

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

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

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

Answer: D

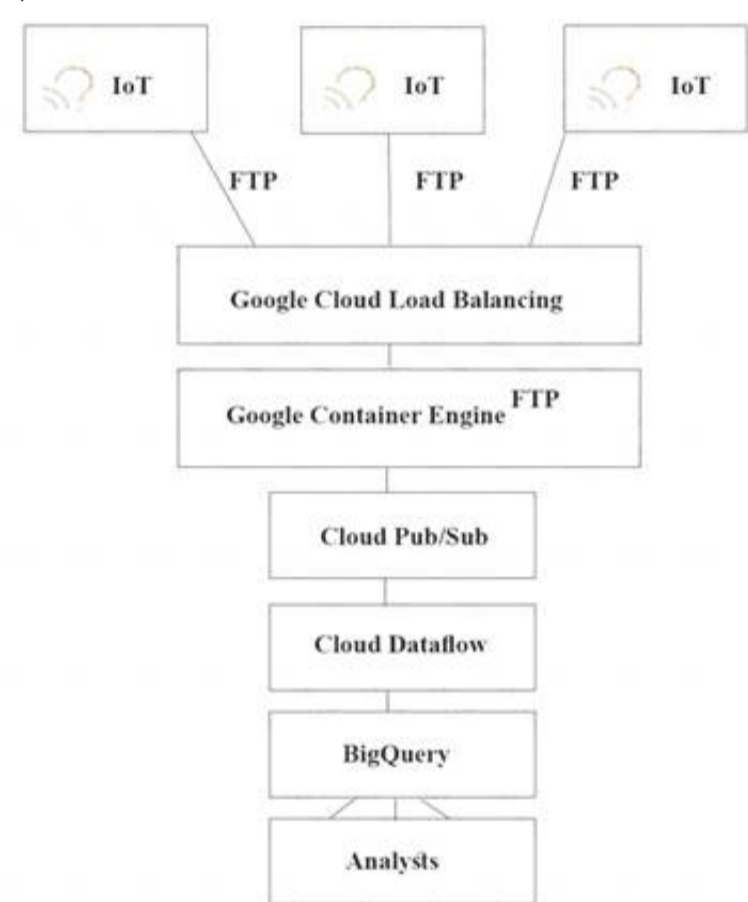
NEW QUESTION 2

- (Exam Topic 2)

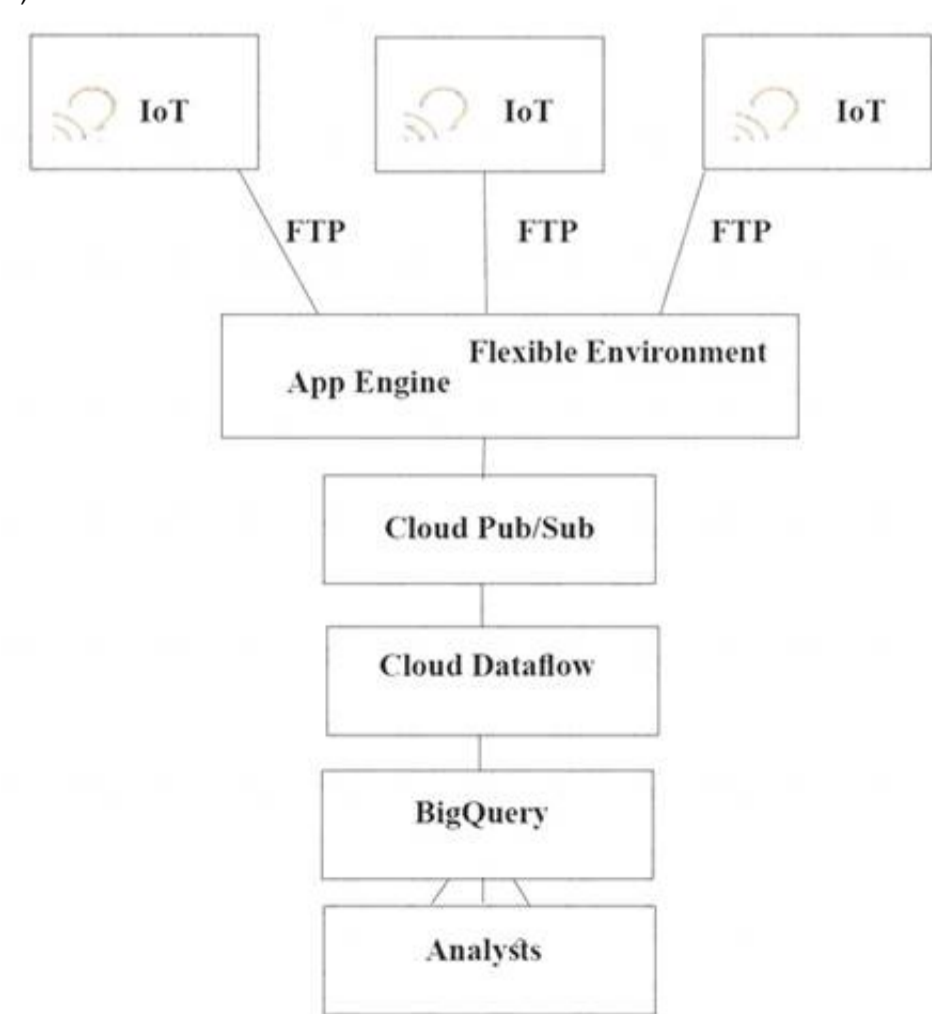
For this question, refer to the TerramEarth case study.

