

Google

Exam Questions Professional-Cloud-Developer

Google Certified Professional - Cloud Developer



NEW QUESTION 1

- (Exam Topic 1)

In order to meet their business requirements, how should HipLocal store their application state?

- A. Use local SSDs to store state.
- B. Put a memcache layer in front of MySQL.
- C. Move the state storage to Cloud Spanner.
- D. Replace the MySQL instance with Cloud SQL.

Answer: B

NEW QUESTION 2

- (Exam Topic 1)

For this question, refer to the HipLocal case study.

How should HipLocal redesign their architecture to ensure that the application scales to support a large increase in users?

- A. Use Google Kubernetes Engine (GKE) to run the application as a microservice
- B. Run the MySQL database on a dedicated GKE node.
- C. Use multiple Compute Engine instances to run MySQL to store state information
- D. Use a GoogleCloud-managed load balancer to distribute the load between instances
- E. Use managed instance groups for scaling.
- F. Use Memorystore to store session information and CloudSQL to store state information
- G. Use a Google Cloud-managed load balancer to distribute the load between instances
- H. Use managed instance groups for scaling.
- I. Use a Cloud Storage bucket to serve the application as a static website, and use another Cloud Storage bucket to store user state information.

Answer: D

NEW QUESTION 3

- (Exam Topic 1)

HipLocal has connected their Hadoop infrastructure to GCP using Cloud Interconnect in order to query data stored on persistent disks.

Which IP strategy should they use?

- A. Create manual subnets.
- B. Create an auto mode subnet.
- C. Create multiple peered VPCs.
- D. Provision a single instance for NAT.

Answer: A

NEW QUESTION 4

- (Exam Topic 1)

Which service should HipLocal use to enable access to internal apps?

- A. Cloud VPN
- B. Cloud Armor
- C. Virtual Private Cloud
- D. Cloud Identity-Aware Proxy

Answer: D

Explanation:

Reference: <https://cloud.google.com/iap/docs/cloud-iap-for-on-prem-apps-overview>

NEW QUESTION 5

- (Exam Topic 1)

HipLocal wants to reduce the number of on-call engineers and eliminate manual scaling. Which two services should they choose? (Choose two.)

- A. Use Google App Engine services.
- B. Use serverless Google Cloud Functions.
- C. Use Knative to build and deploy serverless applications.
- D. Use Google Kubernetes Engine for automated deployments.
- E. Use a large Google Compute Engine cluster for deployments.

Answer: BC

NEW QUESTION 6

- (Exam Topic 1)

HipLocal's APIs are showing occasional failures, but they cannot find a pattern. They want to collect some metrics to help them troubleshoot.

What should they do?

- A. Take frequent snapshots of all of the VMs.
- B. Install the Stackdriver Logging agent on the VMs.
- C. Install the Stackdriver Monitoring agent on the VMs.
- D. Use Stackdriver Trace to look for performance bottlenecks.

Answer: C

NEW QUESTION 7

- (Exam Topic 2)

You support an application that uses the Cloud Storage API. You review the logs and discover multiple HTTP 503 Service Unavailable error responses from the API. Your application logs the error and does not take any further action. You want to implement Google-recommended retry logic to improve success rates. Which approach should you take?

- A. Retry the failures in batch after a set number of failures is logged.
- B. Retry each failure at a set time interval up to a maximum number of times.
- C. Retry each failure at increasing time intervals up to a maximum number of tries.
- D. Retry each failure at decreasing time intervals up to a maximum number of tries.

Answer: C

Explanation:

<https://cloud.google.com/storage/docs/retry-strategy>

NEW QUESTION 8

- (Exam Topic 2)

You made a typo in a low-level Linux configuration file that prevents your Compute Engine instance from booting to a normal run level. You just created the Compute Engine instance today and have done no other maintenance on it, other than tweaking files. How should you correct this error?

- A. Download the file using scp, change the file, and then upload the modified version
- B. Configure and log in to the Compute Engine instance through SSH, and change the file
- C. Configure and log in to the Compute Engine instance through the serial port, and change the file
- D. Configure and log in to the Compute Engine instance using a remote desktop client, and change the file

Answer: C

Explanation:

<https://cloud.google.com/compute/docs/troubleshooting/troubleshooting-using-serial-console>

NEW QUESTION 9

- (Exam Topic 2)

You have an application in production. It is deployed on Compute Engine virtual machine instances controlled by a managed instance group. Traffic is routed to the instances via a HTTP(s) load balancer. Your users are unable to access your application. You want to implement a monitoring technique to alert you when the application is unavailable.

