



Google

Exam Questions Professional-Cloud-Architect

Google Certified Professional - Cloud Architect (GCP)

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NEW QUESTION 1

- (Exam Topic 1)

For this question, refer to the Mountkirk Games case study.

Mountkirk Games' gaming servers are not automatically scaling properly. Last month, they rolled out a new feature, which suddenly became very popular. A record number of users are trying to use the service, but many of them are getting 503 errors and very slow response times. What should they investigate first?

- A. Verify that the database is online.
- B. Verify that the project quota hasn't been exceeded.
- C. Verify that the new feature code did not introduce any performance bugs.
- D. Verify that the load-testing team is not running their tool against production.

Answer: B

Explanation:

* 503 is service unavailable error. If the database was online everyone would get the 503 error. https://cloud.google.com/docs/quota#capping_usage

NEW QUESTION 2

- (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 3

- (Exam Topic 2)

For this question, refer to the TerramEarth case study

Your development team has created a structured API to retrieve vehicle data. They want to allow third parties to develop tools for dealerships that use this vehicle event data. You want to support delegated authorization against this data. What should you do?

- A. Build or leverage an OAuth-compatible access control system.
- B. Build SAML 2.0 SSO compatibility into your authentication system.
- C. Restrict data access based on the source IP address of the partner systems.
- D. Create secondary credentials for each dealer that can be given to the trusted third party.

Answer: A

Explanation:

<https://cloud.google.com/appengine/docs/flexible/go/authorizing-apps> https://cloud.google.com/docs/enterprise/best-practices-for-enterprise-organizations#delegate_application_auth Delegate application authorization with OAuth2

Cloud Platform APIs support OAuth 2.0, and scopes provide granular authorization over the methods that are supported. Cloud Platform supports both service-account and user-account OAuth, also called three-legged OAuth.

References:

https://cloud.google.com/docs/enterprise/best-practices-for-enterprise-organizations#delegate_application_auth

<https://cloud.google.com/appengine/docs/flexible/go/authorizing-apps>

NEW QUESTION 4

- (Exam Topic 5)

You need to ensure reliability for your application and operations by supporting reliable task scheduling for compute on GCP. Leveraging Google best practices, what should you do?

- A. Using the Cron service provided by App Engine, publishing messages directly to a message-processing utility service running on Compute Engine instances.
- B. Using the Cron service provided by App Engine, publish messages to a Cloud Pub/Sub topic
- C. Subscribe to that topic using a message-processing utility service running on Compute Engine instances.
- D. Using the Cron service provided by Google Kubernetes Engine (GKE), publish messages directly to a message-processing utility service running on Compute Engine instances.
- E. Using the Cron service provided by GKE, publish messages to a Cloud Pub/Sub topic
- F. Subscribe to that topic using a message-processing utility service running on Compute Engine instances.

Answer: B

Explanation:

<https://cloud.google.com/solutions/reliable-task-scheduling-compute-engine>

NEW QUESTION 5

- (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 bucket.
- 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 6

- (Exam Topic 5)

You are building a continuous deployment pipeline for a project stored in a Git source repository and want to ensure that code changes can be verified deploying to production. What should you do?

- A. Use Spinnaker to deploy builds to production using the red/black deployment strategy so that changes can easily be rolled back.
- B. Use Spinnaker to deploy builds to production and run tests on production deployments.
- C. Use Jenkins to build the staging branches and the master branch.
- D. Build and deploy changes to production for 10% of users before doing a complete rollout.
- E. Use Jenkins to monitor tags in the repository.
- F. Deploy staging tags to a staging environment for testing. After testing, tag the repository for production and deploy that to the production environment.

Answer: D

Explanation:

Reference: <https://github.com/GoogleCloudPlatform/continuous-deployment-on-kubernetes/blob/master/README.md>

NEW QUESTION 7

- (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 8

- (Exam Topic 5)

Your web application uses Google Kubernetes Engine to manage several workloads. One workload requires a consistent set of hostnames even after pod scaling and relaunches.