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

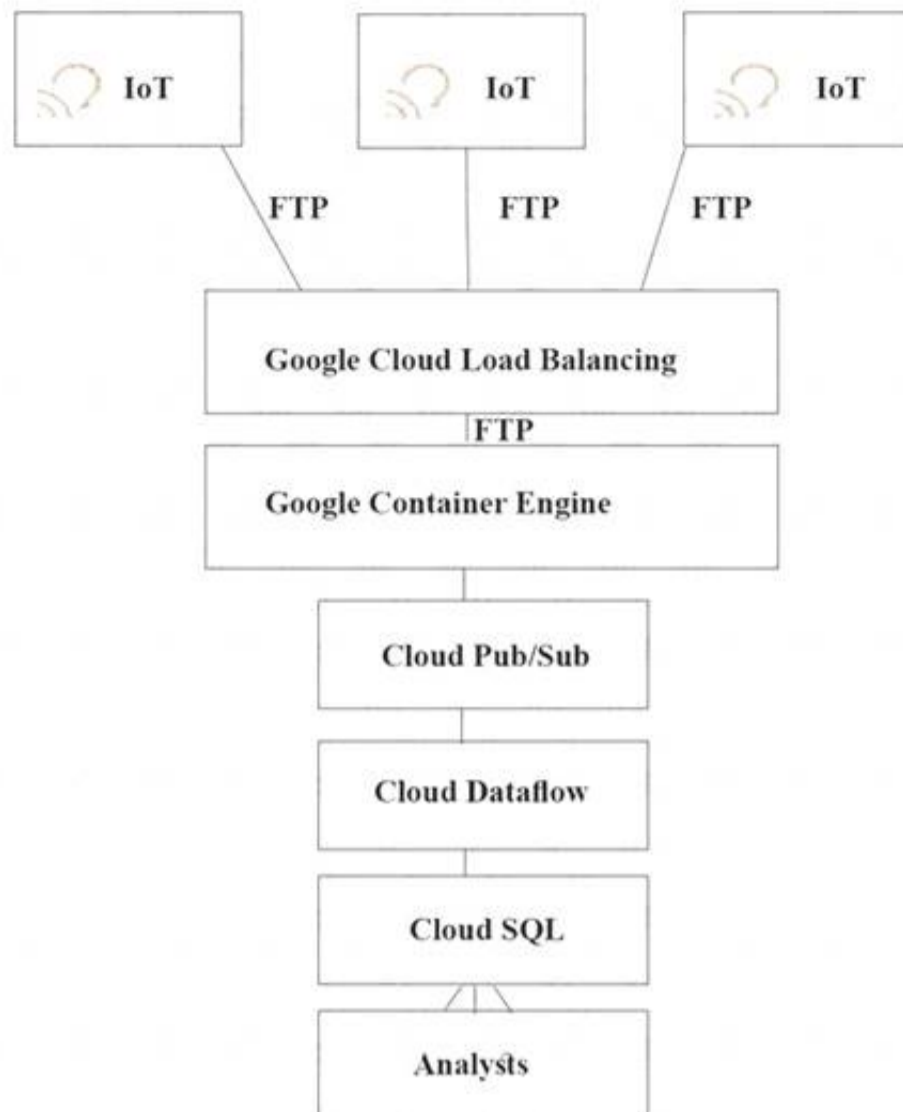
A)