Which technique should you choose?

- A. Smoke tests
- B. Stackdriver uptime checks
- C. Cloud Load Balancing - health checks
- D. Managed instance group - health checks

Answer: B

Explanation:

Reference: <https://medium.com/google-cloud/stackdriver-monitoring-automation-part-3-uptime-checks-476b8507f59c>

NEW QUESTION 10

- (Exam Topic 2)

You are developing a microservice-based application that will be deployed on a Google Kubernetes Engine cluster. The application needs to read and write to a Spanner database. You want to follow security best practices while minimizing code changes. How should you configure your application to retrieve Spanner credentials?

- A. Configure the appropriate service accounts, and use Workload Identity to run the pods.
- B. Store the application credentials as Kubernetes Secrets, and expose them as environment variables.
- C. Configure the appropriate routing rules, and use a VPC-native cluster to directly connect to the database.
- D. Store the application credentials using Cloud Key Management Service, and retrieve them whenever a database connection is made.

Answer: A

Explanation:

<https://cloud.google.com/kubernetes-engine/docs/concepts/workload-identity>

NEW QUESTION 10

- (Exam Topic 2)

Your existing application keeps user state information in a single MySQL database. This state information is very user-specific and depends heavily on how long a user has been using an application. The MySQL database is causing challenges to maintain and enhance the schema for various users.

Which storage option should you choose?

- A. Cloud SQL
- B. Cloud Storage
- C. Cloud Spanner
- D. Cloud Datastore/Firestore

Answer: A

Explanation:

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

NEW QUESTION 11

- (Exam Topic 2)

You are writing a single-page web application with a user-interface that communicates with a third-party API for content using XMLHttpRequest. The data displayed on the UI by the API results is less critical than other data displayed on the same web page, so it is acceptable for some requests to not have the API data displayed in the UI. However, calls made to the API should not delay rendering of other parts of the user interface. You want your application to perform well when the API response is an error or a timeout. What should you do?

- A. Set the asynchronous option for your requests to the API to false and omit the widget displaying the API results when a timeout or error is encountered.
- B. Set the asynchronous option for your request to the API to true and omit the widget displaying the API results when a timeout or error is encountered.
- C. Catch timeout or error exceptions from the API call and keep trying with exponential backoff until the API response is successful.
- D. Catch timeout or error exceptions from the API call and display the error response in the UI widget.

Answer: A

NEW QUESTION 15

- (Exam Topic 2)

You want to re-architect a monolithic application so that it follows a microservices model. You want to accomplish this efficiently while minimizing the impact of this change to the business. Which approach should you take?

- A. Deploy the application to Compute Engine and turn on autoscaling.
- B. Replace the application's features with appropriate microservices in phases.
- C. Refactor the monolithic application with appropriate microservices in a single effort and deploy it.
- D. Build a new application with the appropriate microservices separate from the monolith and replace it when it is complete.

Answer: C

Explanation:

Reference: <https://cloud.google.com/solutions/migrating-a-monolithic-app-to-microservices-gke>

NEW QUESTION 20

- (Exam Topic 2)

You are running an application on App Engine that you inherited. You want to find out whether the application is using insecure binaries or is vulnerable to XSS attacks. Which service should you use?

- A. Cloud Armor
- B. Stackdriver Debugger
- C. Cloud Security Scanner
- D. Stackdriver Error Reporting

Answer: C

Explanation:

Reference: <https://cloud.google.com/security-scanner>

NEW QUESTION 22

- (Exam Topic 2)

You are porting an existing Apache/MySQL/PHP application stack from a single machine to Google Kubernetes Engine. You need to determine how to containerize the application. Your approach should follow Google-recommended best practices for availability. What should you do?

- A. Package each component in a separate container.
- B. Implement readiness and liveness probes.
- C. Package the application in a single container.
- D. Use a process management tool to manage each component.
- E. Package each component in a separate container.
- F. Use a script to orchestrate the launch of the components.
- G. Package the application in a single container.
- H. Use a bash script as an entrypoint to the container, and then spawn each component as a background job.