Which feature of Kubernetes should you use to accomplish this?

- A. StatefulSets
- B. Role-based access control
- C. Container environment variables
- D. Persistent Volumes

Answer: A

Explanation:

<https://kubernetes.io/docs/tutorials/stateful-application/basic-stateful-set/>

NEW QUESTION 9

- (Exam Topic 5)

Your company is using BigQuery as its enterprise data warehouse. Data is distributed over several Google Cloud projects. All queries on BigQuery need to be billed on a single project. You want to make sure that no query costs are incurred on the projects that contain the data. Users should be able to query the datasets, but not edit them.

How should you configure users' access roles?

- A. Add all users to a group
- B. Grant the group the role of BigQuery user on the billing project and BigQuery dataViewer on the projects that contain the data.
- C. Add all users to a group
- D. Grant the group the roles of BigQuery dataViewer on the billing project and BigQuery user on the projects that contain the data.
- E. Add all users to a group
- F. Grant the group the roles of BigQuery jobUser on the billing project and BigQuery dataViewer on the projects that contain the data.
- G. Add all users to a group
- H. Grant the group the roles of BigQuery dataViewer on the billing project and BigQuery jobUser on the projects that contain the data.

Answer: A

Explanation:

Reference: <https://cloud.google.com/bigquery/docs/running-queries>

NEW QUESTION 10

- (Exam Topic 5)

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

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

Answer: AEF

Explanation:

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

NEW QUESTION 10

- (Exam Topic 5)

Your customer is moving their corporate applications to Google Cloud Platform. The security team wants detailed visibility of all projects in the organization. You provision the Google Cloud Resource Manager and set up yourself as the org admin. What Google Cloud Identity and Access Management (Cloud IAM) roles should you give to the security team'?

- A. Org viewer, project owner
- B. Org viewer, project viewer
- C. Org admin, project browser
- D. Project owner, network admin

Answer: B

Explanation:

<https://cloud.google.com/iam/docs/using-iam-securely>

NEW QUESTION 12

- (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 16

- (Exam Topic 5)

You want to establish a Compute Engine application in a single VPC across two regions. The application must communicate over VPN to an on-premises network. How should you deploy the VPN?

- A. Use VPC Network Peering between the VPC and the on-premises network.
- B. Expose the VPC to the on-premises network using IAM and VPC Sharing.
- C. Create a global Cloud VPN Gateway with VPN tunnels from each region to the on-premises peer gateway.
- D. Deploy Cloud VPN Gateway in each regio
- E. Ensure that each region has at least one VPN tunnel to the on-premises peer gateway.

Answer: C

Explanation:

<https://cloud.google.com/vpn/docs/how-to/creating-static-vpns>

NEW QUESTION 21

- (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 25

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

Answer: D

Explanation:

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

NEW QUESTION 30

- (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 32

- (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 35

- (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 rule

F. Configure SSL proxy balancing.

Answer: B

Explanation:

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

NEW QUESTION 36

- (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 39

- (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 balancer.
- 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 configuring 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 41

- (Exam Topic 5)

Your company's user-feedback portal comprises a standard LAMP stack replicated across two zones. It is deployed in the us-central1 region and uses autoscaled managed instance groups on all layers, except the database. Currently, only a small group of select customers have access to the portal. The portal meets a 99.99% availability SLA under these conditions. However, next quarter, your company will be making the portal available to all users, including unauthenticated users. You need to develop a resiliency testing strategy to ensure the system maintains the SLA once they introduce additional user load. What should you do?

