GCP ACE Practise Set 04

Total points 0/0

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✓ **The sales team has a project named Sales Data Digest that has the ID acme-data-digest. You need to set up similar Google Cloud resources for the marketing team but their resources must be organized independently of the sales team. What should you do?** *

- ○ A. Grant the Project Editor role to the Marketing team for acme-data-digest.
- ○ B. Create a Project Lien on acme-data-digest and then grant the Project Editor role to the Marketing team.
- ◉ C. Create another project with the ID acme-marketing-data-digest for the Marketing team and deploy the resources there. ✓
- ○ D. Create a new project named Marketing Data Digest and use the ID acme-data-digest. Grant the Project Editor role to the Marketing team.

✗ **You need to configure optimal data storage for files stored in Cloud Storage * for minimal cost. The files are used in a mission-critical analytics pipeline that is used continually. The users are in Boston, MA (United States). What should you do?**

- ○ A. Configure regional storage for the region closest to the users. Configure a Nearline storage class.
- ○ B. Configure regional storage for the region closest to the users. Configure a Standard storage class.
- ○ C. Configure dual-regional storage for the dual region closest to the users. Configure a Nearline storage class.
- ◉ D. Configure dual-regional storage for the dual region closest to the users. Configure a Standard storage class ✗

Correct answer

- ◉ B. Configure regional storage for the region closest to the users. Configure a Standard storage class.

✓ **Your organization has three existing Google Cloud projects. You need to bill the Marketing department for only their Google Cloud services for a new initiative within their group. What should you do?** *

- (●) A. 1. Verify that you are assigned the Billing Administrator IAM role for your organization's Google Cloud Project for the Marketing department. 2. Link the new project to a Marketing Billing Account. ✓
- ( ) B. 1. Verify that you are assigned the Billing Administrator IAM role for your organization's Google Cloud account. 2. Create a new Google Cloud Project for the Marketing department. 3. Set the default key-value project labels to department:marketing for all services in this project.
- ( ) C. 1. Verify that you are assigned the Organization Administrator IAM role for your organization's Google Cloud account. 2. Create a new Google Cloud Project for the Marketing department. 3. Link the new project to a Marketing Billing Account.
- ( ) D. 1. Verify that you are assigned the Organization Administrator IAM role for your organization's Google Cloud account. 2. Create a new Google Cloud Project for the Marketing department. 3. Set the default key-value project labels to department:marketing for all services in this project

✓ **You need to manage a third-party application that will run on a Compute Engine instance. Other Compute Engine instances are already running with default configuration. Application installation files are hosted on Cloud Storage. You need to access these files from the new instance without allowing other virtual machines (VMs) to access these files. What should you do?** *

- ○ A. Create the instance with the default Compute Engine service account. Grant the service account permissions on Cloud Storage.
- ○ B. Create the instance with the default Compute Engine service account. Add metadata to the objects on Cloud Storage that matches the metadata on the new instance.
- ◉ C. Create a new service account and assign this service account to the new instance. Grant the service account permissions on Cloud Storage. ✓
- ○ D. Create a new service account and assign this service account to the new instance. Add metadata to the objects on Cloud Storage that matches the metadata on the new instance.

✓ **You have a website hosted on App Engine standard environment. You want 1% of your users to see a new test version of the website. You want to minimize complexity. What should you do?** *

- ○ A. Deploy the new version in the same application and use the --migrate option.
- ◉ B. Deploy the new version in the same application and use the --splits option to give a weight of 99 to the current version and a weight of 1 to the new version. ✓
- ○ C. Create a new App Engine application in the same project. Deploy the new version in that application. Use the App Engine library to proxy 1% of the requests to the new version.
- ○ D. Create a new App Engine application in the same project. Deploy the new version in that application. Configure your network load balancer to send 1% of the traffic to that new application

✓ **You have just created a new project which will be used to deploy a globally distributed application. You will use Cloud Spanner for data storage. You want to create a Cloud Spanner instance. You want to perform the first step in preparation of creating the instance. What should you do?** *

- (●) A. Enable the Cloud Spanner API. ✓
- ( ) B. Configure your Cloud Spanner instance to be multi-regional.
- ( ) C. Create a new VPC network with subnetworks in all desired regions.
- ( ) D. Grant yourself the IAM role of Cloud Spanner Admin.

