Exam Questions Professional-Cloud-Architect

Google Certified Professional - Cloud Architect (GCP)

https://www.2passeasy.com/dumps/Professional-Cloud-Architect/

NEW QUESTION 1
- (Exam Topic 1)
For this question, refer to the Mountkirk Games case study.
Mountkirk Games has deployed their new backend on Google Cloud Platform (GCP). You want to create a thorough testing process for new versions of the backend before they are released to the public. You want the testing environment to scale in an economical way. How should you design the process?

A. Create a scalable environment in GCP for simulating production load.
B. Use the existing infrastructure to test the GCP-based backend at scale.
C. Build stress tests into each component of your application using resources internal to GCP to simulate load.
D. Create a set of static environments in GCP to test different levels of load — for example, high, medium, and low.

Answer: A

Explanation:
From scenario: Requirements for Game Backend Platform
≫ Dynamically scale up or down based on game activity
≫ Connect to a managed NoSQL database service
≫ Run customize Linux distro

NEW QUESTION 2
- (Exam Topic 1)
For this question, refer to the Mountkirk Games case study.
Mountkirk Games wants to set up a real-time analytics platform for their new game. The new platform must meet their technical requirements. Which combination of Google technologies will meet all of their requirements?

A. Container Engine, Cloud Pub/Sub, and Cloud SQL
B. Cloud Dataflow, Cloud Storage, Cloud Pub/Sub, and BigQuery
C. Cloud SQL, Cloud Storage, Cloud Pub/Sub, and Cloud Dataflow
D. Cloud Dataproc, Cloud Pub/Sub, Cloud SQL, and Cloud Dataflow
E. Cloud Pub/Sub, Compute Engine, Cloud Storage, and Cloud Dataproc

Answer: B

Explanation:
A real time requires Stream / Messaging so Pub/Sub, Analytics by Big Query.
Ingest millions of streaming events per second from anywhere in the world with Cloud Pub/Sub, powered by Google's unique, high-speed private network. Process the streams with Cloud Dataflow to ensure reliable, exactly-once, low-latency data transformation. Stream the transformed data into BigQuery, the cloud-native data warehousing service, for immediate analysis via SQL or popular visualization tools.
From scenario: They plan to deploy the game's backend on Google Compute Engine so they can capture streaming metrics, run intensive analytics.
Requirements for Game Analytics Platform
≫ Dynamically scale up or down based on game activity
≫ Process incoming data on the fly directly from the game servers
≫ Process data that arrives late because of slow mobile networks
≫ Allow SQL queries to access at least 10 TB of historical data
≫ Process files that are regularly uploaded by users' mobile devices
≫ Use only fully managed services
References: https://cloud.google.com/solutions/big-data/stream-analytics/

NEW QUESTION 3
- (Exam Topic 2)
For this question, refer to the TerramEarth case study.
The TerramEarth development team wants to create an API to meet the company's business requirements. You want the development team to focus their development effort on business value versus creating a custom framework. Which method should they use?

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

Answer: A

Explanation:
https://cloud.google.com/endpoints/docs/openapi/about-cloud-endpoints?hl=en_US&_ga=2.21787131.-1712523
https://cloud.google.com/endpoints/docs/openapi/architecture-overview
https://cloud.google.com/storage/docs/gsutil/commands/test
Develop, deploy, protect and monitor your APIs with Google Cloud Endpoints. Using an Open API Specification or one of our API frameworks, Cloud Endpoints gives you the tools you need for every phase of API development.
From scenario: Business Requirements
Decrease unplanned vehicle downtime to less than 1 week, without increasing the cost of carrying surplus inventory
Support the dealer network with more data on how their customers use their equipment to better position new products and services

Have the ability to partner with different companies – especially with seed and fertilizer suppliers in the fast-growing agricultural business – to create compelling joint offerings for their customers.
Reference: https://cloud.google.com/certification/guides/cloud-architect/casestudy-terramearth

NEW QUESTION 4
- (Exam Topic 2)
Your agricultural division is experimenting with fully autonomous vehicles.
You want your architecture to promote strong security during vehicle operation. Which two architecture should you consider?
Choose 2 answers:

A. Treat every micro service call between modules on the vehicle as untrusted.
B. Require IPv6 for connectivity to ensure a secure address space.
C. Use a trusted platform module (TPM) and verify firmware and binaries on boot.
D. Use a functional programming language to isolate code execution cycles.
E. Use multiple connectivity subsystems for redundancy.
F. Enclose the vehicle's drive electronics in a Faraday cage to isolate chips.