- A. Capture existing users input, and replay captured user load until autoscale is triggered on all layer
- B. At the same time, terminate all resources in one of the zones.
- C. Create synthetic random user input, replay synthetic load until autoscale logic is triggered on at least one layer, and introduce "chaos" to the system by terminating random resources on both zones.
- D. Expose the new system to a larger group of users, and increase group ' size each day until autoscale logic is triggered on all layer
- E. At the same time, terminate random resources on both zones.
- F. Capture existing users input, and replay captured user load until resource utilization crosses 80%. Also, derive estimated number of users based on existing users usage of the app, and deploy enough resources to handle 200% of expected load.

Answer: A

NEW QUESTION 45

- (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 in Cloud Data

Answer: A

Explanation:

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

NEW QUESTION 50

- (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 55

- (Exam Topic 5)

A production database virtual machine on Google Compute Engine has an ext4-formatted persistent disk for data files. The database is about to run out of storage space. How can you remediate the problem with the least amount of downtime?

- A. In the Cloud Platform Console, increase the size of the persistent disk and use the `resize2fs` command in Linux.
- B. Shut down the virtual machine, use the Cloud Platform Console to increase the persistent disk size, then restart the virtual machine.
- C. In the Cloud Platform Console, increase the size of the persistent disk and verify the new space is ready to use with the `fdisk` command in Linux.
- D. In the Cloud Platform Console, create a new persistent disk attached to the virtual machine, format and mount it, and configure the database service to move the files to the new disk.
- E. In the Cloud Platform Console, create a snapshot of the persistent disk, restore the snapshot to a new larger disk, unmount the old disk, mount the new disk, and restart the database service.

Answer: A

Explanation:

On Linux instances, connect to your instance and manually resize your partitions and file systems to use the additional disk space that you added.

Extend the file system on the disk or the partition to use the added space. If you grew a partition on your disk, specify the partition. If your disk does not have a partition table, specify only the disk ID.

```
sudo resize2fs /dev/[DISK_ID][PARTITION_NUMBER]
```

where [DISK_ID] is the device name and [PARTITION_NUMBER] is the partition number for the device where you are resizing the file system.

References: <https://cloud.google.com/compute/docs/disks/add-persistent-disk>

NEW QUESTION 57

- (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 file.
- B. Use `gsutil` to upload the files.
- C. Supply the encryption key using `gcloud config`.
- 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 key.
- 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 62

- (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 63

- (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 ls -lr gs://backups/**` to find and remove items older than 90 days.
- D. Schedule a cron script using `gsutil ls -l 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 66

- (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 group
- D. Add his SSH key to the project-wide SSH keys
- E. Disable autoscaling for the instance group
- 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 67

- (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 72

- (Exam Topic 5)

Your company has successfully migrated to the cloud and wants to analyze their data stream to optimize operations. They do not have any existing code for this analysis, so they are exploring all their options. These options include a mix of batch and stream processing, as they are running some hourly jobs and live-processing some data as it comes in. Which technology should they use for this?

- A. Google Cloud Dataproc
- B. Google Cloud Dataflow
- C. Google Container Engine with Bigtable
- D. Google Compute Engine with Google BigQuery

Answer: B

Explanation:

Dataflow is for processing both the Batch and Stream.

Cloud Dataflow is a fully-managed service for transforming and enriching data in stream (real time) and batch (historical) modes with equal reliability and expressiveness -- no more complex workarounds or compromises needed.

References: <https://cloud.google.com/dataflow/>

NEW QUESTION 73

- (Exam Topic 5)

You have been engaged by your client to lead the migration of their application infrastructure to GCP. One of their current problems is that the on-premises high performance SAN is requiring frequent and expensive upgrades to keep up with the variety of workloads that are identified as follows: 20TB of log archives retained for legal reasons; 500 GB of VM boot/data volumes and templates; 500 GB of image thumbnails; 200 GB of customer session state data that allows customers to restart sessions even if off-line for several days.

Which of the following best reflects your recommendations for a cost-effective storage allocation?

