Some of the GCP ACE Exam questions I remember from my exam – 15-Nov-2022

Question 1: **Correct**

Your company has a single sign-on (SSO) identity provider that supports Security Assertion Markup Language (SAML) integration with service providers.

Your company has users in Cloud Identity. You would like users to authenticate using your company's SSO provider. What should you do?

- ○ **In Cloud Identity, set up SSO with Google as an identity provider to access custom SAML apps**
- ◉ **In Cloud Identity, set up SSO with a third-party identity provider with Google as a service provider.** (Correct)
- ○ **Obtain OAuth 2.0 credentials, configure the user consent screen, and set up OAuth 2.0 for Mobile & Desktop Apps.**
- ○ **Obtain OAuth 2.0 credentials, configure the user consent screen, and set up OAuth 2.0 for Web Server Applications.**

You have downloaded and installed the gcloud command line interface (CLI) and have authenticated with your Google Account. Most of your Compute Engine instances in your project run in the europe-west1-d zone.

You want to avoid having to specify this zone with each CLI command when managing these instances.

What should you do?

- ○ **Set the europe-west1-d zone as the default zone using the gcloud config subcommand.** (Correct)
- ◉ **In the Settings page for Compute Engine under Default location, set the zone to europe-west1-d.** (Incorrect)
- ○ **In the CLI installation directory, create a file called default.conf containing zone=europe-west1-d.**
- ○ **Create a Metadata entry on the Compute Engine page with key compute/zone and value europe-west1-d.**

You are hosting an application from Compute Engine virtual machines (VMs) in us-central1-a. You want to adjust your design to support the failure of a single

Compute Engine zone, eliminate downtime, and minimize cost. What should you do?

- ○ **· Create Compute Engine resources in us-central1-b.**
  · Balance the load across both us-central1-a and us-central1-b. **(Correct)**

- ◉ **· Create a Managed Instance Group and specify us-central1-a as the zone.** **(Incorrect)**
  · Configure the Health Check with a short Health Interval.

- ○ **· Create an HTTP(S) Load Balancer.**
  · Create one or more global forwarding rules to direct traffic to your VMs.

- ○ **· Perform regular backups of your application.**
  · Create a Cloud Monitoring Alert and be notified if your application becomes unavailable.
  · Restore from backups when notified.

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?

- ○ **Perform a rolling-action start-update with maxSurge set to 0 and maxUnavailable set to 1.**
- ◉ **Perform a rolling-action start-update with maxSurge set to 1 and maxUnavailable set to 0.** (Correct)
- ○ **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.**
- ○ **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 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?

- ○ Deploy the new version in the same application and use the --migrate option.
- ◉ 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. (Correct)
- ○ 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.
- ○ 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 a Compute Engine instance hosting an application used between 9 AM and 6 PM on weekdays. You want to back up this instance daily for disaster recovery purposes.

You want to keep the backups for 30 days. You want the Google-recommended solution with the least management overhead and the least number of services. What should you do?

- ◯ **1. Update your instances' metadata to add the following value: snapshot-schedule: 0 1 * * ***
  2. Update your instances' metadata to add the following value: snapshot-retention: 30

- ◉ **1. In the Cloud Console, go to the Compute Engine Disks page and select your instance's disk.**
  2. In the Snapshot Schedule section, select Create Schedule and configure the following parameters: (Correct)
  - Schedule frequency: Daily
  - Start time: 1:00 AM ~ 2:00 AM
  - Autodelete snapshots after: 30 days

- ◯ **1. Create a Cloud Function that creates a snapshot of your instance's disk.**
  2. Create a Cloud Function that deletes snapshots that are older than 30 days.
  3. Use Cloud Scheduler to trigger both Cloud Functions daily at 1:00 AM.

- ◯ **1. Create a bash script in the instance that copies the content of the disk to Cloud Storage.**
  2. Create a bash script in the instance that deletes data older than 30 days in the backup Cloud Storage bucket.
  3. Configure the instance's crontab to execute these scripts daily at 1:00 AM.

Your company set up a complex organizational structure on Google Cloud. The structure includes hundreds of folders and projects.

Only a few team members should be able to view the hierarchical structure. You need to assign minimum permissions to these team members, and you want to follow Google-recommended practices.