✓ **Your projects incurred more costs than you expected last month. Your research reveals that a development GKE container emitted a huge number of logs, which resulted in higher costs. You want to disable the logs quickly using the minimum number of steps. What should you do?** *

- (●) A. 1. Go to the Logs ingestion window in Stackdriver Logging, and disable the log source for the GKE container resource. ✓
- ( ) B. 1. Go to the Logs ingestion window in Stackdriver Logging, and disable the log source for the GKE Cluster Operations resource.
- ( ) C. 1. Go to the GKE console, and delete existing clusters. 2. Recreate a new cluster. 3. Clear the option to enable legacy Stackdriver Logging.
- ( ) D. 1. Go to the GKE console, and delete existing clusters. 2. Recreate a new cluster. 3. Clear the option to enable legacy Stackdriver Monitoring.

✓ **Your company has developed a n What should you do?** *

- ( ) A. Deploy the application on GKE, and add a HorizontalPodAutoscaler to the deployment.
- ( ) B. Deploy the application on GKE, and add a VerticalPodAutoscaler to the deployment.
- (•) C. Create a GKE cluster with autoscaling enabled on the node pool. Set a minimum and maximum for the size of the node pool. ✓
- ( ) D. Create a separate node pool for each application, and deploy each application to its dedicated node pool.

✓ **You are running multiple microservices in a Kubernetes Engine cluster. One microservice is rendering images. The microservice responsible for the image rendering requires a large amount of CPU time compared to the memory it requires. The other microservices are workloads that are optimized for n1-standard machine types. You need to optimize your cluster so that all workloads are using resources as efficiently as possible. What should you do?** *

- ( ) A. Assign the pods of the image rendering microservice a higher pod priority than the other microservices.
- (•) B. Create a node pool with compute-optimized machine type nodes for the image rendering microservice. Use the node pool with general-purpose machine type nodes for the other microservices. ✓
- ( ) C. Use the node pool with general-purpose machine type nodes for the image rendering microservice. Create a node pool with compute-optimized machine type nodes for the other microservices.
- ( ) D. Configure the required amount of CPU and memory in the resource requests specification of the image rendering microservice deployment. Keep the resource requests for the other microservices at the default

✗ **You have production and test workloads that you want to deploy on Compute Engine. Production VMs need to be in a different subnet than the test VMs. All the**

VMs must be able to reach each other over Internal IP without creating additional routes. You need to set up VPC and the 2 subnets. Which configuration meets these requirements? *

- ○ A. Create a single custom VPC with 2 subnets. Create each subnet in a different region and with a different CIDR range.
- ○ B. Create a single custom VPC with 2 subnets. Create each subnet in the same region and with the same CIDR range.
- ◉ C. Create 2 custom VPCs, each with a single subnet. Create each subnet in a different region and with a different CIDR range. ✗
- ○ D. Create 2 custom VPCs, each with a single subnet. Create each subnet in the same region and with the same CIDR range

Correct answer

- ◉ A. Create a single custom VPC with 2 subnets. Create each subnet in a different region and with a different CIDR range.

✗ **You are using Data Studio to visualize a table from your data warehouse that is built on top of BigQuery. Data is appended to the data warehouse during the day.**

At night, the daily summary is recalculated by overwriting the table. You just noticed that the charts in Data Studio are broken, and you want to analyze the problem. What should you do? *

- ○ A. Review the Error Reporting page in the Cloud Console to find any errors.
- ○ B. Use the BigQuery interface to review the nightly job and look for any errors.
- ○ C. Use Cloud Debugger to find out why the data was not refreshed correctly.
- ◉ D. In Cloud Logging, create a filter for your Data Studio report. ✗

Correct answer

- ◉ B. Use the BigQuery interface to review the nightly job and look for any errors.

✓ **You are the organization and billing administrator for your company. The engineering team has the Project Creator role on the organization. You do not want the engineering team to be able to link projects to the billing account. Only the finance team should be able to link a project to a billing account, but they should not be able to make any other changes to projects. What should you do?** *

- ○ A. Assign the finance team only the Billing Account User role on the billing account.
- ○ B. Assign the engineering team only the Billing Account User role on the billing account.
- ◉ C. Assign the finance team the Billing Account User role on the billing account and the Project Billing Manager role on the organization. ✓
- ○ D. Assign the engineering team the Billing Account User role on the billing account and the Project Billing Manager role on the organization.