- A. Local SSD for customer session state data
- B. Lifecycle-managed Cloud Storage for log archives, thumbnails, and VM boot/data volumes.
- C. Memcache backed by Cloud Datastore for the customer session state data
- D. Lifecycle-managed Cloud Storage for log archives, thumbnails, and VM boot/data volumes.
- E. Memcache backed by Cloud SQL for customer session state data
- F. Assorted local SSD-backed instances for VM boot/data volume
- G. Cloud Storage for log archives and thumbnails.
- H. Memcache backed by Persistent Disk SSD storage for customer session state data
- I. Assorted local SSD-backed instances for VM boot/data volume
- J. Cloud Storage for log archives and thumbnails.

Answer: D

Explanation:

<https://cloud.google.com/compute/docs/disks>

NEW QUESTION 76

- (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 BigQuery
- 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 ls' 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 81

- (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 section
- 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 section
- 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 84

- (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 89

- (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 autoscaling
- B. Use an Ingress resource to loadbalance the HTTPS traffic.

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

NEW QUESTION 91

- (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 92

- (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 97

- (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 cost
- B. Discontinue use of all GCP services and APIs that are not HIPAA-compliant.
- C. Provisioning preemptible VMs to reduce cost
- 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 cost
- F. Discontinue use of all GCP services and APIs that are not HIPAA-compliant.
- G. Provision standard VMs to the same region to reduce cost
- 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 101

- (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 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 Kubernetes Engine cluster with the following command: `gcloud alpha container clusters update mycluster --enable-autoscaling --min-nodes=1 --max-nodes=10`
- D. Create a new Kubernetes Engine cluster with the following command: `gcloud alpha container clusters create mycluster --enable-autoscaling --min-nodes=1 --max-nodes=10` and redeploy your application

Answer: C

Explanation:

<https://cloud.google.com/kubernetes-engine/docs/concepts/cluster-autoscaler> To enable autoscaling for an existing node pool, run the following command:
`gcloud container clusters update [CLUSTER_NAME] --enable-autoscaling --min-nodes 1 --max-nodes 10 --zone [COMPUTE_ZONE] --node-pool default-pool`

NEW QUESTION 106

- (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 108

- (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 on malicious websites and notify you if any is 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 read 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 111

- (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 on-premises 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 116

- (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 disk
- B. Create an instance template from the snapshot
- C. Create an autoscaled managed instance group from the instance template.
- D. Create a snapshot of the existing disk
- E. Create a custom image from the snapshot
- F. Create an autoscaled managed instance group from the custom image.
- G. Create a custom image from the existing disk
- 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 disk
- 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 118

- (Exam Topic 5)

You are using a single Cloud SQL instance to serve your application from a specific zone. You want to introduce high availability. What should you do?

- A. Create a read replica instance in a different region
- B. Create a failover replica instance in a different region
- C. Create a read replica instance in the same region, but in a different zone
- D. Create a failover replica instance in the same region, but in a different zone

Answer: B

Explanation:

<https://cloud.google.com/sql/docs/mysql/high-availability>

NEW QUESTION 121

- (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 Storage
- B. Use Cloud Datalab to explore and clean your data.
- C. Upload your files into Cloud Storage
- 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 126

- (Exam Topic 5)

Your company wants to track whether someone is present in a meeting room reserved for a scheduled meeting. There are 1000 meeting rooms across 5 offices on 3 continents. Each room is equipped with a motion sensor that reports its status every second. The data from the motion detector includes only a sensor ID and several different discrete items of information. Analysts will use this data, together with information about account owners and office locations. Which database type should you use?

- A. Flat file
- B. NoSQL
- C. Relational
- D. Blobstore

Answer: B

Explanation:

Relational databases were not designed to cope with the scale and agility challenges that face modern applications, nor were they built to take advantage of the commodity storage and processing power available today.

NoSQL fits well for:

Developers are working with applications that create massive volumes of new, rapidly changing data types — structured, semi-structured, unstructured and polymorphic data.

NEW QUESTION 130

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