What should you do?

- ◯ **Add the users to roles/browser role.**
- ◯ **Add the users to roles/iam.roleViewer role.**
- ◉ **Add the users to a group, and add this group to roles/browser.** (Correct)
- ◯ **Add the users to a group, and add this group to roles/iam.roleViewer role.**

You have successfully created a development environment in a project for an application. This application uses Compute Engine and Cloud SQL.

Now you need to create a production environment for this application.

The security team has forbidden the existence of network routes between these 2 environments and has asked you to follow Google-recommended practices. What should you do?

- ◯ **Create a new project, enable the Compute Engine and Cloud SQL APIs in that project, and replicate the setup you have created in the development environment.** (Correct)
- ◯ **Create a new production subnet in the existing VPC and a new production Cloud SQL instance in your existing project, and deploy your application using those resources.**
- ◉ **Create a new project, modify your existing VPC to be a Shared VPC, share that VPC with your new project, and replicate the setup you have in the development environment in that new project in the Shared VPC.** (Incorrect)
- ◯ **Ask the security team to grant you the Project Editor role in an existing production project used by another division of your company. Once they grant you that role, replicate the setup you have in the development environment in that project.**

You need to create a Compute Engine instance in a new project that doesn't exist yet. What should you do?

- (●) Using the Cloud SDK, create a new project, enable the Compute Engine API in that project, and then create the instance specifying your new project. (Correct)
- ( ) Enable the Compute Engine API in the Cloud Console, use the Cloud SDK to create the instance, and then use the --project flag to specify a new project.
- ( ) Using the Cloud SDK, create the new instance, and use the --project flag to specify the new project. Answer yes when prompted by Cloud SDK to enable the Compute Engine API.
- ( ) Enable the Compute Engine API in the Cloud Console. Go to the Compute Engine section of the Console to create a new instance, and look for the Create In A New Project option in the creation form.

Your company publishes large files on an Apache web server that runs on a Compute Engine instance.

The Apache web server is not the only application running in the project. You want to receive an email when the egress network costs for the server exceed 100 dollars for the current month as measured by Google Cloud Platform (GCP). What should you do?

- ○ **Set up a budget alert on the project with an amount of 100 dollars, a threshold of 100%, and notification type of "email."**
- ◉ **Set up a budget alert on the billing account with an amount of 100 dollars, a threshold of 100%, and notification type of "email."** (Incorrect)
- ○ **Export the billing data to BigQuery. Create a Cloud Function that uses BigQuery to sum the egress network costs of the exported billing data for the Apache web server for the current month and sends an email if it is over 100 dollars. Schedule the Cloud Function using Cloud Scheduler to run hourly.** (Correct)
- ○ **Use the Stackdriver Logging Agent to export the Apache web server logs to Stackdriver Logging. Create a Cloud Function that uses BigQuery to parse the HTTP response log data in Stackdriver for the current month and sends an email if the size of all HTTP responses, multiplied by current GCP egress prices, totals over 100 dollars. Schedule the Cloud Function using Cloud Scheduler to run hourly.**

You need to manage multiple Google Cloud Platform (GCP) projects in the fewest steps possible.

You want to configure the Google Cloud SDK command line interface (CLI) so that you can easily manage multiple GCP projects. What should you?

- (●) **1. Create a configuration for each project you need to manage.**
  2. Activate the appropriate configuration when you work with each of your assigned GCP projects. (Correct)
- ( ) **1. Create a configuration for each project you need to manage.**
  2. Use gcloud init to update the configuration values when you need to work with a non-default project
- ( ) **1. Use the default configuration for one project you need to manage.**
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- ( ) **1. Use the default configuration for one project you need to manage.**
  2. Use gcloud init to update the configuration values when you need to work with a non-default project.

You have designed a solution on Google Cloud Platform (GCP) that uses multiple GCP products. Your company has asked you to estimate the costs of the solution.

You need to provide estimates for the monthly total cost. What should you do?