Answer: AC

NEW QUESTION 5
- (Exam Topic 5)
Your company wants to try out the cloud with low risk. They want to archive approximately 100 TB of their log data to the cloud and test the analytics features available to them there, while also retaining that data as a long-term disaster recovery backup. Which two steps should they take? Choose 2 answers

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

Answer: AE

NEW QUESTION 6
- (Exam Topic 5)
You deploy your custom Java application to Google App Engine. It fails to deploy and gives you the following stack trace.

```
java.lang.SecurityException: SHA1 digest error for
com/Altostrat/CloakedServlet.class
    at com.google.appengine.runtime.Request.process
-d36f818a24b8cf1d (Request.java)
    at
sun.security.util.ManifestEntryVerifier.verify
(ManifestEntryVerifier.java:210)
    at java.util.jar.JarVerifier.processEntry
(JarVerifier.java:218)
    at java.util.jar.JarVerifier.update
(JarVerifier.java:205)
    at
java.util.jar.JarVerifiersVerifierStream.read
(JarVerifier.java:428)
    at sun.misc.Resource.getBytes
(Resource.java:124)
    at java.net.URL.ClassLoader.defineClass
(URLClassLoader.java:273)
    at sun.reflect.GeneratedMethodAccessor5.invoke
(Unknown Source)
    at
sun.reflect.DelegatingMethodAccessorImpl.invoke
(DelegatingMethodAccessorImpl.java:43)
    at java.lang.reflect.Method.invoke
(Method.java:616)
    at java.lang.ClassLoader.loadClass
(ClassLoader.java:266)
```

What should you do?

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

Answer: B

NEW QUESTION 7
- (Exam Topic 5)
Your company's test suite is a custom C++ application that runs tests throughout each day on Linux virtual machines. The full test suite takes several hours to complete, running on a limited number of on premises servers reserved for testing. Your company wants to move the testing infrastructure to the cloud, to reduce the amount of time it takes to fully test a change to the system, while changing the tests as little as possible. Which cloud infrastructure should you recommend?

A. Google Compute Engine unmanaged instance groups and Network Load Balancer
B. Google Compute Engine managed instance groups with auto-scaling
C. Google Cloud Dataproc to run Apache Hadoop jobs to process each test
D. Google App Engine with Google Stackdriver for logging

Answer: B

Explanation:
https://cloud.google.com/compute/docs/instance-groups/
Google Compute Engine enables users to launch virtual machines (VMs) on demand. VMs can be launched from the standard images or custom images created by users.
Managed instance groups offer autoscaling capabilities that allow you to automatically add or remove instances from a managed instance group based on increases or decreases in load. Autoscaling helps your applications gracefully handle increases in traffic and reduces cost when the need for resources is lower.

NEW QUESTION 8
- (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 9
- (Exam Topic 5)
You have an application deployed on Kubernetes Engine using a Deployment named echo-deployment. The deployment is exposed using a Service called echo-service. You need to perform an update to the application with minimal downtime to the application. What should you do?

A. Use kubect1 set image deployment/echo-deployment <new-image>
B. Use the rolling update functionality of the Instance Group behind the Kubernetes cluster
C. Update the deployment yaml file with the new container imag
D. Use kubect1 delete deployment/ echo-deployment and kubect1 create –f <yaml-file>
E. Update the service yaml file which the new container imag
F. Use kubect1 delete service/echoservice and kubect1 create –f <yaml-file>

Answer: A

Explanation:
https://cloud.google.com/kubernetes-engine/docs/how-to/updating-apps#updating_an_application

NEW QUESTION 10
- (Exam Topic 5)
You need to design a solution for global load balancing based on the URL path being requested. You need to ensure operations reliability and end-to-end in-transit encryption based on Google best practices.
What should you do?

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

Answer: B

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

NEW QUESTION 10
- (Exam Topic 5)
Your company places a high value on being responsive and meeting customer needs quickly. Their primary business objectives are release speed and agility. You want to reduce the chance of security errors being accidentally introduced. Which two actions can you take? Choose 2 answers

A. Ensure every code check-in is peer reviewed by a security SME.
B. Use source code security analyzers as part of the CI/CD pipeline.
C. Ensure you have stubs to unit test all interfaces between components.
D. Enable code signing and a trusted binary repository integrated with your CI/CD pipeline.
E. Run a vulnerability security scanner as part of your continuous-integration /continuous-delivery (CI/CD) pipeline.

Answer: BE

Explanation:
https://docs.microsoft.com/en-us/vsts/articles/security-validation-cicd-pipeline?view=vsts

NEW QUESTION 11
- (Exam Topic 5)
Your customer is moving an existing corporate application to Google Cloud Platform from an on-premises data center. The business owners require minimal user disruption. There are strict security team requirements for storing passwords. What authentication strategy should they use?

A. Use G Suite Password Sync to replicate passwords into Google.
B. Federate authentication via SAML 2.0 to the existing Identity Provider.
C. Provision users in Google using the Google Cloud Directory Sync tool.
D. Ask users to set their Google password to match their corporate password.

Answer: B

Explanation:
https://cloud.google.com/solutions/authenticating-corporate-users-in-a-hybrid-environment

NEW QUESTION 14
- (Exam Topic 5)
A news teed web service has the following code running on Google App Engine. During peak load, users report that they can see news articles they already viewed. What is the most likely cause of this problem?