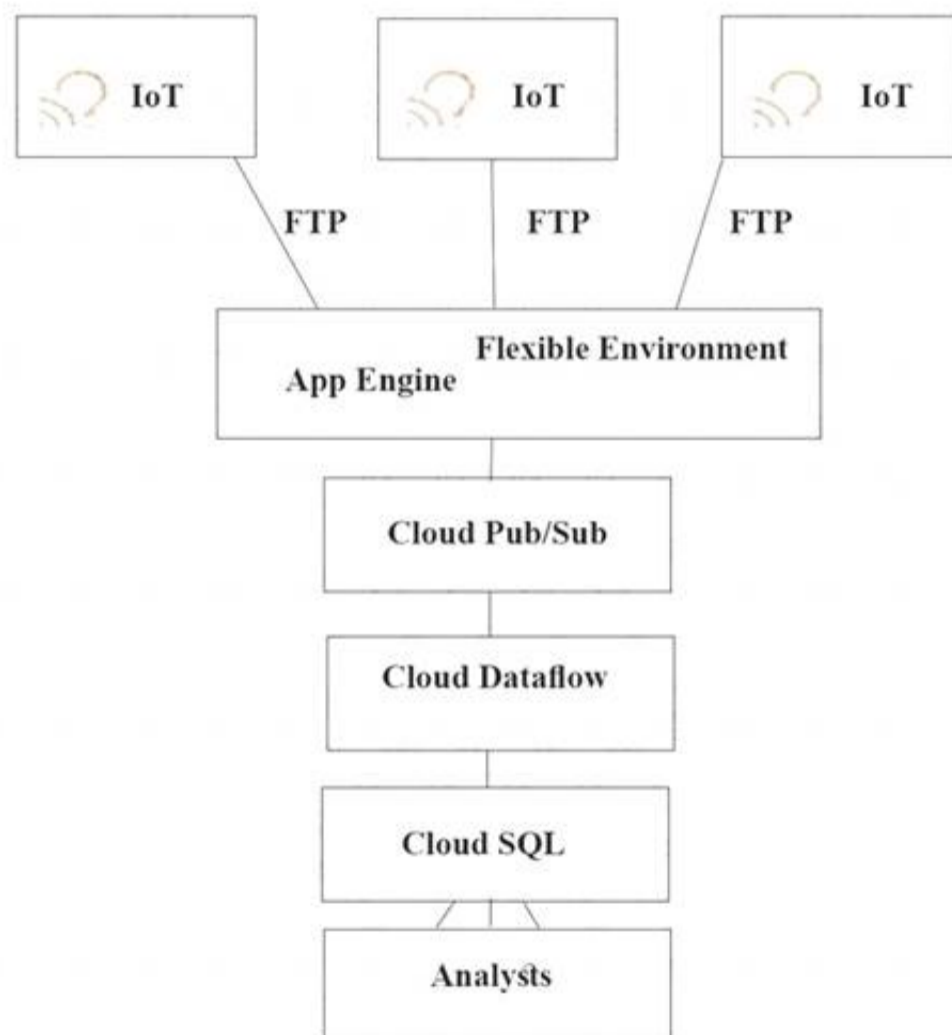
B)



C)



D)

