Google Cloud

Partner Certification Academy

Professional Cloud Developer

V2309

Question 1

You are managing a regional Managed Instance Group (MIG) in Google Cloud with instances spread across three zones. You are planning to roll out an update to the instances in the MIG. If you want to ensure the least disruption to your service during the update, what should be the value of the maxUnavailable option?

A. Set maxUnavailable to 0 and maxSurge to a value greater than 0. This ensures that Compute Engine removes each old machine only after its replacement new machine is created and running.
B. Set maxUnavailable to 1. This ensures that only one instance is taken offline for updating at a time.
C. Set maxUnavailable to the number of instances in the MIG. This ensures that all instances can be taken offline for updating at once.
D. Set maxUnavailable to the number of zones in the regional MIG. This ensures that only one instance per zone is taken offline for updating at a time.

Correct Answer

A. Set maxUnavailable to 0 and maxSurge to a value greater than 0.

This ensures that Compute Engine removes each old machine only after its replacement new machine is created and running.

Automatically apply VM configuration updates in a MIG

Question 2

How can you improve high availability with Managed Instance Groups?

A. Increase the instance size of the managed instances.
B. Implement autoscaling based on CPU utilization.
C. Utilize regional managed instance groups instead of zonal managed instance groups.
D. Enable HTTP load balancing for the managed instance group.

Correct Answer

C. Utilize regional managed instance groups instead of zonal managed instance groups.

By using regional managed instance groups, the instances are spread across multiple zones within a region, allowing for better load distribution and improved latency. This setup helps to reduce the impact of single zone failures and ensures high availability and performance.

Create a MIG with VMs in multiple zones in a region

Question 3

How can you optimize latency when scaling Managed Instance Groups in Google Cloud?

A. By enabling autoscaling based on CPU utilization only.
B. By enabling autoscaling based on load balancing serving capacity only.
C. By enabling predictive autoscaling and configuring scale-in controls.
D. By disabling autoscaling and manually managing instance groups.

Correct Answer

C. Predictive autoscaling allows the autoscaler to forecast future load based on historical data and scales out a Managed Instance Group in advance of predicted load, so that new instances are ready to serve when the load arrives. This is especially useful if your application takes a long time to initialize.

Scale-in controls can reduce the risk of response latency caused by abrupt scale-in events. Specifically, if you expect load spikes to follow soon after declines, you can limit the scale-in rate to prevent autoscaling from reducing a MIG's size by more VM instances than your workload can tolerate.

Autoscaling groups of instances

Question 4

How can you deploy a new instance template in a Managed Instance Group without impacting the existing service in Google Cloud?

A. By deleting the existing instance template and creating a new one.
B. By updating the existing instance template with new configurations.
C. By creating a new instance template and applying it to the Managed Instance Group using a rolling update.
D. By creating a new Managed Instance Group with the new instance template and deleting the old one.

Correct Answer

C. By creating a new instance template and applying it to the Managed Instance Group using a rolling update.

When you want to deploy a new instance template in a Managed Instance Group, you can create a new instance template and apply it to the Managed Instance Group using a rolling update. This allows you to gradually replace instances based on the old template with instances based on the new template, minimizing the impact on the existing service.

Apply new VM configurations in a MIG