✓ **You are assigned to maintain a Google Kubernetes Engine (GKE) cluster named 'dev' that was deployed on Google Cloud. You want to manage the GKE configuration using the command line interface (CLI). You have just downloaded and installed the Cloud SDK. You want to ensure that future CLI commands by default address this specific cluster What should you do?** *

- (●) A. Use the command gcloud config set container/cluster dev. ✓
- ( ) B. Use the command gcloud container clusters update dev.
- ( ) C. Create a file called gke.default in the ~/.gcloud folder that contains the cluster name.
- ( ) D. Create a file called defaults.json in the ~/.gcloud folder that contains the cluster name.

✓ **You have an application running in Google Kubernetes Engine (GKE) with cluster autoscaling enabled. The application exposes a TCP endpoint. There are several replicas of this application. You have a Compute Engine instance in the same region, but in another Virtual Private Cloud (VPC), called gce-network, that has no overlapping IP ranges with the first VPC. This instance needs to connect to the application on GKE. You want to minimize effort. What should you do?** *

- A. 1. In GKE, create a Service of type LoadBalancer that uses the application's Pods as backend. 2. Set the service's externalTrafficPolicy to Cluster. 3. Configure the Compute Engine instance to use the address of the load balancer that has been created.
- B. 1. In GKE, create a Service of type NodePort that uses the application's Pods as backend. 2. Create a Compute Engine instance called proxy with 2 network interfaces, one in each VPC. 3. Use iptables on this instance to forward traffic from gce-network to the GKE nodes. 4. Configure the Compute Engine instance to use the address of proxy in gce-network as endpoint.
- (●) C. 1. In GKE, create a Service of type LoadBalancer that uses the application's Pods as backend. 2. Add an annotation to this service: cloud.google.com/load-balancer-type: Internal 3. Peer the two VPCs together. 4. Configure the Compute Engine instance to use the address of the load balancer that has been created. ✓
- D. 1. In GKE, create a Service of type LoadBalancer that uses the application's Pods as backend. 2. Add a Cloud Armor Security Policy to the load balancer that whitelists the internal IPs of the MIG's instances. 3. Configure the Compute Engine instance to use the address of the load balancer that has been created.

✓ **You have deployed multiple Linux instances on Compute Engine. You plan on adding more instances in the coming weeks. You want to be able to access all of these instances through your SSH client over the internet without having to configure specific access on the existing and new instances. You do not want the** *

Compute Engine instances to have a public IP. What should you do?

- ○ A. Configure Cloud Identity-Aware Proxy for HTTPS resources.
- ◉ B. Configure Cloud Identity-Aware Proxy for SSH and TCP resources ✓
- ○ C. Create an SSH keypair and store the public key as a project-wide SSH Key.
- ○ D. Create an SSH keypair and store the private key as a project-wide SSH Key.

✗ **You have been asked to create robust Virtual Private Network (VPN) connectivity between a new Virtual Private Cloud (VPC) and a remote site. Key requirements include dynamic routing, a shared address space of 10.19.0.1/22, and no overprovisioning of tunnels during a failover event. You want to follow Google- recommended practices to set up a high availability Cloud VPN. What should you do?** *

- ○ A. Use a custom mode VPC network, configure static routes, and use active/passive routing.
- ◉ B. Use an automatic mode VPC network, configure static routes, and use active/active routing. ✗
- ○ C. Use a custom mode VPC network, use Cloud Router border gateway protocol (BGP) routes, and use active/passive routing.
- ○ D. Use an automatic mode VPC network, use Cloud Router border gateway protocol (BGP) routes, and configure policy-based routing

Correct answer

- ◉ C. Use a custom mode VPC network, use Cloud Router border gateway protocol (BGP) routes, and use active/passive routing.