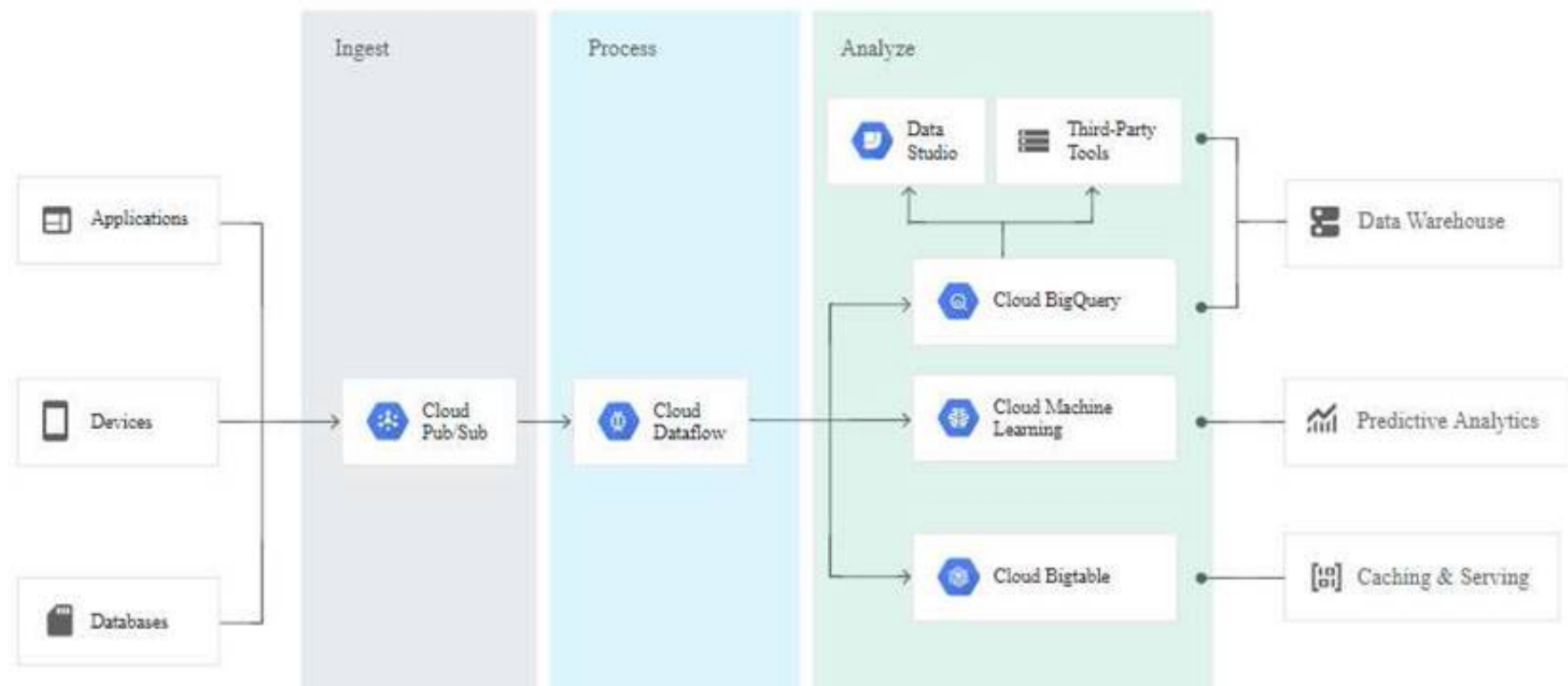


- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: A

Explanation:

<https://cloud.google.com/solutions/iot/> <https://cloud.google.com/solutions/designing-connected-vehicle-platform>
https://cloud.google.com/solutions/designing-connected-vehicle-platform#data_ingestion
<http://www.eweek.com/big-data-and-analytics/google-touts-value-of-cloud-iot-core-for-analyzing-connected-car-data>
<https://cloud.google.com/solutions/iot/> The push endpoint can be a load balancer. A container cluster can be used. Cloud Pub/Sub for Stream Analytics



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

NEW QUESTION 3

- (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 4

- (Exam Topic 3)

For this question, refer to the JencoMart case study.

JencoMart wants to move their User Profiles database to Google Cloud Platform. Which Google Database should they use?

