

QUESTION 61

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

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

Correct Answer: C

Explanation:

It is time-series data, So Big Table.

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

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

Good for:

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

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

QUESTION 62

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 instances. Configure SSL proxy load balancing.
- D. Create a global forwarding rule. Configure SSL proxy balancing.

Correct Answer: B

Explanation:

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

QUESTION 63

You are monitoring Google Kubernetes Engine (GKE) clusters in a Cloud Monitoring workspace. As a Site Reliability Engineer (SRE), you need to triage incidents quickly. What should you do?

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- A. Navigate the predefined dashboards in the Cloud Monitoring workspace, and then add metrics and create alert policies.
- B. Navigate the predefined dashboards in the Cloud Monitoring workspace, create custom metrics, and install alerting software on a Compute Engine instance.
- C. Write a shell script that gathers metrics from GKE nodes, publish these metrics to a Pub/Sub topic, export the data to BigQuery, and make a Data Studio dashboard.
- D. Create a custom dashboard in the Cloud Monitoring workspace for each incident, and then add metrics and create alert policies.

Correct Answer: A

Explanation:

<https://cloud.google.com/stackdriver/docs/solutions/gke/legacy-stackdriver/monitoring>

QUESTION 64

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.

Correct 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.

QUESTION 65

You are working in a highly secured environment where public Internet access from the Compute Engine VMs is not allowed. You do not yet have a VPN connection to access an on-premises file server. You need to install specific software on a Compute Engine instance. How should you install the software?

- A. Upload the required installation files to Cloud Storage. Configure the VM on a subnet with a Private Google Access subnet. Assign only an internal IP address to the VM. Download the installation files to the VM using gsutil.
- B. Upload the required installation files to Cloud Storage and use firewall rules to block all traffic except the IP address range for Cloud Storage. Download the files to the VM using gsutil.
- C. Upload the required installation files to Cloud Source Repositories. Configure the VM on a subnet with a Private Google Access subnet. Assign only an internal IP address to the VM. Download the installation files to the VM using gcloud.
- D. Upload the required installation files to Cloud Source Repositories and use firewall rules to block all traffic except the IP address range for Cloud Source Repositories. Download the files to the VM

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using gsutil.

Correct Answer: A

Explanation:

<https://cloud.google.com/vpc/docs/private-access-options#pga-supported>

QUESTION 66

Your company is running its application workloads on Compute Engine. The applications have been deployed in production, acceptance, and development environments. The production environment is business-critical and is used 24/7, while the acceptance and development environments are only critical during office hours. Your CFO has asked you to optimize these environments to achieve cost savings during idle times. What should you do?

- A. Create a shell script that uses the gcloud command to change the machine type of the development and acceptance instances to a smaller machine type outside of office hours. Schedule the shell script on one of the production instances to automate the task.
- B. Use Cloud Scheduler to trigger a Cloud Function that will stop the development and acceptance environments after office hours and start them just before office hours.
- C. Deploy the development and acceptance applications on a managed instance group and enable autoscaling.
- D. Use regular Compute Engine instances for the production environment, and use preemptible VMs for the acceptance and development environments.

Correct Answer: B

Explanation:

<https://cloud.google.com/blog/products/it-ops/best-practices-for-optimizing-your-cloud-costs>

QUESTION 67

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 Stackdriver Trace in order to break down the request latencies at each microservice.

Correct Answer: D

Explanation:

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

QUESTION 68

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

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- the Cloud KMS key.
- C. Generate a GPG key pair. Encrypt the data using the GPG key. Upload the encrypted data to the bucket.
 - D. Generate an AES-256 encryption key. Encrypt the data in the bucket using the customer-supplied encryption keys feature.

Correct 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>

QUESTION 69

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

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

Correct Answer: A

QUESTION 70

A development team at your company has created a dockerized HTTPS web application. You need to deploy the application on Google Kubernetes Engine (GKE) and make sure that the application scales automatically. How should you deploy to GKE?

- A. Use the Horizontal Pod Autoscaler and enable cluster autoscaling. Use an Ingress resource to loadbalance the HTTPS traffic.
- B. Use the Horizontal Pod Autoscaler and enable cluster autoscaling on the Kubernetes cluster. Use a Service resource of type LoadBalancer to load-balance the HTTPS traffic.
- C. Enable autoscaling on the Compute Engine instance group. Use an Ingress resource to load balance the HTTPS traffic.
- D. Enable autoscaling on the Compute Engine instance group. Use a Service resource of type LoadBalancer to load-balance the HTTPS traffic.

Correct Answer: B

Explanation:

<https://cloud.google.com/kubernetes-engine/docs/tutorials/http-balancer>
<https://cloud.google.com/kubernetes-engine/docs/concepts/network-overview#ext-lb>

QUESTION 71

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

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- C. Cloud Pub/Sub to Stackdriver
- D. Cloud Pub/Sub to Cloud SQL

Correct Answer: B

Explanation:

<https://cloud.google.com/pubsub/docs/ordering>

QUESTION 72

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

Correct 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
```

QUESTION 73

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

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

Correct Answer: B

Explanation:

"Custom images are more deterministic and start more quickly than instances with startup scripts. However, startup scripts are more flexible and let you update the apps and settings in your instances more easily." https://cloud.google.com/compute/docs/instance-templates/create-instance-templates#using_custom_or_public_images_in_your_instance_templates

QUESTION 74

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