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 wants you to design their new testing strategy. How should the test coverage differ from their existing backends on the other platforms?

A. Tests should scale well beyond the prior approaches.
B. Unit tests are no longer required, only end-to-end tests.
C. Tests should be applied after the release is in the production environment.
D. Tests should include directly testing the Google Cloud Platform (GCP) infrastructure.

Answer: A

Explanation:
 From Scenario:
A few of their games were more popular than expected, and they had problems scaling their application servers, MySQL databases, and analytics tools.
Requirements for Game Analytics Platform include: Dynamically scale up or down based on game activity

NEW QUESTION 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 1)
For this question, refer to the Mountkirk Games case study.
Mountkirk Games wants to set up a continuous delivery pipeline. Their architecture includes many small services that they want to be able to update and roll back quickly. Mountkirk Games has the following requirements:
• Services are deployed redundantly across multiple regions in the US and Europe.
• Only frontend services are exposed on the public internet.
• They can provide a single frontend IP for their fleet of services.
• Deployment artifacts are immutable. Which set of products should they use?

A. Google Cloud Storage, Google Cloud Dataflow, Google Compute Engine
B. Google Cloud Storage, Google App Engine, Google Network Load Balancer
C. Google Kubernetes Registry, Google Container Engine, Google HTTP(S) Load Balancer
D. Google Cloud Functions, Google Cloud Pub/Sub, Google Cloud Deployment Manager

Answer: C

NEW QUESTION 4
- (Exam Topic 2)
For this question, refer to the TerramEarth case study.
TerramEarth has equipped unconnected trucks with servers and sensors to collet telemetry data. Next year they want to use the data to train machine learning models. They want to store this data in the cloud while reducing costs. What should they do?

A. Have the vehicle' computer compress the data in hourly snapshots, and store it in a Google Cloud storage (GCS) Nearline bucket.
B. Push the telemetry data in Real-time to a streaming dataflow job that compresses the data, and store it in Google BigQuery.
C. Push the telemetry data in real-time to a streaming dataflow job that compresses the data, and store it in Cloud Bigtable.
D. Have the vehicle's computer compress the data in hourly snapshots, a Store it in a GCS Coldline bucket.

Answer: D

Explanation:
Coldline Storage is the best choice for data that you plan to access at most once a year, due to its slightly lower availability, 90-day minimum storage duration,

costs for data access, and higher per-operation costs. For example:

Cold Data Storage - Infrequently accessed data, such as data stored for legal or regulatory reasons, can be stored at low cost as Coldline Storage, and be available when you need it.

Disaster recovery - In the event of a disaster recovery event, recovery time is key. Cloud Storage provides low latency access to data stored as Coldline Storage.

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

NEW QUESTION 5
- (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 6
- (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, Dresss4win 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 ofvirtual 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 7
- (Exam Topic 5)

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

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

Answer: BC

Explanation:
B: With Container Engine, Google will automatically deploy your cluster for you, update, patch, secure the nodes.
Kubernetes Engine's cluster autoscaler automatically resizes clusters based on the demands of the workloads you want to run.
C: Solutions like Datastore, BigQuery, AppEngine, etc are truly NoOps.
App Engine by default scales the number of instances running up and down to match the load, thus providing consistent performance for your app at all times while minimizing idle instances and thus reducing cost.
Note: At a high level, NoOps means that there is no infrastructure to build out and manage during usage of the platform. Typically, the compromise you make with NoOps is that you lose control of the underlying infrastructure.
References:
https://www.quora.com/How-well-does-Google-Container-Engine-support-Google-Cloud-Platform%E2%80%9

NEW QUESTION 8
- (Exam Topic 5)

One of your primary business objectives is being able to trust the data stored in your application. You want to log all changes to the application data. How can you design your logging system to verify authenticity of your logs?

A. Write the log concurrently in the cloud and on premises.
B. Use a SQL database and limit who can modify the log table.
C. Digitally sign each timestamp and log entry and store the signature.
D. Create a JSON dump of each log entry and store it in Google Cloud Storage.

Answer: C

Explanation:
https://cloud.google.com/storage/docs/access-logs
References: https://cloud.google.com/logging/docs/reference/tools/gcloud-logging

NEW QUESTION 9

- (Exam Topic 5)
You are using Cloud CDN to deliver static HTTP(S) website content hosted on a Compute Engine instance group. You want to improve the cache hit ratio.
What should you do?