- A. Cloud Spanner
- B. Google BigQuery
- C. Google Cloud SQL
- D. Google Cloud Datastore

Answer: D

Explanation:

<https://cloud.google.com/datastore/docs/concepts/overview> Common workloads for Google Cloud Datastore:

- > User profiles
- > Product catalogs
- > Game state

References: <https://cloud.google.com/storage-options/> <https://cloud.google.com/datastore/docs/concepts/overview>

NEW QUESTION 5

- (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 it's 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 6

- (Exam 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 7

- (Exam Topic 5)

You are using Cloud Shell and need to install a custom utility for use in a few weeks. Where can you store the file so it is in the default execution path and persists across sessions?

- A. ~/bin
- B. Cloud Storage
- C. /google/scripts
- D. /usr/local/bin

Answer: D

Explanation:

<https://medium.com/google-cloud/no-localhost-no-problem-using-google-cloud-shell-as-my-full-time-developm>

NEW QUESTION 8

- (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 resizeCLUSTER_Name --size 10`
- B. Add a tag to the instances in the cluster with the following command:`gcloud compute instances add-tagsINSTANCE -tags enable-autoscaling max-nodes=10`
- C. Update the existing Kubernetes Engine cluster with the following command:`gcloud alpha container clustersupdate mycluster -enable-autoscaling -min-nodes=1 -max-nodes=10`
- D. Create a new Kubernetes Engine cluster with the following command:`gcloud alpha container clusterscreate 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 9

- (Exam Topic 5)

You have found an error in your App Engine application caused by missing Cloud Datastore indexes. You have created a YAML file with the required indexes and want to deploy these new indexes to Cloud Datastore. What should you do?

- A. Point `gcloud datastore create-indexes` to your configuration file
- B. Upload the configuration file the App Engine's default Cloud Storage bucket, and have App Engine detect the new indexes
- C. In the GCP Console, use Datastore Admin to delete the current indexes and upload the new configuration file
- D. Create an HTTP request to the built-in python module to send the index configuration file to your application

Answer: A

NEW QUESTION 10

- (Exam Topic 5)

Your company creates rendering software which users can download from the company website. Your company has customers all over the world. You want to minimize latency for all your customers. You want to follow Google-recommended practices. How should you store the files?

- A. Save the files in a Multi-Regional Cloud Storage bucket.
- B. Save the files in a Regional Cloud Storage bucket, one bucket per zone of the region.
- C. Save the files in multiple Regional Cloud Storage buckets, one bucket per zone per region.
- D. Save the files in multiple Multi-Regional Cloud Storage buckets, one bucket per multi-region.

Answer: A

Explanation:

<https://cloud.google.com/storage/docs/locations#location-mr>

NEW QUESTION 10

- (Exam Topic 5)

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

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

Answer: B

Explanation:

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

NEW QUESTION 12

- (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 14

- (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 18

- (Exam Topic 5)

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

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

Answer: B

Explanation:

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

NEW QUESTION 20

- (Exam Topic 5)

You need to migrate Hadoop jobs for your company's Data Science team without modifying the underlying infrastructure. You want to minimize costs and infrastructure management effort. What should you do?

- A. Create a Dataproc cluster using standard worker instances.
- B. Create a Dataproc cluster using preemptible worker instances.

- C. Manually deploy a Hadoop cluster on Compute Engine using standard instances.
- D. Manually deploy a Hadoop cluster on Compute Engine using preemptible instances.

Answer: B

Explanation:

Reference: <https://cloud.google.com/architecture/hadoop/hadoop-gcp-migration-jobs>

NEW QUESTION 24

- (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 28

- (Exam Topic 5)

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

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

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

Answer: B

Explanation:

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

NEW QUESTION 33

- (Exam Topic 5)

You are managing an application deployed on Cloud Run for Anthos, and you need to define a strategy for deploying new versions of the application. You want to evaluate the new code with a subset of production traffic to decide whether to proceed with the rollout. What should you do?

- A. Deploy a new revision to Cloud Run with the new versio
- B. Configure traffic percentage between revisions.
- C. Deploy a new service to Cloud Run with the new versio
- D. Add a Cloud Load Balancing instance in front of both services.
- E. In the Google Cloud Console page for Cloud Run, set up continuous deployment using Cloud Build for the development branc
- F. As part of the Cloud Build trigger, configure the substitution variable TRAFFIC_PERCENTAGE with the percentage of traffic you want directed to a new version.
- G. In the Google Cloud Console, configure Traffic Director with a new Service that points to the newversion of the application on Cloud Ru
- H. Configure Traffic Director to send a small percentage of traffic to the new version of the application.