Answer: A

Explanation:

<https://cloud.google.com/blog/products/containers-kubernetes/7-best-practices-for-building-containers> <https://cloud.google.com/architecture/best-practices-for-building-containers>

"classic Apache/MySQL/PHP stack: you might be tempted to run all the components in a single container. However, the best practice is to use two or three different containers: one for Apache, one for MySQL, and potentially one for PHP if you are running PHP-FPM."

NEW QUESTION 23

- (Exam Topic 2)

Your security team is auditing all deployed applications running in Google Kubernetes Engine. After completing the audit, your team discovers that some of the applications send traffic within the cluster in clear text. You need to ensure that all application traffic is encrypted as quickly as possible while minimizing changes

to your applications and maintaining support from Google. What should you do?

- A. Use Network Policies to block traffic between applications.
- B. Install Istio, enable proxy injection on your application namespace, and then enable mTLS.
- C. Define Trusted Network ranges within the application, and configure the applications to allow traffic only from those networks.
- D. Use an automated process to request SSL Certificates for your applications from Let's Encrypt and add them to your applications.

Answer: D

NEW QUESTION 24

- (Exam Topic 2)

Your application is composed of a set of loosely coupled services orchestrated by code executed on Compute Engine. You want your application to easily bring up new Compute Engine instances that find and use a specific version of a service. How should this be configured?

- A. Define your service endpoint information as metadata that is retrieved at runtime and used to connect to the desired service.
- B. Define your service endpoint information as label data that is retrieved at runtime and used to connect to the desired service.
- C. Define your service endpoint information to be retrieved from an environment variable at runtime and used to connect to the desired service.
- D. Define your service to use a fixed hostname and port to connect to the desired service.
- E. Replace the service at the endpoint with your new version.

Answer: A

Explanation:

<https://cloud.google.com/service-infrastructure/docs/service-metadata/reference/rest#service-endpoint>

NEW QUESTION 25

- (Exam Topic 2)

Your team develops stateless services that run on Google Kubernetes Engine (GKE). You need to deploy a new service that will only be accessed by other services running in the GKE cluster. The service will need to scale as quickly as possible to respond to changing load. What should you do?

- A. Use a Vertical Pod Autoscaler to scale the containers, and expose them via a ClusterIP Service.
- B. Use a Vertical Pod Autoscaler to scale the containers, and expose them via a NodePort Service.
- C. Use a Horizontal Pod Autoscaler to scale the containers, and expose them via a ClusterIP Service.
- D. Use a Horizontal Pod Autoscaler to scale the containers, and expose them via a NodePort Service.

Answer: C

Explanation:

<https://cloud.google.com/kubernetes-engine/docs/concepts/service>

NEW QUESTION 28

- (Exam Topic 2)

You want to notify on-call engineers about a service degradation in production while minimizing development time. What should you do?

- A. Use Cloud Function to monitor resources and raise alerts.
- B. Use Cloud Pub/Sub to monitor resources and raise alerts.
- C. Use Stackdriver Error Reporting to capture errors and raise alerts.
- D. Use Stackdriver Monitoring to monitor resources and raise alerts.

Answer: A

NEW QUESTION 29

- (Exam Topic 2)

You are planning to deploy your application in a Google Kubernetes Engine (GKE) cluster. The application exposes an HTTP-based health check at /healthz. You want to use this health check endpoint to determine whether traffic should be routed to the pod by the load balancer. Which code snippet should you include in your Pod configuration?

- A. `livenessProbe:`
`httpGet:`
`path: /healthz`
`port: 80`
- B. `readinessProbe:`
`httpGet:`
`path: /healthz`
`port: 80`
- C. `loadbalancerHealthCheck:`
`httpGet:`
`path: /healthz`
`port: 80`
- D. `healthCheck:`
`httpGet:`
`path: /healthz`
`port: 80`

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

Answer: B

Explanation:

For the GKE ingress controller to use your readinessProbes as health checks, the Pods for an Ingress must exist at the time of Ingress creation. If your replicas are scaled to 0, the default health check will apply.

NEW QUESTION 31

- (Exam Topic 2)

You recently developed a new application. You want to deploy the application on Cloud Run without a Dockerfile. Your organization requires that all container images are pushed to a centrally managed container repository. How should you build your container using Google Cloud services? (Choose two.)

