecture on Kubernetes Engine. As part of the development lifecycle, any code change that has been pushed to the remote develop branch on your GitHub repository should be built and tested automatically. When the build and test are successful, the relevant microservice will be deployed automatically in the development environment. You want to ensure that all code deployed in the development environment follows this process. What should you do?

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

**Answer:** C

**Explanation:**

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

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

**NEW QUESTION 58**

- (Topic 5)

Your company uses Google Kubernetes Engine (GKE) as a platform for all workloads. Your company has a single large GKE cluster that contains batch, stateful, and stateless workloads. The GKE cluster is configured with a single node pool with 200 nodes. Your company needs to reduce the cost of this cluster but does not want to compromise availability. What should you do?

- A. Create a second GKE cluster for the batch workloads only
- B. Allocate the 200 original nodes across both clusters.
- C. Configure a HorizontalPodAutoscaler for all stateless workloads and for all compatible stateful workload
- D. Configure the cluster to use node auto scaling.
- E. Configure CPU and memory limits on the namespaces in the cluster
- F. Configure all Pods to have a CPU and memory limits.
- G. Change the node pool to use spot VMs.

**Answer:** C

**Explanation:**

One way to reduce the cost of a Google Kubernetes Engine (GKE) cluster without compromising availability is to use horizontal pod autoscalers (HPA) and node auto scaling. HPA allows you to automatically scale the number of Pods in a deployment based on the resource usage of the Pods. By configuring HPA for stateless workloads and for compatible stateful workloads, you can ensure that the number of Pods is automatically adjusted based on the actual resource usage, which can help to reduce costs. Node auto scaling allows you to automatically add or remove nodes from the node pool based on the resource usage of the cluster. By configuring node auto scaling, you can ensure that the cluster has the minimum number of nodes needed to meet the resource requirements of the workloads, which can also help to reduce costs.

**NEW QUESTION 61**

- (Topic 5)

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

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

**Answer:** C

**NEW QUESTION 63**

- (Topic 5)

As part of implementing their disaster recovery plan, your company is trying to replicate their production

MySQL database from their private data center to their GCP project using a Google Cloud VPN connection. They are experiencing latency issues and a small amount of packet loss that is disrupting the replication. What should they do?

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

**Answer:** B

#### NEW QUESTION 66

- (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 67

- (Topic 5)

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

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

**Answer:** A

#### Explanation:

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

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

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

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

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

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

#### NEW QUESTION 68

- (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 70

- (Topic 5)

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

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

**Answer:** B

**Explanation:**

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

#### NEW QUESTION 73

- (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 including BigQuery are 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 78

- (Topic 5)

You are designing a Data Warehouse on Google Cloud and want to store sensitive data in BigQuery. Your company requires you to generate encryption keys outside of Google Cloud. You need to implement a solution. What should you do?

- A. Generate a new key in Cloud Key Management Service (Cloud KMS). Store all data in Cloud Storage using the customer-managed key option and select the created key
- B. Set up a Dataflow pipeline to decrypt the data and to store it in a BigQuery dataset.
- C. Generate a new key in Cloud Key Management Service (Cloud KMS). Create a dataset in BigQuery using the customer-managed key option and select the created key
- D. Import a key in Cloud KM
- E. Store all data in Cloud Storage using the customer- managed key option and select the created key
- F. Set up a Dataflow pipeline to decrypt the data and to store it in a new BigQuery dataset.
- G. Import a key in Cloud KM
- H. Create a dataset in BigQuery using the customer-supplied key option and select the created key.

**Answer:** D

#### Explanation:

<https://cloud.google.com/bigquery/docs/customer-managed-encryption>

#### NEW QUESTION 79

- (Topic 5)

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

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

**Answer:** B

#### Explanation:

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

Subnet primary IP address range (used by nodes)

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

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

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

#### NEW QUESTION 81

- (Topic 5)

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 84

- (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 89

- (Topic 5)

You have developed a non-critical update to your application that is running in a managed instance group, and have created a new instance template with the update that you want to release. To prevent any possible impact to the application, you don't want to update any running instances. You want any new instances that are created by the managed instance group to contain the new update. What should you do?

- A. Start a new rolling restart operation.
- B. Start a new rolling replace operation.
- C. Start a new rolling updat
- D. Select the Proactive update mode.
- E. Start a new rolling updat
- F. Select the Opportunistic update mode.