Answer: A

Explanation:

<https://cloud.google.com/run/docs/rollouts-rollbacks-traffic-migration>

NEW QUESTION 35

- (Exam Topic 5)

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

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

Answer: D

Explanation:

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

NEW QUESTION 38

- (Exam Topic 5)

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

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

Answer: B

NEW QUESTION 41

- (Exam Topic 5)

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

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

Answer: A

Explanation:

The Anthos Service Mesh pages in the Google Cloud Console provide both summary and in-depth metrics, charts, and graphs that enable you to observe service behavior. You can monitor the overall health of your services, or drill down on a specific service to set a service level objective (SLO) or troubleshoot an issue.

<https://cloud.google.com/service-mesh/docs/observability/explore-dashboard>

<https://cloud.google.com/anthos/service-mesh>

NEW QUESTION 42

- (Exam Topic 5)

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

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

Answer: C

Explanation:

The framework illustrated in the preceding diagram has four phases:

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

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

NEW QUESTION 46

- (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 like caused by the access scope issue. When create new instance, you have the default Compute engine default service account but most serves access including BigQuery is not enable. Create an instance Most access are not enabled by default You have default service account but don't have the

permission (scope) you can stop the instance, edit, change scope and restart it to enable the scope access. Of course, if you Run your script on a new virtual machine with the BigQuery access scope enabled, it also works
<https://cloud.google.com/compute/docs/access/service-accounts>

NEW QUESTION 51

- (Exam Topic 5)

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

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

Answer: D

Explanation:

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

NEW QUESTION 53

- (Exam Topic 5)

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

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

Answer: A

Explanation:

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

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

NEW QUESTION 57

- (Exam Topic 5)

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

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

Answer: A

Explanation:

Reference https://cloud.google.com/storage/docs/json_api/v1/status-codes

NEW QUESTION 62

- (Exam Topic 5)

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

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

Answer: B

Explanation:

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

NEW QUESTION 67

- (Exam 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

Answer: B

NEW QUESTION 69

- (Exam Topic 5)

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

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

Answer: D

Explanation:

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

NEW QUESTION 70

- (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 72

- (Exam Topic 5)

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

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

Answer: A

Explanation:

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

NEW QUESTION 74

- (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 79

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

Answer: B

Explanation:

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

NEW QUESTION 80

- (Exam Topic 5)

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

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

Answer: AEF

Explanation:

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

NEW QUESTION 82

- (Exam Topic 5)

You have a Python web application with many dependencies that requires 0.1 CPU cores and 128 MB of memory to operate in production. You want to monitor and maximize machine utilization. You also to reliably deploy new versions of the application. Which set of steps should you take?

- A. Perform the following:1) Create a managed instance group with f1-micro type machines.2) Use a startup script to clone the repository, check out the production branch, install the dependencies,and start the Python app.3) Restart the instances to automatically deploy new production releases.
- B. Perform the following:1) Create a managed instance group with n1-standard-1 type machines.2) Build a Compute Engine image from the production branch that contains all of the dependencies and automatically starts the Python app.3) Rebuild the Compute Engine image, and update the instance template to deploy new production releases.
- C. Perform the following:1) Create a Kubernetes Engine cluster with n1-standard-1 type machines.2) Build a Docker image from the production branch with all of the dependencies, and tag it with the version number.3) Create a Kubernetes Deployment with the imagePullPolicy set to “IfNotPresent” in the staging namespace, and then promote it to the production namespace after testing.
- D. Perform the following:1) Create a Kubernetes Engine (GKE) cluster with n1-standard-4 type machines.2) Build a Docker image from the master branch will all of the dependencies, and tag it with “latest”.3) Create a Kubernetes Deployment in the default namespace with the imagePullPolicy set to “Always”. Restart the pods to automatically deploy new production releases.

