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EXAM ASSOCIATE CLOUD ENGINEER TOPIC 1 QUESTION 33 DISCUSSION

Actual exam question from Google's Associate Cloud Engineer

Question #: 33

Topic #: 1

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You are deploying an application to a Compute Engine VM in a managed instance group. The application must be running at all times, but only a single instance of the VM should run per GCP project. How should you configure the instance group?

- A. Set autoscaling to On, set the minimum number of instances to 1, and then set the maximum number of instances to 1.
- B. Set autoscaling to Off, set the minimum number of instances to 1, and then set the maximum number of instances to 1.
- C. Set autoscaling to On, set the minimum number of instances to 1, and then set the maximum number of instances to 2.
- D. Set autoscaling to Off, set the minimum number of instances to 1, and then set the maximum number of instances to 2.

Show Suggested Answer

by [SinZ](#) at May 17, 2020, 9:44 a.m.

Comments

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🗨️ 👤 **XRiddlerX** Highly Voted 👍 4 years, 3 months ago

In my GCP console, I created a managed instance group for each answer. For each answer I deleted the instance that was created as a simple test to prove or disprove each answer.

In answer A, another instance was created after I deleted the instance

In answer B, no other instance was created after I deleted the instance

In answer C, another instance was created after I deleted the instance

In answer D, no other instance was created after I deleted the instance

My observation is A is the correct Answer.

A - Correct - It correctly solves the problem with only a single instance at one time

B - Incorrect - Does not fit the requirement because AFTER the deletion of the instance, no other instance was created

C - Incorrect - It creates another instance after the delete HOWEVER it 2 VM's could be created even if the target is exceeded

D - Incorrect - Does not fit the requirement because AFTER the deletion of the instance, no other instance was created

👍 🔄 🚩 upvoted 185 times

🗨️ 👤 **prasanu** 4 years ago

thanks for confirming

👍 🔄 🚩 upvoted 2 times

🗨️ 👤 **Verve** 4 years, 2 months ago

Thanks for confirming this for us.

👍 🔄 🚩 upvoted 3 times

🗨️ 👤 **soukumar369** 3 years, 11 months ago

Thank you very much for this detail testing and explanation.

👍 🔄 🚩 upvoted 1 times

🗨️ 👤 **Eshkrkrkr** 3 years, 11 months ago

Wrong! <https://cloud.google.com/compute/docs/instance-groups> MIGs offer the following advantages:

High availability.

Keeping VM instances running. If a VM in the group stops, crashes, or is deleted by an action other than an instance group management command (for example, an intentional scale in), the MIG automatically recreates that VM in accordance with the original instance's specification (same VM name, same template) so that the VM can resume its work.

👍 🔄 🚩 upvoted 4 times

🗨️ 👤 **alpharomeo9** 3 years, 10 months ago

Why are you talking about MIG when the options are about AutoScaling on or off?

👍 🔄 🚩 upvoted 1 times

🗨️ 👤 **Ozymandiox** 3 years, 10 months ago

Because the question states MIG: "you are deploying an application to a Compute Engine VM in a managed instance group "

I am wondering if XRiddlerX got a MIG with the autohealing configured.

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

Autoscaling works independently from autohealing.

"If you configure autohealing for your group and an instance fails the health check, the autohealer attempts to recreate the instance. Recreating an instance can cause the number of instances in the group to fall below the autoscaling threshold (minNumReplicas) that you specify."

👍 🔄 🚩 upvoted 4 times

🗨️ 👤 **alpharomeo9** 3 years, 10 months ago

I mean why don't you elaborate on Autoscaling part. If it is set to off will the MIG keep instance health?

👍 🔄 🚩 upvoted 1 times

🗨️ 👤 **here2help** 3 years, 5 months ago

Good point but this questions says nothing about auto-healing so we need to treat this question within context. The reason that auto-healing is not the correct way to implement this is because you can fall under your min instance number with auto-healing and not with auto-scaling. See below:

Autoscaling works independently from autohealing. If you configure autohealing for your group and an instance fails

the health check, the autohealer attempts to recreate the instance. Recreating an instance can cause the number of instances in the group to fall below the autoscaling threshold (minNumReplicas) that you specify.

If you autoscale a regional MIG, an instance can be added then immediately deleted from one of the zones. This happens when the utilization in the zone triggers a scale out but the overall utilization in the regional MIG does not require the additional instance or the additional instance is required in a different zone.