- A. Push your source code to Artifact Registry.
- B. Submit a Cloud Build job to push the image.
- C. Use the pack build command with pack CLI.
- D. Include the `--source` flag with the `gcloud run deploy` CLI command.
- E. Include the `--platform=kubernetes` flag with the `gcloud run deploy` CLI command.

Answer: AC

Explanation:

<https://cloud.google.com/run/docs/deploying#images> <https://cloud.google.com/blog/products/containers-kubernetes/google-cloud-now-supports-buildpacks>

NEW QUESTION 36

- (Exam Topic 2)

You have an application that uses an HTTP Cloud Function to process user activity from both desktop browser and mobile application clients. This function will serve as the endpoint for all metric submissions using HTTP POST.

Due to legacy restrictions, the function must be mapped to a domain that is separate from the domain requested by users on web or mobile sessions. The domain for the Cloud Function is `https://fn.example.com`. Desktop and mobile clients use the domain `https://www.example.com`. You need to add a header to the function's HTTP response so that only those browser and mobile sessions can submit metrics to the Cloud Function. Which response header should you add?

- A. `Access-Control-Allow-Origin: *`
- B. `Access-Control-Allow-Origin: https://*.example.com`
- C. `Access-Control-Allow-Origin: https://fn.example.com`
- D. `Access-Control-Allow-origin: https://www.example.com`

Answer: D

NEW QUESTION 37

- (Exam Topic 2)

You migrated some of your applications to Google Cloud. You are using a legacy monitoring platform deployed on-premises for both on-premises and cloud-deployed applications. You discover that your notification system is responding slowly to time-critical problems in the cloud applications. What should you do?

- A. Replace your monitoring platform with Cloud Monitoring.

- B. Install the Cloud Monitoring agent on your Compute Engine instances.
- C. Migrate some traffic back to your old platform
- D. Perform A/B testing on the two platforms concurrently.
- E. Use Cloud Logging and Cloud Monitoring to capture logs, monitor, and send alert
- F. Send them to your existing platform.

Answer: D

NEW QUESTION 41

- (Exam Topic 2)

You are deploying your application on a Compute Engine instance that communicates with Cloud SQL. You will use Cloud SQL Proxy to allow your application to communicate to the database using the service account associated with the application's instance. You want to follow the Google-recommended best practice of providing minimum access for the role assigned to the service account. What should you do?

- A. Assign the Project Editor role.
- B. Assign the Project Owner role.
- C. Assign the Cloud SQL Client role.
- D. Assign the Cloud SQL Editor role.

Answer: C

Explanation:

Reference: <https://cloud.google.com/sql/docs/mysql/sql-proxy>

NEW QUESTION 44

- (Exam Topic 2)

You are a developer at a large organization. You have an application written in Go running in a production Google Kubernetes Engine (GKE) cluster. You need to add a new feature that requires access to BigQuery. You want to grant BigQuery access to your GKE cluster following Google-recommended best practices. What should you do?

- A. Create a Google service account with BigQuery access
- B. Add the JSON key to Secret Manager, and use the Go client library to access the JSON key.
- C. Create a Google service account with BigQuery access
- D. Add the Google service account JSON key as a Kubernetes secret, and configure the application to use this secret.
- E. Create a Google service account with BigQuery access
- F. Add the Google service account JSON key to Secret Manager, and use an init container to access the secret for the application to use.
- G. Create a Google service account and a Kubernetes service account
- H. Configure Workload Identity on the GKE cluster, and reference the Kubernetes service account on the application Deployment.

Answer: D

Explanation:

https://cloud.google.com/kubernetes-engine/docs/concepts/workload-identity#what_is

Applications running on GKE might need access to Google Cloud APIs such as Compute Engine API, BigQuery Storage API, or Machine Learning APIs. Workload Identity allows a Kubernetes service account in your GKE cluster to act as an IAM service account. Pods that use the configured Kubernetes service account automatically authenticate as the IAM service account when accessing Google Cloud APIs. Using Workload Identity allows you to assign distinct, fine-grained identities and authorization for each application in your cluster.