Answer: D

Explanation:

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

NEW QUESTION 83

- (Exam Topic 5)

Your operations team has asked you to help diagnose a performance issue in a production application that runs on Compute Engine. The application is dropping requests that reach it when under heavy load. The process list for affected instances shows a single application process that is consuming all available CPU, and autoscaling has reached the upper limit of instances. There is no abnormal load on any other related systems, including the database. You want to allow production traffic to be served again as quickly as possible. Which action should you recommend?

- A. Change the autoscaling metric to agent.googleapis.com/memory/percent_used.
- B. Restart the affected instances on a staggered schedule.
- C. SSH to each instance and restart the application process.
- D. Increase the maximum number of instances in the autoscaling group.

Answer: D

Explanation:

Reference: <https://cloud.google.com/blog/products/sap-google-cloud/best-practices-for-sap-app-server-autoscaling-on-google-cloud>

NEW QUESTION 88

- (Exam Topic 5)

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

How should you set up the connection?

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

Answer: A

Explanation:

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

NEW QUESTION 91

- (Exam Topic 5)

You are developing an application using different microservices that should remain internal to the cluster. You want to be able to configure each microservice with a specific number of replicas. You also want to be able to address a specific microservice from any other microservice in a uniform way, regardless of the number of replicas the microservice scales to. You need to implement this solution on Google Kubernetes Engine. What should you do?

- A. Deploy each microservice as a Deployment
- B. Expose the Deployment in the cluster using a Service, and use the Service DNS name to address it from other microservices within the cluster.
- C. Deploy each microservice as a Deployment
- D. Expose the Deployment in the cluster using an Ingress, and use the Ingress IP address to address the Deployment from other microservices within the cluster.
- E. Deploy each microservice as a Pod
- F. Expose the Pod in the cluster using a Service, and use the Service DNS name to address the microservice from other microservices within the cluster.
- G. Deploy each microservice as a Pod
- H. Expose the Pod in the cluster using an Ingress, and use the Ingress IP address name to address the Pod from other microservices within the cluster.

Answer: A

Explanation:

<https://kubernetes.io/docs/concepts/services-networking/ingress/>

NEW QUESTION 95

- (Exam 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 96

- (Exam Topic 5)

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

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

- A. Create a group per country
- B. Add analysts to their respective country-group
- C. Create a single group 'all_analysts', and add all country-groups as member
- D. Grant the 'all-analysis' group the IAM role of BigQuery jobUser
- E. Share the appropriate dataset with view access with each respective analyst country-group.
- F. Create a group per country
- G. Add analysts to their respective country-group
- H. Create a single group 'all_analysts', and add all country-groups as member
- I. Grant the 'all-analysis' group the IAM role of BigQuery jobUser
- J. Share the appropriate tables with view access with each respective analyst country-group.
- K. Create a group per country
- L. Add analysts to their respective country-group
- M. Create a single group 'all_analysts', and add all country-groups as member
- N. Grant the 'all-analysis' group the IAM role of BigQuery dataViewer
- O. Share the appropriate dataset with view access with each respective analyst country-group.
- P. Create a group per country

- Q. Add analysts to their respective country-group
- R. Create a single group 'all_analysts', and add all country-groups as member
- S. Grant the 'all-analysis' group the IAM role of BigQuery dataViewer
- T. Share the appropriate table with view access with each respective analyst countrygroup.

Answer: A

NEW QUESTION 97

- (Exam Topic 5)

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

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

Answer: C

Explanation:

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

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

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

NEW QUESTION 100

- (Exam Topic 5)

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

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

Answer: B

NEW QUESTION 105

- (Exam Topic 5)

Your company operates nationally and plans to use GCP for multiple batch workloads, including some that are not time-critical. You also need to use GCP services that are HIPAA-certified and manage service costs.

How should you design to meet Google best practices?

- A. Provisioning preemptible VMs to reduce costs
- B. Discontinue use of all GCP services and APIs that are not HIPAA-compliant.
- C. Provisioning preemptible VMs to reduce costs
- D. Disable and then discontinue use of all GCP services and APIs that are not HIPAA-compliant.
- E. Provision standard VMs in the same region to reduce costs
- F. Discontinue use of all GCP services and APIs that are not HIPAA-compliant.
- G. Provision standard VMs to the same region to reduce costs
- H. Disable and then discontinue use of all GCP services and APIs that are not HIPAA-compliant.