**Answer:** D

#### Explanation:

In certain scenarios, an opportunistic update is useful because you don't want to cause instability to the system if it can be avoided. For example, if you have a non- critical update that can be applied as necessary without any urgency and you have a MIG that is actively being autoscaled, perform an opportunistic update so that Compute Engine does not actively tear down your existing instances to apply the update. When resizing down, the autoscaler preferentially terminates instances with the old template as well as instances that are not yet in a RUNNING state.

#### NEW QUESTION 93

- (Topic 5)

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

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

**Answer:** A

#### Explanation:

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

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

Benefits:

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

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

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

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

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

#### NEW QUESTION 95

- (Topic 5)

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

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

**Answer:** B

#### Explanation:

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

<https://cloud.google.com/dlp#section-6>

#### NEW QUESTION 100

- (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 105**

- (Topic 5)

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

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

**Answer: A**

**Explanation:**

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

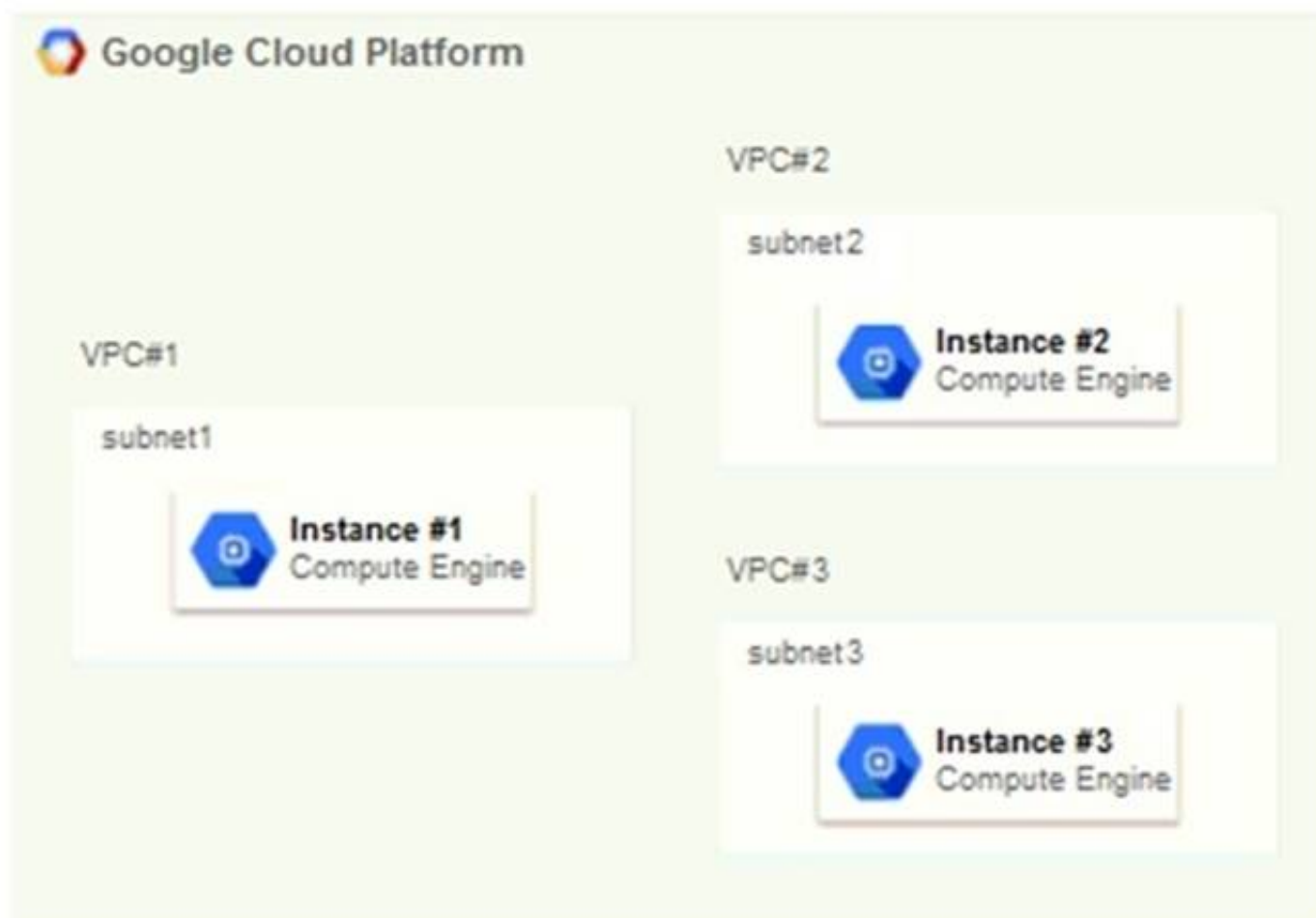
? <https://cloud.google.com/data-transfer-appliance/docs/overview>