NEW QUESTION 49

- (Exam Topic 2)

Your teammate has asked you to review the code below, which is adding a credit to an account balance in Cloud Datastore. Which improvement should you suggest your teammate make?

```
public Entity creditAccount(long accountId, long
creditAmount) {
    Entity account = datastore.get
(keyFactory.newKey(accountId));
    account = Entity.builder(account).set(
        "balance", account.getLong("balance")
+ creditAmount).build();
    datastore.put(account);
    return account;
}
```

- A. Get the entity with an ancestor query.
- B. Get and put the entity in a transaction.
- C. Use a strongly consistent transactional database.
- D. Don't return the account entity from the function.

Answer: A

NEW QUESTION 51

- (Exam Topic 2)

You have recently instrumented a new application with OpenTelemetry, and you want to check the latency of your application requests in Trace. You want to ensure that a specific request is always traced. What should you do?

- A. Wait 10 minutes, then verify that Trace captures those types of requests automatically.

- B. Write a custom script that sends this type of request repeatedly from your dev project.
- C. Use the Trace API to apply custom attributes to the trace.
- D. Add the X-Cloud-Trace-Context header to the request with the appropriate parameters.

Answer: D

Explanation:

<https://cloud.google.com/trace/docs/setup#force-trace>

Cloud Trace doesn't sample every request. To force a specific request to be traced, add an X-Cloud-Trace-Context header to the request.

NEW QUESTION 52

- (Exam Topic 2)

You are developing a microservice-based application that will run on Google Kubernetes Engine (GKE). Some of the services need to access different Google Cloud APIs. How should you set up authentication of these services in the cluster following Google-recommended best practices? (Choose two.)

- A. Use the service account attached to the GKE node.
- B. Enable Workload Identity in the cluster via the gcloud command-line tool.
- C. Access the Google service account keys from a secret management service.
- D. Store the Google service account keys in a central secret management service.
- E. Use gcloud to bind the Kubernetes service account and the Google service account using roles/iam.workloadIdentity.

Answer: BE

Explanation:

<https://cloud.google.com/kubernetes-engine/docs/how-to/workload-identity>

NEW QUESTION 53

- (Exam Topic 2)

Your company wants to expand their users outside the United States for their popular application. The company wants to ensure 99.999% availability of the database for their application and also wants to minimize the read latency for their users across the globe.

Which two actions should they take? (Choose two.)

- A. Create a multi-regional Cloud Spanner instance with "nam-asia-eur1" configuration.
- B. Create a multi-regional Cloud Spanner instance with "nam3" configuration.
- C. Create a cluster with at least 3 Spanner nodes.
- D. Create a cluster with at least 1 Spanner node.
- E. Create a minimum of two Cloud Spanner instances in separate regions with at least one node.
- F. Create a Cloud Dataflow pipeline to replicate data across different databases.

Answer: BF

NEW QUESTION 54

- (Exam Topic 2)

Your team develops services that run on Google Cloud. You want to process messages sent to a Pub/Sub topic, and then store them. Each message must be processed exactly once to avoid duplication of data and any data conflicts. You need to use the cheapest and most simple solution. What should you do?

- A. Process the messages with a Dataproc job, and write the output to storage.
- B. Process the messages with a Dataflow streaming pipeline using Apache Beam's PubSubIO package, and write the output to storage.
- C. Process the messages with a Cloud Function, and write the results to a BigQuery location where you can run a job to deduplicate the data.
- D. Retrieve the messages with a Dataflow streaming pipeline, store them in Cloud Bigtable, and use another Dataflow streaming pipeline to deduplicate messages.

Answer: B

Explanation:

<https://cloud.google.com/dataflow/docs/concepts/streaming-with-cloud-pubsub>

NEW QUESTION 56

- (Exam Topic 2)

Your application is logging to Stackdriver. You want to get the count of all requests on all /api/alpha/* endpoints.

What should you do?

- A. Add a Stackdriver counter metric for path:/api/alpha/.
- B. Add a Stackdriver counter metric for endpoint:/api/alpha/*.
- C. Export the logs to Cloud Storage and count lines matching /api/alpha.
- D. Export the logs to Cloud Pub/Sub and count lines matching /api/alpha.