Source: <https://cloud.google.com/compute/docs/autoscaler>

In conclusion, the answer is A.

   upvoted 8 times

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  **khaliqn** Highly Voted  4 years, 4 months ago


We want the application running at all times. If the VM crashes due to any underlying hardware failure, we want another instance to be added so we need autoscaling ON
Correct answer is A

   upvoted 30 times

  **Ozymandiox** 3 years, 10 months ago

As said in other coment, you can fix this with Autohealing, autoscaling means more machines, autohealing means re creating of VM's

   upvoted 1 times

  **GCP_Student1** 3 years, 8 months ago

Even if I agree with your response, it still does not meet the requirements asked in the question, which is "the application should be running all the time", because in your case when the VM instance for whatever reason stops, that mean the application will experience a downtime.

   upvoted 2 times

  **Gurnoor** 4 years, 4 months ago

A is wrong - What you are talking about is Autohealing. Autoscale will not rebuild the VM on the crash.

   upvoted 6 times

  **Dips_** 3 years, 10 months ago

won't auto healing take time to recreate that VM? and there should be one VM running all time

   upvoted 2 times

  **[Removed]** 3 years, 7 months ago

Read this warning message: "The minimum number of instances is equal to maximum number of instances. This means the autoscaler cannot add or remove instances from the instance group. Make sure this is the correct setting."

So when minimum is equal to maximum, it does not matter whether autoscaling is on or off. So now the question is who takes care of running the MINIMUM instances: MIG itself.

   upvoted 7 times

  **roaming_panda** 1 year, 9 months ago

nice explanation

   upvoted 1 times

  **denno22** Most Recent  1 week ago

Selected Answer: A

A is correct.

   upvoted 1 times

  **RJ78** 1 month, 1 week ago

Selected Answer: B

Autoscaling Off: By setting autoscaling to Off, you ensure that the instance group will not automatically scale up or down based on demand. This is important because you only want a single instance of the VM running.

Minimum instances 1: Setting the minimum number of instances to 1 guarantees that at least one instance of the VM will always be running. This ensures that your application is always available.

Maximum instances 1: Setting the maximum number of instances to 1 prevents additional instances from being created, ensuring that only a single instance of the VM is running at any given time.

   upvoted 1 times

  **stanleyjade** 2 months ago

Selected Answer: A

The correct answer is A

By setting autoscaling to "On" and configuring both the minimum and maximum number of instances to 1, you ensure that the managed instance group will always maintain exactly one running instance. If the instance fails or is terminated, the

autoscaler will automatically recreate it, ensuring that the application remains available at all times.

   upvoted 1 times

  **DWT33004** 6 months, 2 weeks ago

Selected Answer: B

Option A, setting autoscaling to On and configuring both the minimum and maximum number of instances to 1, may seem initially plausible, but it doesn't align with the requirement of having only a single instance of the VM running per GCP project.

With autoscaling set to On and both minimum and maximum instances set to 1, the managed instance group would indeed maintain a single instance of the VM. However, if for any reason that instance were to terminate unexpectedly (e.g., due to maintenance events, instance failure, etc.), the autoscaling mechanism would immediately attempt to launch another instance to maintain the desired minimum of 1 instance.

This behavior would potentially lead to multiple instances being spawned over time, violating the requirement of having only one instance running per GCP project.

   upvoted 3 times

  **DWT33004** 6 months, 2 weeks ago

Therefore, option B, with autoscaling set to Off and both minimum and maximum instances set to 1, ensures strict enforcement of having only one instance running at all times, aligning better with the specified requirement.

   upvoted 2 times

  **SumitDubey** 7 months, 1 week ago

Selected Answer: B

B is the answer.



   upvoted 2 times

  **PiperMe** 7 months, 2 weeks ago

Selected Answer: A

A is the best answer. No Autoscaling = Risk. Turning off autoscaling removes the automatic health checks and recovery mechanisms, making your single instance vulnerable.

   upvoted 1 times

  **shmoeee** 8 months ago

B is correct. This is a trick question. Don't confuse "autoSCALING" with "autoHEALING"

   upvoted 3 times

  **edoo** 8 months, 3 weeks ago

Selected Answer: A

Another instance will be created after a crash of the running instance

   upvoted 2 times

  **BARUNS** 9 months ago

Selected Answer: A

A is the correct answer.

A. When autoscaling is on, we can set minimum and maximum no of instances.

B. When autoscaling is off, we cannot set minimum or maximum no of instances. Instead we set no of instances.

C. Max no of instances can't be 2 as per question.

D. Max no of instances can't be 2 as per question.

   upvoted 3 times

  **jrb_321** 9 months, 1 week ago

A - Correct

   upvoted 1 times

  **Dinya_jui** 9 months, 2 weeks ago

A is the correct answer

   upvoted 1 times

  **Bagibo** 9 months, 3 weeks ago


Selected Answer: B











B - Autoscaling has no effect so A is wrong.

   upvoted 2 times

  **ukedu** 9 months, 3 weeks ago

Correct ans is B as autoscaling will create more instance and requirement is to run only single instance.

   upvoted 1 times

-   **junkyaard** 10 months ago
A. Because we want app to be fail/crash safe.
   upvoted 1 times
-   **JB28** 10 months, 1 week ago
Option A, min 1 n max 1 with autoscaling
   upvoted 1 times
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