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

**NEW QUESTION 110**

- (Topic 5)

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



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

- A. Create a cloud router to advertise subnet #2 and subnet #3 to subnet #1.
- B. Add two additional NICs to Instance #1 with the following configuration: •NIC1 VPC: VPC #2 SUBNETWORK: subnet #2 •NIC2 VPC: VPC #3 SUBNETWORK: subnet #3 Update firewall rules to enable traffic between instances.
- C. Create two VPN tunnels via CloudVPN: •1 between VPC #1 and VPC #2. •1 between VPC #2 and VPC #3. Update firewall rules to enable traffic between the instances.
- D. Peer all three VPCs: •Peer VPC #1 with VPC #2. •Peer VPC #2 with VPC #3. Update firewall rules to enable traffic between the instances.

**Answer: B**

**Explanation:**

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

#### NEW QUESTION 114

- (Topic 5)

Your applications will be writing their logs to BigQuery for analysis. Each application should have its own table.

Any logs older than 45 days should be removed. You want to optimize storage and follow Google recommended practices. What should you do?

- A. Configure the expiration time for your tables at 45 days
- B. Make the tables time-partitioned, and configure the partition expiration at 45 days
- C. Rely on BigQuery's default behavior to prune application logs older than 45 days
- D. Create a script that uses the BigQuery command line tool (bq) to remove records older than 45 days

**Answer: B**

#### Explanation:

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

#### NEW QUESTION 115

- (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 120

- (Topic 5)

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

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

**Answer: BC**

#### Explanation:

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

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

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

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

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

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

#### NEW QUESTION 124

- (Topic 5)

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

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

**Answer: B**

#### Explanation:

Dataflow is for processing both the Batch and Stream.

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

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

#### NEW QUESTION 128

- (Topic 7)

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

Which two actions should you take?

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

**Answer:** A

#### NEW QUESTION 130

- (Topic 7)

For this question, refer to the TerramEarth case study. Considering the technical requirements, how should you reduce the unplanned vehicle downtime in GCP?

- A. Use BigQuery as the data warehouse
- B. Connect all vehicles to the network and stream data into BigQuery using Cloud Pub/Sub and Cloud Dataflow
- C. Use Google Data Studio for analysis and reporting.
- D. Use BigQuery as the data warehouse
- E. Connect all vehicles to the network and upload gzip files to a Multi-Regional Cloud Storage bucket using gcloud
- F. Use Google Data Studio for analysis and reporting.
- G. Use Cloud Dataproc Hive as the data warehouse
- H. Upload gzip files to a MultiRegional Cloud Storage bucket
- I. Upload this data into BigQuery using gcloud
- J. Use Google data Studio for analysis and reporting.
- K. Use Cloud Dataproc Hive as the data warehouse
- L. Directly stream data into partitioned Hive table
- M. Use Pig scripts to analyze data.

**Answer:** A

#### NEW QUESTION 134

- (Topic 7)

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

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

**Answer:** A

#### NEW QUESTION 138

- (Topic 7)

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

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

**Answer:** C

#### Explanation:

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

#### NEW QUESTION 143

- (Topic 8)

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

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

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



successfully.

E. Integrate Cloud Armor to defend against possible SQL injection attacks in analytics files uploaded to Cloud Storage.

**Answer:** AB

**Explanation:**

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

#### NEW QUESTION 148

- (Topic 8)

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

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

**Answer:** A

#### NEW QUESTION 152

- (Topic 8)

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

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

**Answer:** A

#### NEW QUESTION 157

- (Topic 9)

For this question, refer to the Helicopter Racing League (HRL) case study. The HRL development team releases a new version of their predictive capability application every Tuesday evening at 3

- A. a.
- B. UTC to a repository
- C. The security team at HRL has developed an in-house penetration test Cloud Function called Airwolf. The security team wants to run Airwolf against the predictive capability application as soon as it is released every Tuesday
- D. You need to set up Airwolf to run at the recurring weekly cadence
- E. What should you do?
- F. Set up Cloud Tasks and a Cloud Storage bucket that triggers a Cloud Function.
- G. Set up a Cloud Logging sink and a Cloud Storage bucket that triggers a Cloud Function.
- H. Configure the deployment job to notify a Pub/Sub queue that triggers a Cloud Function.
- I. Set up Identity and Access Management (IAM) and Confidential Computing to trigger a Cloud Function.

**Answer:** A

#### NEW QUESTION 160

- (Topic 9)

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

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

**Answer:** A

**Explanation:**

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

#### NEW QUESTION 165

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