Answer: C

NEW QUESTION 57

- (Exam Topic 2)

You are load testing your server application. During the first 30 seconds, you observe that a previously inactive Cloud Storage bucket is now servicing 2000 write requests per second and 7500 read requests per second. Your application is now receiving intermittent 5xx and 429 HTTP responses from the Cloud Storage JSON API as the demand escalates. You want to decrease the failed responses from the Cloud Storage API. What should you do?

- A. Distribute the uploads across a large number of individual storage buckets.
- B. Use the XML API instead of the JSON API for interfacing with Cloud Storage.
- C. Pass the HTTP response codes back to clients that are invoking the uploads from your application.
- D. Limit the upload rate from your application clients so that the dormant bucket's peak request rate is reached more gradually.

Answer: A

Explanation:

Reference: <https://cloud.google.com/storage/docs/request-rate>

NEW QUESTION 60

- (Exam Topic 2)

You recently migrated an on-premises monolithic application to a microservices application on Google Kubernetes Engine (GKE). The application has dependencies on backend services on-premises, including a CRM system and a MySQL database that contains personally identifiable information (PII). The backend services must remain on-premises to meet regulatory requirements.

You established a Cloud VPN connection between your on-premises data center and Google Cloud. You notice that some requests from your microservices application on GKE to the backend services are failing due to latency issues caused by fluctuating bandwidth, which is causing the application to crash. How should you address the latency issues?

- A. Use Memorystore to cache frequently accessed PII data from the on-premises MySQL database
- B. Use Istio to create a service mesh that includes the microservices on GKE and the on-premises services
- C. Increase the number of Cloud VPN tunnels for the connection between Google Cloud and the on-premises services
- D. Decrease the network layer packet size by decreasing the Maximum Transmission Unit (MTU) value from its default value on Cloud VPN

Answer: C

Explanation:

<https://cloud.google.com/network-connectivity/docs/vpn/concepts/choosing-networks-routing#route-alignment>

NEW QUESTION 62

- (Exam Topic 2)

Your App Engine standard configuration is as follows: service: production

instance_class: B1

You want to limit the application to 5 instances. Which code snippet should you include in your configuration?

- A. manual_scaling:instances: 5min_pending_latency: 30ms
- B. manual_scaling:max_instances: 5idle_timeout: 10m
- C. basic_scaling:instances: 5min_pending_latency: 30ms
- D. basic_scaling:max_instances: 5idle_timeout: 10m

Answer: C

NEW QUESTION 65

- (Exam Topic 2)

You are developing an application that consists of several microservices running in a Google Kubernetes Engine cluster. One microservice needs to connect to a third-party database running on-premises. You need to store credentials to the database and ensure that these credentials can be rotated while following security best practices. What should you do?

- A. Store the credentials in a sidecar container proxy, and use it to connect to the third-party database.
- B. Configure a service mesh to allow or restrict traffic from the Pods in your microservice to the database.
- C. Store the credentials in an encrypted volume mount, and associate a Persistent Volume Claim with the client Pod.
- D. Store the credentials as a Kubernetes Secret, and use the Cloud Key Management Service plugin to handle encryption and decryption.

Answer: D

Explanation:

<https://cloud.google.com/kubernetes-engine/docs/how-to/encrypting-secrets>

By default, Google Kubernetes Engine (GKE) encrypts customer content stored at rest, including Secrets. GKE handles and manages this default encryption for you without any additional action on your part.

Application-layer secrets encryption provides an additional layer of security for sensitive data, such as Secrets, stored in etcd. Using this functionality, you can use a key managed with Cloud KMS to encrypt data at the application layer. This encryption protects against attackers who gain access to an offline copy of etcd.

NEW QUESTION 67

- (Exam Topic 2)

Your organization has recently begun an initiative to replatform their legacy applications onto Google Kubernetes Engine. You need to decompose a monolithic application into microservices. Multiple instances have read and write access to a configuration file, which is stored on a shared file system. You want to minimize the effort required to manage this transition, and you want to avoid rewriting the application code. What should you do?

- A. Create a new Cloud Storage bucket, and mount it via FUSE in the container.
- B. Create a new persistent disk, and mount the volume as a shared PersistentVolume.
- C. Create a new Filestore instance, and mount the volume as an NFS PersistentVolume.
- D. Create a new ConfigMap and volumeMount to store the contents of the configuration file.