A. Customize the cache keys to omit the protocol from the key.
B. Shorten the expiration time of the cached objects.
C. Make sure the HTTP(S) header "Cache-Region" points to the closest region of your users.
D. Replicate the static content in a Cloud Storage bucke
E. Point CloudCDN toward a load balancer on that bucket.

Answer: A

Explanation:
Reference https://cloud.google.com/cdn/docs/bestpractices#using_custom_cache_keys_to_improve_cache_hit_ratio

NEW QUESTION 10
- (Exam Topic 5)
Your customer runs a web service used by e-commerce sites to offer product recommendations to users. The company has begun experimenting with a machine learning model on Google Cloud Platform to improve the quality of results.
What should the customer do to improve their model's results over time?

A. Export Cloud Machine Learning Engine performance metrics from Stackdriver to BigQuery, to be used to analyze the efficiency of the model.
B. Build a roadmap to move the machine learning model training from Cloud GPUs to Cloud TPUs, which offer better results.
C. Monitor Compute Engine announcements for availability of newer CPU architectures, and deploy the model to them as soon as they are available for additional performance.
D. Save a history of recommendations and results of the recommendations in BigQuery, to be used as training data.

Answer: D

Explanation:
https://cloud.google.com/solutions/building-a-serverless-ml-model

NEW QUESTION 10
- (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 11
- (Exam Topic 5)
You deploy your custom Java application to Google App Engine. It fails to deploy and gives you the following stack trace.

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 12
- (Exam Topic 5)
You are helping the QA team to roll out a new load-testing tool to test the scalability of your primary cloud services that run on Google Compute Engine with Cloud Bigtable. Which three requirements should they include? Choose 3 answers

A. Ensure that the load tests validate the performance of Cloud Bigtable.
B. Create a separate Google Cloud project to use for the load-testing environment.
C. Schedule the load-testing tool to regularly run against the production environment.
D. Ensure all third-party systems your services use are capable of handling high load.
E. Instrument the production services to record every transaction for replay by the load-testing tool.
F. Instrument the load-testing tool and the target services with detailed logging and metrics collection.

Answer: ABF

NEW QUESTION 14
- (Exam Topic 5)
You are designing a large distributed application with 30 microservices. Each of your distributed microservices needs to connect to a database back-end. You want to store the credentials securely. Where should you store the credentials?

A. In the source code
B. In an environment variable

C. In a secret management system
D. In a config file that has restricted access through ACLs

Answer: C

Explanation:
https://cloud.google.com/docs/authentication/production#providing_credentials_to_your_application

NEW QUESTION 19
- (Exam Topic 5)
You have been asked to select the storage system for the click-data of your company's large portfolio of websites. This data is streamed in from a custom website analytics package at a typical rate of 6,000 clicks per minute, with bursts of up to 8,500 clicks per second. It must been stored for future analysis by your data science and user experience teams. Which storage infrastructure should you choose?

A. Google Cloud SQL
B. Google Cloud Bigtable
C. Google Cloud Storage
D. Google cloud Datastore

Answer: C

Explanation:
https://cloud.google.com/bigquery/docs/loading-data-cloud-storage

NEW QUESTION 20
- (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 24
- (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 25
- (Exam Topic 5)
The application reliability team at your company has added a debug feature to their backend service to send all server events to Google Cloud Storage for eventual analysis. The event records are at least 50 KB and at most 15 MB and are expected to peak at 3,000 events per second. You want to minimize data loss. Which process should you implement?

A. • Append metadata to file body.• Compress individual files.• Name files with serverName-Timestamp.• Create a new bucket if bucket is older than 1 hour and save individual files to the new bucke
B. Otherwise, save files to existing bucket
C. • Batch every 10,000 events with a single manifest file for metadata.• Compress event files and manifest file into a single archive file.• Name files using serverName-EventSequence.• Create a new bucket if bucket is older than 1 day and save the single archive file to the new bucke
D. Otherwise, save the single archive file to existing bucket.
E. • Compress individual files.• Name files with serverName-EventSequence.• Save files to one bucket• Set custom metadata headers for each object after saving.
F. • Append metadata to file body.• Compress individual files.• Name files with a random prefix pattern.• Save files to one bucket

Answer: D

Explanation:
In order to maintain a high request rate, avoid using sequential names. Using completely random object names will give you the best load distribution.
Randomness after a common prefix is effective under the prefix https://cloud.google.com/storage/docs/request-rate

NEW QUESTION 30
- (Exam Topic 5)
You are tasked with building an online analytical processing (OLAP) marketing analytics and reporting tool. This requires a relational database that can operate on hundreds of terabytes of data. What is the Google
recommended tool for such applications?