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

app = Flask(_name_)
sessions = {}

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

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

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

        return news.render(news_articles)

if _name_ == "_main_":
        app.run()
```

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

Answer: A

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

NEW QUESTION 19
- (Exam Topic 5)

Your customer wants to capture multiple GBs of aggregate real-time key performance indicators (KPIs) from their game servers running on Google Cloud Platform and monitor the KPIs with low latency. How should they capture the KPIs?

A. Store time-series data from the game servers in Google Bigtable, and view it using Google Data Studio.
B. Output custom metrics to Stackdriver from the game servers, and create a Dashboard in Stackdriver Monitoring Console to view them.
C. Schedule BigQuery load jobs to ingest analytics files uploaded to Cloud Storage every ten minutes, and visualize the results in Google Data Studio.
D. Insert the KPIs into Cloud Datastore entities, and run ad hoc analysis and visualizations of them inCloud Datala

Answer: A

Explanation:
https://cloud.google.com/monitoring/api/v3/metrics-details#metric-kinds

NEW QUESTION 20
- (Exam Topic 5)
You need to upload files from your on-premises environment to Cloud Storage. You want the files to be encrypted on Cloud Storage using customer-supplied encryption keys. What should you do?

A. Supply the encryption key in a .boto configuration fil
B. Use gsutil to upload the files.
C. Supply the encryption key using gcloud confi
D. Use gsutil to upload the files to that bucket.
E. Use gsutil to upload the files, and use the flag --encryption-key to supply the encryption key.
F. Use gsutil to create a bucket, and use the flag --encryption-key to supply the encryption ke
G. Use gsutil to upload the files to that bucket.

Answer: A

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

NEW QUESTION 22
- (Exam Topic 5)
You are running a cluster on Kubernetes Engine to serve a web application. Users are reporting that a specific part of the application is not responding anymore. You notice that all pods of your deployment keep restarting after 2 seconds. The application writes logs to standard output. You want to inspect the logs to find the cause of the issue. Which approach can you take?

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

Answer: B

NEW QUESTION 24
- (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 gccloud 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 28
- (Exam Topic 5)
Your BigQuery project has several users. For audit purposes, you need to see how many queries each user ran in the last month.

A. Connect Google Data Studio to BigQuer
B. Create a dimension for the users and a metric for the amount of queries per user.
C. In the BigQuery interface, execute a query on the JOBS table to get the required information.
D. Use 'bq show' to list all job
E. Per job, use 'bq Is' to list job information and get the required information.
F. Use Cloud Audit Logging to view Cloud Audit Logs, and create a filter on the query operation to get the required information.

Answer: C

Explanation:
https://cloud.google.com/bigquery/docs/managing-jobs

NEW QUESTION 31
- (Exam Topic 5)
A recent audit that a new network was created in Your GCP project. In this network, a GCE instance has an SSH port open the world. You want to discover this network's origin. What should you do?

A. Search for Create VM entry in the Stackdriver alerting console.
B. Navigate to the Activity page in the Home sectio
C. Set category to Data Access and search for Create VM entry.
D. In the logging section of the console, specify GCE Network as the logging sectio
E. Search for the Create Insert entry.
F. Connect to the GCE instance using project SSH Key
G. Identify previous logins in system logs, and match these with the project owners list.

Answer: C

NEW QUESTION 34
- (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 38
- (Exam Topic 5)
Your application needs to process credit card transactions. You want the smallest scope of Payment Card Industry (PCI) compliance without compromising the ability to analyze transactional data and trends relating to which payment methods are used. How should you design your architecture?

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

Answer: A

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

NEW QUESTION 39
- (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 cos
B. Discontinue use of all GCP services and APIs that are not HIPAA-compliant.
C. Provisioning preemptible VMs to reduce cos
D. Disable and then discontinue use of all GCP and APIs that are not HIPAA-compliant.
E. Provision standard VMs in the same region to reduce cos
F. Discontinue use of all GCP services and APIs that are not HIPAA-compliant.
G. Provision standard VMs to the same region to reduce cos
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 44
- (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=10and 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 47
- (Exam Topic 5)
You want to optimize the performance of an accurate, real-time, weather-charting application. The data comes from 50,000 sensors sending 10 readings a second, in the format of a timestamp and sensor reading. Where
should you store the data?

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

Answer: C

Explanation:
It is time-series data, So Big Table. https://cloud.google.com/bigtable/docs/schema-design-time-series
Google Cloud Bigtable is a scalable, fully-managed NoSQL wide-column database that is suitable for both real-time access and analytics workloads.
Good for:
- Low-latency read/write access
- High-throughput analytics
- Native time series support
- Common workloads:
- IoT, finance, adtech
- Personalization, recommendations
- Monitoring
- Geospatial datasets
- Graphs
References: https://cloud.google.com/storage-options/

NEW QUESTION 50
- (Exam Topic 5)
You want to automate the creation of a managed instance group and a startup script to install the OS package dependencies. You want to minimize the startup time for VMs in the instance group.
What should you do?

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

Answer: B

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

NEW QUESTION 53
- (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 dedicate
D. Create a cron task that runs every minute to populate the cache with keys containing query results.
E. Set the memcache service level to share
F. Create a cron task that runs every minute to save all expected queries to a key called "cached-queries".
G. Set the memcache service level to share
H. Create a key called "cached-queries", and return 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 57
- (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 59
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