- (●) **For each GCP product in the solution, review the pricing details on the products pricing page. Use the pricing calculator to total the monthly costs for each GCP product.** (Correct)
- ( ) **For each GCP product in the solution, review the pricing details on the products pricing page. Create a Google Sheet that summarizes the expected monthly costs for each product.**
- ( ) **Provision the solution on GCP. Leave the solution provisioned for 1 week. Navigate to the Billing Report page in the Google Cloud Platform Console. Multiply the 1 week cost to determine the monthly costs.**
- ( ) **Provision the solution on GCP. Leave the solution provisioned for 1 week. Use Stackdriver to determine the provisioned and used resource amounts. Multiply the 1 week cost to determine the monthly costs.**

You are building an archival solution for your data warehouse and have selected Cloud Storage to archive your data. Your users need to be able to access this archived data once a quarter for some regulatory requirements. You want to select a cost-efficient option. Which storage option should you use?

- (●) **Coldline Storage** (Correct)
- ( ) **Nearline Storage**
- ( ) **Regional Storage**
- ( ) **Multi-Regional Storage**

Your company runs one batch process in an on-premises server that takes around 30 hours to complete. The task runs monthly, can be performed offline, and must be restarted if interrupted.

You want to migrate this workload to the cloud while minimizing cost. What should you do?

- (●) **Migrate the workload to a Compute Engine Preemptible VM.** (Incorrect)
- ( ) **Migrate the workload to a Google Kubernetes Engine cluster with Preemptible nodes.**
- ( ) **Migrate the workload to a Compute Engine VM. Start and stop the instance as needed.** (Correct)
- ( ) **Create an Instance Template with Preemptible VMs On. Create a Managed Instance Group from the template and adjust Target CPU Utilization. Migrate the workload.**

Your managed instance group raised an alert stating that new instance creation has failed to create new instances. You need to maintain the number of running instances specified by the template to be able to process expected application traffic. What should you do?

- ○ **Create an instance template that contains valid syntax which will be used by the instance group. Delete any persistent disks with the same name as instance names.** (Correct)
- ○ **Create an instance template that contains valid syntax that will be used by the instance group. Verify that the instance name and persistent disk name values are not the same in the template.**
- ◉ **Verify that the instance template being used by the instance group contains valid syntax. Delete any persistent disks with the same name as instance names. Set the disks.autoDelete property to true in the instance template.** (Incorrect)
- ○ **Delete the current instance template and replace it with a new instance template. Verify that the instance name and persistent disk name values are not the same in the template. Set the disks.autoDelete property to true in the instance template.**

Your company has a large quantity of unstructured data in different file formats. You want to perform ETL transformations on the data.

You need to make the data accessible on Google Cloud so it can be processed by a Dataflow job. What should you do?

- ○ **Upload the data to BigQuery using the bq command line tool.**
- ◉ **Upload the data to Cloud Storage using the gsutil command line tool.** (Correct)
- ○ **Upload the data into Cloud SQL using the import function in the console.**
- ○ **Upload the data into Cloud Spanner using the import function in the console.**

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- ○ **Upload the data into Cloud SQL using the import function in the console.**
- ○ **Upload the data into Cloud Spanner using the import function in the console.**

Your existing application running in Google Kubernetes Engine (GKE) consists of multiple pods running on four GKE n1-standard-2 nodes. You need to deploy additional pods requiring n2-highmem-16 nodes without any downtime. What should you do?

- ○ **Use gcloud container clusters upgrade. Deploy the new services.**
- ◉ **Create a new Node Pool and specify machine type n2-highmem-16. Deploy the new pods.** (Correct)
- ○ **Create a new cluster with n2-highmem-16 nodes. Redeploy the pods and delete the old cluster.**
- ○ **Create a new cluster with both n1-standard-2 and n2-highmem-16 nodes. Redeploy the pods and delete the old cluster.**

Your organization has strict requirements to control access to Google Cloud projects. You need to enable your Site Reliability Engineers (SREs) to approve requests from the Google Cloud support team when an SRE opens a support case. You want to follow Google-recommended practices. What should you do?

- ◯ **Add your SREs to roles/iam.roleAdmin role.**
- ◯ **Add your SREs to roles/accessapproval.approver role.**
- ◯ **Add your SREs to a group and then add this group to roles/iam.roleAdmin.role.**
- ◉ **Add your SREs to a group and then add this group to roles/accessapproval.approver role.** (Correct)

You built an application on Google Cloud that uses Cloud Spanner. Your support team needs to monitor the environment but should not have access to table data.