✓ **You need to create an autoscaling managed instance group for an HTTPS web application. You want to make sure that unhealthy VMs are recreated. What should you do?** *

- ◉ A. Create a health check on port 443 and use that when creating the Managed Instance Group. ✓
- ○ B. Select Multi-Zone instead of Single-Zone when creating the Managed Instance Group.
- ○ C. In the Instance Template, add the label 'health-check'.
- ○ D. In the Instance Template, add a startup script that sends a heartbeat to the metadata server.

✓ **You are given a project with a single Virtual Private Cloud (VPC) and a single subnetwork in the us-central1 region. There is a Compute Engine instance hosting an application in this subnetwork. You need to deploy a new instance in the same project in the europe-west1 region. This new instance needs access to the application. You want to follow Google-recommended practices. What should you do?** *

- (●) A. 1. Create a subnetwork in the same VPC, in europe-west1. 2. Create the new instance in the new subnetwork and use the first instance's private address as the endpoint. ✓
- ( ) B. 1. Create a VPC and a subnetwork in europe-west1. 2. Expose the application with an internal load balancer. 3. Create the new instance in the new subnetwork and use the load balancer's address as the endpoint.
- ( ) C. 1. Create a subnetwork in the same VPC, in europe-west1. 2. Use Cloud VPN to connect the two subnetworks. 3. Create the new instance in the new subnetwork and use the first instance's private address as the endpoint.
- ( ) D. 1. Create a VPC and a subnetwork in europe-west1. 2. Peer the 2 VPCs. 3. Create the new instance in the new subnetwork and use the first instance's private address as the endpoint.

✓ **You need to add a group of new users to Cloud Identity. Some of the users already have existing Google accounts. You want to follow one of Google's recommended practices and avoid conflicting accounts. What should you do?** *

- (●) A. Invite the user to transfer their existing account. ✓
- ( ) B. Invite the user to use an email alias to resolve the conflict.
- ( ) C. Tell the user that they must delete their existing account.
- ( ) D. Tell the user to remove all personal email from the existing account.

✓ **You are developing a new web application that will be deployed on Google Cloud Platform. As part of your release cycle, you want to test updates to your application on a small portion of real user traffic. The majority of the users should still be directed towards a stable version of your application. What should you do?** *

- (●) A. Deploy the application on App Engine. For each update, create a new version of the same service. Configure traffic splitting to send a small percentage of traffic to the new version. ✓
- ( ) B. Deploy the application on App Engine. For each update, create a new service. Configure traffic splitting to send a small percentage of traffic to the new service.
- ( ) C. Deploy the application on Kubernetes Engine. For a new release, update the deployment to use the new version.
- ( ) D. Deploy the application on Kubernetes Engine. For a new release, create a new deployment for the new version. Update the service to use the new deployment.

✓ **You have created an application that is packaged into a Docker image. You want to deploy the Docker image as a workload on Google Kubernetes Engine. What should you do?** *

- ( ) A. Upload the image to Cloud Storage and create a Kubernetes Service referencing the image.
- ( ) B. Upload the image to Cloud Storage and create a Kubernetes Deployment referencing the image.
- ( ) C. Upload the image to Container Registry and create a Kubernetes Service referencing the image.
- (●) D. Upload the image to Container Registry and create a Kubernetes Deployment referencing the image. ✓

✓ **Your company has a 3-tier solution running on Compute Engine. The configuration of the current infrastructure is shown below.** *

Each tier has a service account that is associated with all instances within it. You need to enable communication on TCP port 8080 between tiers as follows:

*** Instances in tier #1 must communicate with tier #2.**

*** Instances in tier #2 must communicate with tier #3.**

What should you do?
(TIER IMAGE)

A. 1. Create an ingress firewall rule with the following settings: ɹ€¢ Targets: all instances ɹ€¢ Source filter: IP ranges (with the range set to 10.0.2.0/24) ɹ€¢ Protocols: allow all 2. Create an ingress firewall rule with the following settings: ɹ€¢ Targets: all instances ɹ€¢ Source filter: IP ranges (with the range set to 10.0.1.0/24) ɹ€¢ Protocols: allow all

B. 1. Create an ingress firewall rule with the following settings: ɹ€¢ Targets: all instances with tier #2 service account ɹ€¢ Source filter: all instances with tier #1 service account ɹ€¢ Protocols: allow TCP:8080 2. Create an ingress firewall rule with the following settings: ɹ€¢ Targets: all instances with tier #3 service account ɹ€¢ Source filter: all instances with tier #2 service account ɹ€¢ Protocols: allow TCP: 8080 ✓