Answer: B

Explanation:

<https://cloud.google.com/security/compliance/hipaa/>

NEW QUESTION 106

- (Exam Topic 5)

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

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

Answer: B

Explanation:

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

NEW QUESTION 109

- (Exam Topic 7)

For this question, refer to the TerramEarth case study.

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

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

Answer: B

Explanation:

https://cloud.google.com/functions/docs/securing/authenticating#authenticating_function_to_function_calls

NEW QUESTION 113

- (Exam Topic 7)

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

- A. Create a BigQuery table for the European data, and set the table retention period to 36 months
- B. For Cloud Storage, use `gsutil` to enable lifecycle management using a DELETE action with an Age condition of 36 months.
- C. Create a BigQuery table for the European data, and set the table retention period to 36 months
- D. For Cloud Storage, use `gsutil` to create a `SetStorageClass` to NONE action with an Age condition of 36 months.
- E. Create a BigQuery time-partitioned table for the European data, and set the partition expiration period to 36 months
- F. For Cloud Storage, use `gsutil` to enable lifecycle management using a DELETE action with an Age condition of 36 months.
- G. Create a BigQuery time-partitioned table for the European data, and set the partition period to 36 months
- H. For Cloud Storage, use `gsutil` to create a `SetStorageClass` to NONE action with an Age condition of 36 months.

Answer: C

Explanation:

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

NEW QUESTION 118

- (Exam Topic 8)

For this question, refer to the Mountkirk Games case study. You are in charge of the new Game Backend Platform architecture. The game communicates with the backend over a REST API.

You want to follow Google-recommended practices. How should you design the backend?

- A. Create an instance template for the backend
- B. For every region, deploy it on a multi-zone managed instance group
- C. Use an L4 load balancer.
- D. Create an instance template for the backend
- E. For every region, deploy it on a single-zone managed instance group
- F. Use an L4 load balancer.
- G. Create an instance template for the backend
- H. For every region, deploy it on a multi-zone managed instance group

- I. Use an L7 load balancer.
- J. Create an instance template for the backen
- K. For every region, deploy it on a single-zone managed instance grou
- L. Use an L7 load balancer.

Answer: C

Explanation:

https://cloud.google.com/solutions/gaming/cloud-game-infrastructure#dedicated_game_server

NEW QUESTION 120

- (Exam Topic 8)

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

- A. Cloud Bigtable
- B. Cloud Spanner
- C. BigQuery
- D. Cloud Datastore

Answer: A

Explanation:

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

NEW QUESTION 125

- (Exam Topic 8)

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

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

Answer: BC

NEW QUESTION 129

- (Exam 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.m. UTC to a repository. 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. You need to set up Airwolf to run at the recurring weekly cadence. What should you do?

- A. Set up Cloud Tasks and a Cloud Storage bucket that triggers a Cloud Function.
- B. Set up a Cloud Logging sink and a Cloud Storage bucket that triggers a Cloud Function.
- C. Configure the deployment job to notify a Pub/Sub queue that triggers a Cloud Function.
- D. Set up Identity and Access Management (IAM) and Confidential Computing to trigger a Cloud Function.

Answer: A

NEW QUESTION 134

- (Exam Topic 9)

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

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

Which storage approach should you adopt for your tokenization service?

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

Answer: B

NEW QUESTION 135

- (Exam Topic 10)

For this question, refer to the EHR Healthcare case study. You are responsible for ensuring that EHR's use of Google Cloud will pass an upcoming privacy compliance audit. What should you do? (Choose two.)

- A. Verify EHR's product usage against the list of compliant products on the Google Cloud compliance page.
- B. Advise EHR to execute a Business Associate Agreement (BAA) with Google Cloud.
- C. Use Firebase Authentication for EHR's user facing applications.
- D. Implement Prometheus to detect and prevent security breaches on EHR's web-based applications.
- E. Use GKE private clusters for all Kubernetes workloads.

Answer: AB

Explanation:

<https://cloud.google.com/security/compliance/hipaa>

NEW QUESTION 136

- (Exam Topic 10)

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

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

Answer: D

NEW QUESTION 141

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