Answer: D

Explanation:

<https://cloud.google.com/kubernetes-engine/docs/concepts/configmap>

ConfigMaps bind non-sensitive configuration artifacts such as configuration files, command-line arguments, and environment variables to your Pod containers and system components at runtime.

A ConfigMap separates your configurations from your Pod and components, which helps keep your workloads portable. This makes their configurations easier to change and manage, and prevents hardcoding configuration data to Pod specifications.

NEW QUESTION 71

- (Exam Topic 2)

You are developing an ecommerce web application that uses App Engine standard environment and Memorystore for Redis. When a user logs into the app, the application caches the user's information (e.g., session, name, address, preferences), which is stored for quick retrieval during checkout. While testing your application in a browser, you get a 502 Bad Gateway error. You have determined that the application is not connecting to Memorystore. What is the reason for this error?

- A. Your Memorystore for Redis instance was deployed without a public IP address.
- B. You configured your Serverless VPC Access connector in a different region than your App Engine instance.
- C. The firewall rule allowing a connection between App Engine and Memorystore was removed during an infrastructure update by the DevOps team.
- D. You configured your application to use a Serverless VPC Access connector on a different subnet in a different availability zone than your App Engine instance.

Answer: A

Explanation:

Reference: <https://cloud.google.com/endpoints/docs/openapi/troubleshoot-response-errors>

NEW QUESTION 73

- (Exam Topic 2)

Your application is running in multiple Google Kubernetes Engine clusters. It is managed by a Deployment in each cluster. The Deployment has created multiple replicas of your Pod in each cluster. You want to view the logs sent to stdout for all of the replicas in your Deployment in all clusters. Which command should you use?

- A. `kubectl logs [PARAM]`
- B. `gcloud logging read [PARAM]`
- C. `kubectl exec -it [PARAM] journalctl`
- D. `gcloud compute ssh [PARAM] --command= "sudo journalctl"`

Answer: D

NEW QUESTION 75

- (Exam Topic 2)

Your application is deployed on hundreds of Compute Engine instances in a managed instance group (MIG) in multiple zones. You need to deploy a new instance template to fix a critical vulnerability immediately but must avoid impact to your service. What setting should be made to the MIG after updating the instance template?

- A. Set the Max Surge to 100%.
- B. Set the Update mode to Opportunistic.
- C. Set the Maximum Unavailable to 100%.
- D. Set the Minimum Wait time to 0 seconds.

Answer: B

Explanation:

<https://cloud.google.com/compute/docs/instance-groups/rolling-out-updates-to-managed-instance-groups#type> Alternatively, if an automated update is potentially too disruptive, you can choose to perform an opportunistic update. The MIG applies an opportunistic update only when you manually initiate the update on selected instances or when new instances are created. New instances can be created when you or another service, such as an autoscaler, resizes the MIG. Compute Engine does not actively initiate requests to apply opportunistic updates on existing instances.

NEW QUESTION 79

- (Exam Topic 2)

Your development team has built several Cloud Functions using Java along with corresponding integration and service tests. You are building and deploying the functions and launching the tests using Cloud Build. Your Cloud Build job is reporting deployment failures immediately after successfully validating the code. What should you do?

- A. Check the maximum number of Cloud Function instances.
- B. Verify that your Cloud Build trigger has the correct build parameters.
- C. Retry the tests using the truncated exponential backoff polling strategy.
- D. Verify that the Cloud Build service account is assigned the Cloud Functions Developer role.

Answer: D

Explanation:

<https://cloud.google.com/build/docs/securing-builds/configure-access-for-cloud-build-service-account>

NEW QUESTION 84

- (Exam Topic 2)

Your application is built as a custom machine image. You have multiple unique deployments of the machine image. Each deployment is a separate managed instance group with its own template. Each deployment requires a unique set of configuration values. You want to provide these unique values to each deployment but use the same custom machine image in all deployments. You want to use out-of-the-box features of Compute Engine. What should you do?

- A. Place the unique configuration values in the persistent disk.
- B. Place the unique configuration values in a Cloud Bigtable table.
- C. Place the unique configuration values in the instance template startup script.
- D. Place the unique configuration values in the instance template instance metadata.

Answer: A

Explanation:

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

NEW QUESTION 85

- (Exam Topic 2)

You deployed a new application to Google Kubernetes Engine and are experiencing some performance degradation. Your logs are being written to Cloud Logging, and you are using a Prometheus sidecar model for capturing metrics. You need to correlate the metrics and data from the logs to troubleshoot the performance issue and send real-time alerts while minimizing costs. What should you do?