C. 1. Create an ingress firewall rule with the following settings: ɹ€¢ Targets: all instances with tier #2 service account ɹ€¢ Source filter: all instances with tier #1 service account ɹ€¢ Protocols: allow all 2. Create an ingress firewall rule with the following settings: ɹ€¢ Targets: all instances with tier #3 service account ɹ€¢ Source filter: all instances with tier #2 service account ɹ€¢ Protocols: allow all

D. 1. Create an egress firewall rule with the following settings: ɹ€¢ Targets: all instances ɹ€¢ Source filter: IP ranges (with the range set to 10.0.2.0/24) ɹ€¢ Protocols: allow TCP: 8080 2. Create an egress firewall rule with the following settings: ɹ€¢ Targets: all instances ɹ€¢ Source filter: IP ranges (with the range set to 10.0.1.0/24) ɹ€¢ Protocols: allow TCP: 8080

✓ **You have created a new project in Google Cloud through the gcloud command line interface (CLI) and linked a billing account. You need to create a new Compute**

Engine instance using the CLI. You need to perform the prerequisite stops. What should you do? *

- ○ A. Create a Cloud Monitoring Workspace.
- ○ B. Create a VPC network in the project.
- ◉ C. Enable the compute googleapis.com API. ✓
- ○ D. Grant yourself the IAM role of Computer Admin

✗ **You are building a multi-player gaming application that will store game information in a database. As the popularity of the application increases, you are concerned about delivering consistent performance. You need to ensure an optimal gaming performance for global users, without increasing the management complexity. What should you do?** *

- ○ A. Use Cloud SQL database with cross-region replication to store game statistics in the EU, US, and APAC regions.
- ○ B. Use Cloud Spanner to store user data mapped to the game statistics.
- ◉ C. Use BigQuery to store game statistics with a Redis on Memorystore instance in the front to provide global consistency. ✗
- ○ D. Store game statistics in a Bigtable database partitioned by username

Correct answer

- ◉ B. Use Cloud Spanner to store user data mapped to the game statistics.

✓ **Your company has a Google Cloud Platform project that uses BigQuery for data warehousing. Your data science team changes frequently and has few members.** *

You need to allow members of this team to perform queries. You want to follow Google-recommended practices. What should you do?

- ○ A. 1. Create an IAM entry for each data scientist's user account. 2. Assign the BigQuery jobUser role to the group.
- ○ B. 1. Create an IAM entry for each data scientist's user account. 2. Assign the BigQuery dataViewer user role to the group.
- ◉ C. 1. Create a dedicated Google group in Cloud Identity. 2. Add each data scientist's user account to the group. 3. Assign the BigQuery jobUser role to the group. ✓
- ○ D. 1. Create a dedicated Google group in Cloud Identity. 2. Add each data scientist's user account to the group. 3. Assign the BigQuery dataViewer user role to the group.

✓ **You are building an application that stores relational data from users. Users across the globe will use this application. Your CTO is concerned about the scaling requirements because the size of the user base is unknown. You need to implement a database solution that can scale with your user growth with minimum configuration changes. Which storage solution should you use?** *

- ○ A. Cloud SQL
- ◉ B. Cloud Spanner ✓
- ○ C. Cloud Firestore
- ○ D. Cloud Datastore

✓ **Your company is moving its entire workload to Compute Engine. Some servers should be accessible through the Internet, and other servers should only be accessible over the internal network. All servers need to be able to talk to each other over specific ports and protocols. The current on-premises network relies on a demilitarized zone (DMZ) for the public servers and a Local Area Network (LAN) for the private servers. You need to design the networking infrastructure on** *

Google Cloud to match these requirements. What should you do?