A. Cloud Spanner, because it is globally distributed
B. Cloud SQL, because it is a fully managed relational database
C. Cloud Firestore, because it offers real-time synchronization across devices
D. BigQuery, because it is designed for large-scale processing of tabular data

Answer: A

Explanation:
Reference: https://cloud.google.com/files/BigQueryTechnicalWP.pdf

NEW QUESTION 35
- (Exam Topic 5)
You want to enable your running Google Container Engine cluster to scale as demand for your application changes.
What should you do?

A. Add additional nodes to your Container Engine cluster using the following command: gcloud container clusters resize CLUSTER_NAME --size 10
B. Add a tag to the instances in the cluster with the following command:gcloud compute instances add-tags INSTANCE --tags enable --autoscaling max-nodes-10
C. Update the existing Container Engine cluster with the following command:gcloud alpha container clusters update mycluster --enable-autoscaling --min-nodes=1 --max-nodes=10
D. Create a new Container Engine cluster with the following command:gcloud alpha container clusters create mycluster --enable-autocaling --min-nodes=1 --max-nodes=10 and redeploy your application.

Answer: B

Explanation:
https://cloud.google.com/kubernetes-engine/docs/concepts/cluster-autoscaler Cluster autoscaling
--enable-autoscaling
Enables autoscaling for a node pool.
Enables autoscaling in the node pool specified by --node-pool or the default node pool if --node-pool is not provided.
Where:
--max-nodes=MAX_NODES
Maximum number of nodes in the node pool.
Maximum number of nodes to which the node pool specified by --node-pool (or default node pool if unspecified) can scale.

NEW QUESTION 38
- (Exam Topic 5)
A development manager is building a new application He asks you to review his requirements and identify what cloud technologies he can use to meet them. The application must
* 1. Be based on open-source technology for cloud portability
* 2. Dynamically scale compute capacity based on demand
* 3. Support continuous software delivery
* 4. Run multiple segregated copies of the same application stack
* 5. Deploy application bundles using dynamic templates
* 6. Route network traffic to specific services based on URL
Which combination of technologies will meet all of his requirements?

A. Google Container Engine, Jenkins, and Helm
B. Google Container Engine and Cloud Load Balancing
C. Google Compute Engine and Cloud Deployment Manager
D. Google Compute Engine, Jenkins, and Cloud Load Balancing

Answer: A

Explanation:
Helm for managing Kubernetes
Kubernetes can base on the URL to route traffic to different location (path) https://cloud.google.com/kubernetes-engine/docs/tutorials/http-balancer eg.apiVersion:
networking.k8s.io/v1beta1
kind: Ingress metadata:
name: fanout-ingress spec:
rules:
- http: paths:
- path: /* backend: serviceName: web servicePort: 8080
- path: /v2/* backend: serviceName: web2 servicePort: 8080

NEW QUESTION 43
- (Exam Topic 5)
Your organization has a 3-tier web application deployed in the same network on Google Cloud Platform. Each tier (web, API, and database) scales independently of the others Network traffic should flow through the web to the API tier and then on to the database tier. Traffic should not flow between the web and the database tier. How should you configure the network?

A. Add each tier to a different subnetwork.
B. Set up software based firewalls on individual VMs.
C. Add tags to each tier and set up routes to allow the desired traffic flow.
D. Add tags to each tier and set up firewall rules to allow the desired traffic flow.

Answer: D

Explanation:
https://aws.amazon.com/blogs/aws/building-three-tier-architectures-with-security-groups/
Google Cloud Platform(GCP) enforces firewall rules through rules and tags. GCP rules and tags can be defined once and used across all regions.
References: https://cloud.google.com/docs/compare/openstack/ https://aws.amazon.com/it/blogs/aws/building-three-tier-architectures-with-security-groups/

NEW QUESTION 48
- (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 51
- (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 54
- (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 56
- (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 60
- (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 65
- (Exam Topic 5)
Your company acquired a healthcare startup and must retain its customers' medical information for up to 4 more years, depending on when it was created. Your corporate policy is to securely retain this data, and then delete it as soon as regulations allow.
Which approach should you take?

A. Store the data in Google Drive and manually delete records as they expire.
B. Anonymize the data using the Cloud Data Loss Prevention API and store it indefinitely.
C. Store the data using the Cloud Storage and use lifecycle management to delete files when they expire.
D. Store the data in Cloud Storage and run a nightly batch script that deletes all expired datA.