- A. Create custom metrics from the Cloud Logging logs, and use Prometheus to import the results using the Cloud Monitoring REST API.
- B. Export the Cloud Logging logs and the Prometheus metrics to Cloud Bigtable.
- C. Run a query to join the results, and analyze in Google Data Studio.
- D. Export the Cloud Logging logs and stream the Prometheus metrics to BigQuery.
- E. Run a recurring query to join the results, and send notifications using Cloud Tasks.
- F. Export the Prometheus metrics and use Cloud Monitoring to view them as external metric.
- G. Configure Cloud Monitoring to create log-based metrics from the logs, and correlate them with the Prometheus data.

Answer: D

Explanation:

Reference:

<https://cloud.google.com/blog/products/operations/troubleshoot-gke-faster-with-monitoring-data-in-your-logs>

NEW QUESTION 87

- (Exam Topic 2)

Your company stores their source code in a Cloud Source Repositories repository. Your company wants to build and test their code on each source code commit to the repository and requires a solution that is managed and has minimal operations overhead.

Which method should they use?

- A. Use Cloud Build with a trigger configured for each source code commit.
- B. Use Jenkins deployed via the Google Cloud Platform Marketplace, configured to watch for source code commits.
- C. Use a Compute Engine virtual machine instance with an open source continuous integration tool, configured to watch for source code commits.
- D. Use a source code commit trigger to push a message to a Cloud Pub/Sub topic that triggers an App Engine service to build the source code.

Answer: A

Explanation:

[https://cloud.google.com/build/docs/automating-builds/create-manage-triggers#:~:text=A%20Cloud%20Build%](https://cloud.google.com/build/docs/automating-builds/create-manage-triggers#:~:text=A%20Cloud%20Build%20)

NEW QUESTION 90

- (Exam Topic 2)

Your analytics system executes queries against a BigQuery dataset. The SQL query is executed in batch and passes the contents of a SQL file to the BigQuery CLI. Then it redirects the BigQuery CLI output to another process. However, you are getting a permission error from the BigQuery CLI when the queries are executed. You want to resolve the issue. What should you do?

- A. Grant the service account BigQuery Data Viewer and BigQuery Job User roles.
- B. Grant the service account BigQuery Data Editor and BigQuery Data Viewer roles.
- C. Create a view in BigQuery from the SQL query and SELECT* from the view in the CLI.
- D. Create a new dataset in BigQuery, and copy the source table to the new dataset. Query the new dataset and table from the CLI.

Answer: B

NEW QUESTION 93

- (Exam Topic 2)

Your development team has been asked to refactor an existing monolithic application into a set of composable microservices. Which design aspects should you implement for the new application? (Choose two.)

- A. Develop the microservice code in the same programming language used by the microservice caller.
- B. Create an API contract agreement between the microservice implementation and microservice caller.
- C. Require asynchronous communications between all microservice implementations and microservice callers.
- D. Ensure that sufficient instances of the microservice are running to accommodate the performance requirements.
- E. Implement a versioning scheme to permit future changes that could be incompatible with the current interface.

Answer: BE

NEW QUESTION 95

- (Exam Topic 2)

You are trying to connect to your Google Kubernetes Engine (GKE) cluster using kubectl from Cloud Shell. You have deployed your GKE cluster with a public endpoint. From Cloud Shell, you run the following command:

```
gcloud container clusters get-credentials <cluster-name> \
  --zone <zone> --project <project-name> \
```

You notice that the kubectl commands time out without returning an error message. What is the most likely cause of this issue?

- A. Your user account does not have privileges to interact with the cluster using kubectl.
- B. Your Cloud Shell external IP address is not part of the authorized networks of the cluster.
- C. The Cloud Shell is not part of the same VPC as the GKE cluster.
- D. A VPC firewall is blocking access to the cluster's endpoint.

Answer: B

Explanation:

https://cloud.google.com/kubernetes-engine/docs/how-to/private-clusters#cloud_shell

If you want to use Cloud Shell to access the cluster, you must add the public IP address of your Cloud Shell to the cluster's list of authorized networks.

NEW QUESTION 97

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