- (●) A. 1. Create a single VPC with a subnet for the DMZ and a subnet for the LAN. 2. Set up firewall rules to open up relevant traffic between the DMZ and the LAN subnets, and another firewall rule to allow public ingress traffic for the DMZ. ✓
- ( ) B. 1. Create a single VPC with a subnet for the DMZ and a subnet for the LAN. 2. Set up firewall rules to open up relevant traffic between the DMZ and the LAN subnets, and another firewall rule to allow public egress traffic for the DMZ.
- ( ) C. 1. Create a VPC with a subnet for the DMZ and another VPC with a subnet for the LAN. 2. Set up firewall rules to open up relevant traffic between the DMZ and the LAN subnets, and another firewall rule to allow public ingress traffic for the DMZ.
- ( ) D. 1. Create a VPC with a subnet for the DMZ and another VPC with a subnet for the LAN. 2. Set up firewall rules to open up relevant traffic between the DMZ and the LAN subnets, and another firewall rule to allow public egress traffic for the DMZ.

✓ **You deployed an application on a managed instance group in Compute Engine. The application accepts Transmission Control Protocol (TCP) traffic on port 389 and requires you to preserve the IP address of the client who is making a request. You want to expose the application to the internet by using a load balancer. What should you do?** *

- (●) A. Expose the application by using an external TCP Network Load Balancer. ✓
- ( ) B. Expose the application by using a TCP Proxy Load Balancer.
- ( ) C. Expose the application by using an SSL Proxy Load Balancer.
- ( ) D. Expose the application by using an internal TCP Network Load Balancer

✓ **You have been asked to set up the billing configuration for a new Google Cloud customer. Your customer wants to group resources that share common IAM policies. What should you do?** *

- ( ) A. Use labels to group resources that share common IAM policies.
- (●) B. Use folders to group resources that share common IAM policies. ✓
- ( ) C. Set up a proper billing account structure to group IAM policies.
- ( ) D. Set up a proper project naming structure to group IAM policies.

✓ **Your company has an internal application for managing transactional orders. The application is used exclusively by employees in a single physical location. The application requires strong consistency, fast queries, and ACID guarantees for multi-table transactional updates. The first version of the application is implemented in PostgreSQL, and you want to deploy it to the cloud with minimal code changes. Which database is most appropriate for this application?** *

- ○ A. BigQuery
- ◉ B. Cloud SQL ✓
- ○ C. Cloud Spanner
- ○ D. Cloud Datastore

✓ **You have a web application deployed as a managed instance group. You have a new version of the application to gradually deploy. Your web application is currently receiving live web traffic. You want to ensure that the available capacity does not decrease during the deployment. What should you do?** *

- ○ A. Perform a rolling-action start-update with maxSurge set to 0 and maxUnavailable set to 1.
- ◉ B. Perform a rolling-action start-update with maxSurge set to 1 and maxUnavailable set to 0. ✓
- ○ C. Create a new managed instance group with an updated instance template. Add the group to the backend service for the load balancer. When all instances in the new managed instance group are healthy, delete the old managed instance group.
- ○ D. Create a new instance template with the new application version. Update the existing managed instance group with the new instance template. Delete the instances in the managed instance group to allow the managed instance group to recreate the instance using the new instance template

✓ **You are building an application that stores relational data from users. Users across the globe will use this application. Your CTO is concerned about the scaling requirements because the size of the user base is unknown. You need to implement a database solution that can scale with your user growth with minimum configuration changes. Which storage solution should you use?** *

- ○ A. Cloud SQL
- ○ B. Firestore
- ◉ C. Cloud Spanner ✓
- ○ D. Bigtable

✓ **You need to manage a Cloud Spanner instance for best query performance. Your instance in production runs in a single Google Cloud region. You need to improve performance in the shortest amount of time. You want to follow Google best practices for service configuration. What should you do?** *

- ○ A. Create an alert in Cloud Monitoring to alert when the percentage of high priority CPU utilization reaches 45%. If you exceed this threshold, add nodes to your instance.
- ○ B. Create an alert in Cloud Monitoring to alert when the percentage of high priority CPU utilization reaches 45%. Use database query statistics to identify queries that result in high CPU usage, and then rewrite those queries to optimize their resource usage.
- ◉ C. Create an alert in Cloud Monitoring to alert when the percentage of high priority CPU utilization reaches 65%. If you exceed this threshold, add nodes to your instance. ✓
- ○ D. Create an alert in Cloud Monitoring to alert when the percentage of high priority CPU utilization reaches 65%. Use database query statistics to identify queries that result in high CPU usage, and then rewrite those queries to optimize their resource usage.

Google Forms