Answer: C

Explanation:
https://cloud.google.com/storage/docs/lifecycle

NEW QUESTION 69
- (Exam Topic 5)
You set up an autoscaling instance group to serve web traffic for an upcoming launch. After configuring the instance group as a backend service to an HTTP(S) load balancer, you notice that virtual machine (VM) instances are being terminated and re-launched every minute. The instances do not have a public IP address. You have verified the appropriate web response is coming from each instance using the curl command. You want to ensure the backend is configured correctly. What should you do?

A. Ensure that a firewall rule exists to allow source traffic on HTTP/HTTPS to reach the load balancer.
B. Assign a public IP to each instance and configure a firewall rule to allow the load balancer to reach the instance public IP.
C. Ensure that a firewall rule exists to allow load balancer health checks to reach the instances in the instance group.
D. Create a tag on each instance with the name of the load balance
E. Configure a firewall rule with the name of the load balancer as the source and the instance tag as the destination.

Answer: C

Explanation:
https://cloud.google.com/vpc/docs/using-firewalls
The best practice when configuration a health check is to check health and serve traffic on the same port. However, it is possible to perform health checks on one port, but serve traffic on another. If you do use two different ports, ensure that firewall rules and services running on instances are configured appropriately. If you run health checks and serve traffic on the same port, but decide to switch ports at some point, be sure to update both the backend service and the health check. Backend services that do not have a valid global forwarding rule referencing it will not be health checked and will have no health status.
References: https://cloud.google.com/compute/docs/load-balancing/http/backend-service

NEW QUESTION 74
- (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 77
- (Exam Topic 5)
Your marketing department wants to send out a promotional email campaign. The development team wants to minimize direct operation management. They project a wide range of possible customer responses, from 100 to 500,000 click-throughs per day. The link leads to a simple website that explains the promotion and collects user information and preferences. Which infrastructure should you recommend? (CHOOSE TWO)

A. Use Google App Engine to serve the website and Google Cloud Datastore to store user data.
B. Use a Google Container Engine cluster to serve the website and store data to persistent disk.
C. Use a managed instance group to serve the website and Google Cloud Bigtable to store user data.
D. Use a single compute Engine virtual machine (VM) to host a web server, backed by Google Cloud SQL.

Answer: AC

Explanation:
Reference: https://cloud.google.com/storage-options/ References: https://cloud.google.com/storage-options/

NEW QUESTION 78
- (Exam Topic 5)
Your applications will be writing their logs to BigQuery for analysis. Each application should have its own table.
Any logs older than 45 days should be removed. You want to optimize storage and follow Google recommended practices. What should you do?

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

Answer: B

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

NEW QUESTION 82
- (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 87
- (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 90
- (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 92
- (Exam Topic 5)
You have an outage in your Compute Engine managed instance group: all instance keep restarting after 5 seconds. You have a health check configured, but autoscaling is disabled. Your colleague, who is a Linux expert, offered to look into the issue. You need to make sure that he can access the VMs. What should you do?

A. Grant your colleague the IAM role of project Viewer
B. Perform a rolling restart on the instance group
C. Disable the health check for the instance grou
D. Add his SSH key to the project-wide SSH keys
E. Disable autoscaling for the instance grou
F. Add his SSH key to the project-wide SSH Keys

Answer: C

Explanation:
https://cloud.google.com/compute/docs/instance-groups/autohealing-instances-in-migs
Health checks used for autohealing should be conservative so they don't preemptively delete and recreate your instances. When an autohealer health check is too aggressive, the autohealer might mistake busy instances for failed instances and unnecessarily restart them, reducing availability

NEW QUESTION 94
- (Exam Topic 5)
Google Cloud Platform resources are managed hierarchically using organization, folders, and projects. When Cloud Identity and Access Management (IAM) policies exist at these different levels, what is the effective policy at a particular node of the hierarchy?

A. The effective policy is determined only by the policy set at the node
B. The effective policy is the policy set at the node and restricted by the policies of its ancestors
C. The effective policy is the union of the policy set at the node and policies inherited from its ancestors
D. The effective policy is the intersection of the policy set at the node and policies inherited from its ancestors

Answer: B

Explanation:
Reference: https://cloud.google.com/resource-manager/docs/cloud-platform-resource-hierarchy

NEW QUESTION 97
- (Exam Topic 5)
One of the developers on your team deployed their application in Google Container Engine with the Dockerfile below. They report that their application deployments are taking too long.