You need a streamlined solution to grant the correct permissions to your support team, and you want to follow Google-recommended practices. What should you do?

- ◉ **Add the support team group to the roles/monitoring.viewer role** (Correct)
- ◯ **Add the support team group to the roles/spanner.databaseUser role.**
- ◯ **Add the support team group to the roles/spanner.databaseReader role.**
- ◯ **Add the support team group to the roles/stackdriver.accounts.viewer role.**

You are configuring service accounts for an application that spans multiple projects. Virtual machines (VMs) running in the web-applications project need access to BigQuery datasets in crm-databases-proj.

You want to follow Google-recommended practices to give access to the service account in the web-applications project. What should you do?

- ◯ **Give "project owner" for web-applications appropriate roles to crm-databases-proj.**
- ◯ **Give "project owner" role to crm-databases-proj and the web-applications project.**
- ◯ **Give "project owner" role to crm-databases-proj and bigquery.dataViewer role to web-applications.**
- ◉ **Give bigquery.dataViewer role to crm-databases-proj and appropriate roles to web-applications** (Correct)

You have developed an application that consists of multiple microservices, with each microservice packaged in its own Docker container image.

You want to deploy the entire application on Google Kubernetes Engine so that each microservice can be scaled individually. What should you do?

- ◯ **Create and deploy a Custom Resource Definition per microservice.**
- ◉ **Create and deploy a Deployment per microservice.** (Correct)
- ◯ **Create and deploy a Docker Compose File.**
- ◯ **Create and deploy a Job per microservice.**

You have created a code snippet that should be triggered whenever a new file is uploaded to a Cloud Storage bucket. You want to deploy this code snippet. What should you do?

- ○ Use Google Kubernetes Engine and configure a CronJob to trigger the application using Pub/Sub.
- ○ Use App Engine and configure Cloud Scheduler to trigger the application using Pub/Sub.
- ○ Use Dataflow as a batch job, and configure the bucket as a data source.
- ◉ Use Cloud Functions and configure the bucket as a trigger resource. (Correct)

You are deploying a production application on Compute Engine. You want to prevent anyone from accidentally destroying the instance by clicking the wrong button. What should you do?

- ◉ Enable delete protection on the instance. (Correct)
- ○ Disable the flag "Delete boot disk when instance is deleted".
- ○ Disable Automatic restart on the instance.
- ○ Enable Preemptibility on the instance.

You are the team lead of a group of 10 developers. You provided each developer with an individual Google Cloud Project that they can use as their personal sandbox to experiment with different Google Cloud solutions.

You want to be notified if any of the developers are spending above $500 per month on their sandbox environment. What should you do?

- ○ **Create a single budget for all projects and configure budget alerts on this budget.**
- ◉ **Create a budget per project and configure budget alerts on all of these budgets.** (Correct)
- ○ **Create a single billing account for all sandbox projects and enable BigQuery billing exports. Create a Data Studio dashboard to plot the spending per project.**
- ○ **Create a separate billing account per sandbox project and enable BigQuery billing exports. Create a Data Studio dashboard to plot the spending per billing account.**

Your company uses a large number of Google Cloud services centralized in a single project. All teams have specific projects for testing and development. The

DevOps team needs access to all of the production services in order to perform their job. You want to prevent Google Cloud product changes from broadening their permissions in the future. You want to follow Google-recommended practices. What should you do?

- ○ **Grant all members of the DevOps team the role of Project Editor on the organization level.**
- ○ **Grant all members of the DevOps team the role of Project Editor on the production project.**
- ○ **Create a custom role that combines the required permissions. Grant the DevOps team the custom role on the production project.** (Correct)
- ◉ **Create a custom role that combines the required permissions. Grant the DevOps team the custom role on the organization level.** (Incorrect)

You are performing a monthly security check of your Google Cloud environment and want to know who has access to view data stored in your Google Cloud

Project. What should you?

- (●) **Review the IAM permissions for any role that allows for data access.** (Correct)
- ( ) **Review the Identity-Aware Proxy settings for each resource.**
- ( ) **Enable Audit Logs for all APIs that are related to data storage.**
- ( ) **Create a Data Loss Prevention job.**