You want to optimize this Dockerfile for faster deployment times without adversely affecting the app's functionality.
Which two actions should you take? Choose 2 answers.

A. Remove Python after running pip.
B. Remove dependencies from requirements.txt.
C. Use a slimmed-down base image like Alpine linux.
D. Use larger machine types for your Google Container Engine node pools.
E. Copy the source after the package dependencies (Python and pip) are installed.

Answer: CE

Explanation:
The speed of deployment can be changed by limiting the size of the uploaded app, limiting the complexity of the build necessary in the Dockerfile, if present, and by ensuring a fast and reliable internet connection.
Note: Alpine Linux is built around musl libc and busybox. This makes it smaller and more resource efficient than traditional GNU/Linux distributions. A container requires no more than 8 MB and a minimal installation to disk requires around 130 MB of storage. Not only do you get a fully-fledged Linux environment but a large selection of packages from the repository.
References: https://groups.google.com/forum/#!topic/google-appengine/hZMEkmmObDU https://www.alpinelinux.org/about/

NEW QUESTION 98
- (Exam Topic 5)
You are designing a mobile chat application. You want to ensure people cannot spoof chat messages, by providing a message were sent by a specific user.
What should you do

A. Tag messages client side with the originating user identifier and the destination user.
B. Encrypt the message client side using block-based encryption with a shared key.
C. Use public key infrastructure (PKI) to encrypt the message client side using the originating user's private key.
D. Use a trusted certificate authority to enable SSL connectivity between the client application and the server.

Answer: C

NEW QUESTION 100
- (Exam Topic 5)
You deploy your custom java application to google app engine. It fails to deploy and gives you the following stack trace:

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

Answer: B

NEW QUESTION 102
- (Exam Topic 5)
You are creating an App Engine application that uses Cloud Datastore as its persistence layer. You need to retrieve several root entities for which you have the identifiers. You want to minimize the overhead in operations performed by Cloud Datastore. What should you do?

A. Create the Key object for each Entity and run a batch get operation
B. Create the Key object for each Entity and run multiple get operations, one operation for each entity
C. Use the identifiers to create a query filter and run a batch query operation
D. Use the identifiers to create a query filter and run multiple query operations, one operation for each entity

Answer: C

Explanation:
https://cloud.google.com/datastore/docs/concepts/entities#datastore-datastore-batch-upsert-nodejs

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NEW QUESTION 104
- (Exam Topic 5)
An application development team believes their current logging tool will not meet their needs for their new cloud-based product. They want a bettor tool to capture errors and help them analyze their historical log data. You want to help them find a solution that meets their needs, what should you do?

A. Direct them to download and install the Google StackDriver logging agent.
B. Send them a list of online resources about logging best practices.
C. Help them define their requirements and assess viable logging tools.
D. Help them upgrade their current tool to take advantage of any new features.

Answer: C

Explanation:
Help them define their requirements and assess viable logging tools. They know the requirements and the existing tools' problems. While it's true StackDriver Logging and Error Reporting possibly meet all their requirements, there might be other tools also meet their need. They need you to provide expertise to make assessment for new tools, specifically, logging tools that can "capture errors and help them analyze their historical log data".
References: https://cloud.google.com/logging/docs/agent/installation

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NEW QUESTION 108
- (Exam Topic 5)
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 autoscalin
B. Use an Ingress resource to loadbalance the HTTPS traffic.
C. Use the Horizontal Pod Autoscaler and enable cluster autoscaling on the Kubernetes cluste
D. Use a Service resource of type LoadBalancer to load-balance the HTTPS traffic.
E. Enable autoscaling on the Compute Engine instance grou
F. Use an Ingress resource to load balance the HTTPS traffic.
G. Enable autoscaling on the Compute Engine instance grou
H. Use a Service resource of type LoadBalancer to load-balance the HTTPS traffic.

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

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NEW QUESTION 112
- (Exam Topic 5)
Your company has decided to build a backup replica of their on-premises user authentication PostgreSQL database on Google Cloud Platform. The database is 4 TB, and large updates are frequent. Replication requires private address space communication. Which networking approach should you use?

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

Answer: A

Explanation:
https://cloud.google.com/docs/enterprise/best-practices-for-enterprise-organizations
Google Cloud Dedicated Interconnect provides direct physical connections and RFC 1918 communication between your on-premises network and Google's network. Dedicated Interconnect enables you to transfer large amounts of data between networks, which can be more cost effective than purchasing additional bandwidth over the public Internet or using VPN tunnels.
Benefits:
 Traffic between your on-premises network and your VPC network doesn't traverse the public Internet.
Traffic traverses a dedicated connection with fewer hops, meaning there are less points of failure where traffic might get dropped or disrupted.

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

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

The cost of egress traffic from your VPC network to your on-premises network is reduced. A dedicated connection is generally the least expensive method if you have a high-volume of traffic to and from Google's network.
References: https://cloud.google.com/interconnect/docs/details/dedicated

NEW QUESTION 115
- (Exam Topic 5)
Your company is forecasting a sharp increase in the number and size of Apache Spark and Hadoop jobs being run on your local datacenter You want to utilize the cloud to help you scale this upcoming demand with the least amount of operations work and code change. Which product should you use?

A. Google Cloud Dataflow
B. Google Cloud Dataproc
C. Google Compute Engine
D. Google Container Engine

Answer: B

Explanation:
Google Cloud Dataproc is a fast, easy-to-use, low-cost and fully managed service that lets you run the Apache Spark and Apache Hadoop ecosystem on Google Cloud Platform. Cloud Dataproc provisions big or small clusters rapidly, supports many popular job types, and is integrated with other Google Cloud Platform services, such as Google Cloud Storage and Stackdriver Logging, thus helping you reduce TCO.
References: https://cloud.google.com/dataproc/docs/resources/faq

NEW QUESTION 120
- (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 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 123
- (Exam Topic 5)
The development team has provided you with a Kubernetes Deployment file. You have no infrastructure yet and need to deploy the application. What should you do?

A. Use gcloud to create a Kubernetes cluste
B. Use Deployment Manager to create the deployment.
C. Use gcloud to create a Kubernetes cluste
D. Use kubect1 to create the deployment.
E. Use kubect1 to create a Kubernetes cluste
F. Use Deployment Manager to create the deployment.
G. Use kubect1 to create a Kubernetes cluste
H. Use kubect1 to create the deployment.

Answer: B

Explanation:
https://cloud.google.com/kubernetes-engine/docs/how-to/creating-a-cluster

NEW QUESTION 125
- (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 126
- (Exam Topic 5)
Your customer wants to do resilience testing of their authentication layer. This consists of a regional managed instance group serving a public REST API that reads from and writes to a Cloud SQL instance.
What should you do?

A. Engage with a security company to run web scrapes that look your users' authentication data om malicious websites and notify you if any if found.
B. Deploy intrusion detection software to your virtual machines to detect and log unauthorized access.
C. Schedule a disaster simulation exercise during which you can shut off all VMs in a zone to see how your application behaves.
D. Configure a red replica for your Cloud SQL instance in a different zone than the master, and then manually trigger a failover while monitoring KPIs for our REST API.

Answer: C

NEW QUESTION 129
- (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 134
- (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 136
- (Exam Topic 5)
Your company wants to start using Google Cloud resources but wants to retain their on-premises Active Directory domain controller for identity management. What should you do?

A. Use the Admin Directory API to authenticate against the Active Directory domain controller.
B. Use Google Cloud Directory Sync to synchronize Active Directory usernames with cloud identities and configure SAML SSO.
C. Use Cloud Identity-Aware Proxy configured to use the on-premises Active Directory domain controller as an identity provider.
D. Use Compute Engine to create an Active Directory (AD) domain controller that is a replica of the onpremises AD domain controller using Google Cloud Directory Sync.

Answer: B

Explanation:
https://cloud.google.com/solutions/federating-gcp-with-active-directory-introduction#implementing_federation

NEW QUESTION 140
- (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 144
- (Exam Topic 5)
During a high traffic portion of the day, one of your relational databases crashes, but the replica is never promoted to a master. You want to avoid this in the future. What should you do?

A. Use a different database.
B. Choose larger instances for your database.
C. Create snapshots of your database more regularly.
D. Implement routinely scheduled failovers of your databases.

Answer: D

Explanation:
https://cloud.google.com/solutions/dr-scenarios-planning-guide

NEW QUESTION 145
- (Exam Topic 5)
You are designing an application for use only during business hours. For the minimum viable product release, you'd like to use a managed product that automatically "scales to zero" so you don't incur costs when there is no activity.
Which primary compute resource should you choose?

A. Cloud Functions
B. Compute Engine
C. Kubernetes Engine
D. AppEngine flexible environment

Answer: A

Explanation:
https://cloud.google.com/serverless-options

NEW QUESTION 150
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