Google Cloud

Partner Certification Academy

Professional Cloud Developer

v2309

Quiz questions*

Managed Instance Group Deployment Patterns

** These are for practice only and are not actual exam questions*

Question: What is the primary purpose of a basic rolling update in a Managed Instance Group (MIG)?

- A. To restart all VM instances in the MIG.
- B. To apply security patches to the VM instances.
- C. To gradually apply updates to all instances in a MIG until all instances have the latest intended configuration.
- D. To change the instance type of all VMs in the MIG.

Question: When starting a basic rolling update, what does the rolling update automatically skip?

- A. Instances that are in a different region.
- B. Instances that are already in their latest configuration.
- C. Instances that have been manually configured.
- D. Instances that are in a different project.

Question: What is the maximum value for the minReadySec field during a rolling update?

- A. 30 seconds
- B. 600 seconds (10 minutes)
- C. 3600 seconds (1 hour)
- D. 86400 seconds (1 day)

Question: Which of the following is NOT a type of update supported by Managed Instance Groups?

- A. Proactive
- B. Opportunistic
- C. Reactive
- D. Automatic

Question: What is the default replacement method when proactively updating a MIG?

- A. RECREATE
- B. SUBSTITUTE
- C. PRESERVE
- D. REPLACE

Question: What is a canary update in the context of Managed Instance Groups (MIG)?

- A. An update that is applied to all instances in the group simultaneously.
- B. An update that is applied to a subset of instances in the group to test new features or upgrades.
- C. An update that is applied only to instances that are running outdated configurations.
- D. An update that is applied to instances based on their health status.

Question: How many instance templates can you specify for a canary update?

- A. One
- B. Two
- C. Three
- D. Four

Question: After running a canary update, what can you do if you decide to commit the update to 100% of the MIG?

- A. Delete the canary template.
- B. Roll forward the template to all your instances.
- C. Restart all instances in the MIG.
- D. Create a new MIG with the canary template.

Question: How can you verify if all VMs in a Managed Instance Group have reached their target template version?

- A. By checking the versionTarget.isReached flag in the group status.
- B. By counting the number of VMs manually.
- C. By checking the health status of each VM.
- D. By checking the currentAction field for each VM.

Question: What is the primary advantage of the Blue/Green deployment pattern in MIGs?

- A. It allows for A/B testing of new features.
- B. It ensures zero downtime during deployments.
- C. It automatically scales the application based on traffic.
- D. It provides automatic backup of the application data.

Question: In a Managed Instance Group (MIG), which update type allows you to apply new configurations to existing VMs only when you selectively target specific VMs to be updated?

- A. Proactive
- B. Reactive
- C. Opportunistic
- D. Immediate

Question: When using the "opportunistic" update mode in a Managed Instance Group, what is the primary advantage?

- A. The rollout of an update happens automatically.
- B. You can select the VMs that you want to update.
- C. All VMs are updated simultaneously.
- D. The update is applied only during system downtime.

Answers to Quiz questions

Managed Instance Group Deployment Patterns

Question: What is the primary purpose of a basic rolling update in a Managed Instance Group (MIG)?

- A. To restart all VM instances in the MIG.
- B. To apply security patches to the VM instances.
- C. To gradually apply updates to all instances in a MIG until all instances have the latest intended configuration.
- D. To change the instance type of all VMs in the MIG.

Correct Answer: C. To gradually apply updates to all instances in a MIG until all instances have the latest intended configuration.

Explanation: A basic rolling update is designed to ensure that all VM instances in a Managed Instance Group are updated to the latest intended configuration in a gradual manner, ensuring minimal disruption.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: When starting a basic rolling update, what does the rolling update automatically skip?

- A. Instances that are in a different region.
- B. Instances that are already in their latest configuration.
- C. Instances that have been manually configured.
- D. Instances that are in a different project.

Correct Answer: B. Instances that are already in their latest configuration.

Explanation: When initiating a basic rolling update, the process will automatically skip instances that are already updated to their latest configuration, ensuring efficiency and avoiding unnecessary updates.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: What is the maximum value for the minReadySec field during a rolling update?

- A. 30 seconds
- B. 600 seconds (10 minutes)
- C. 3600 seconds (1 hour)
- D. 86400 seconds (1 day)

Correct Answer: C. 3600 seconds (1 hour)

Explanation: The minReadySec option specifies the amount of time to wait before considering a new or restarted instance as updated. The maximum value for this field is 3600 seconds, which is equivalent to 1 hour.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: Which of the following is NOT a type of update supported by Managed Instance Groups?

- A. Proactive
- B. Opportunistic
- C. Reactive
- D. Automatic

Correct Answer: C. Reactive

Explanation: Managed instance groups support two types of updates: Automatic (or proactive) and Selective (or opportunistic). Reactive is not a type of update supported by Managed Instance Groups.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: What is the default replacement method when proactively updating a MIG?

- A. RECREATE
- B. SUBSTITUTE
- C. PRESERVE
- D. REPLACE

Correct Answer: B. SUBSTITUTE

Explanation: By default, when you proactively update a MIG, the group deletes your VM instances and swaps them with new instances with new names. This default method is termed as "SUBSTITUTE".
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: What is a canary update in the context of Managed Instance Groups (MIG)?

- A. An update that is applied to all instances in the group simultaneously.
- B. An update that is applied to a subset of instances in the group to test new features or upgrades.
- C. An update that is applied only to instances that are running outdated configurations.
- D. An update that is applied to instances based on their health status.

Correct Answer: B. An update that is applied to a subset of instances in the group to test new features or upgrades.

Explanation: A canary update allows you to test new features or upgrades on a random subset of instances, instead of rolling out a potentially disruptive update to all your instances. This helps in minimizing the disruption for users.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: How many instance templates can you specify for a canary update?

- A. One
- B. Two
- C. Three
- D. Four

Correct Answer: B. Two

Explanation: For a canary update, you can specify up to two instance template versions. Typically, one is a new instance template to canary and the other is the current instance template for the remainder of the instances.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: After running a canary update, what can you do if you decide to commit the update to 100% of the MIG?

- A. Delete the canary template.
- B. Roll forward the template to all your instances.
- C. Restart all instances in the MIG.
- D. Create a new MIG with the canary template.

Correct Answer: B. Roll forward the template to all your instances.

Explanation: After running a canary update, if you decide to commit to the update, you can roll forward the update to all instances in the MIG. This ensures that all instances use the new configuration.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: How can you verify if all VMs in a Managed Instance Group have reached their target template version?

- A. By checking the versionTarget.isReached flag in the group status.
- B. By counting the number of VMs manually.
- C. By checking the health status of each VM.
- D. By checking the currentAction field for each VM.

Correct Answer: A. By checking the versionTarget.isReached flag in the group status.

Explanation: To verify if all VMs have reached their target template version, you can check the versionTarget.isReached flag in the group status. This flag indicates whether all VM instances have been or are being created using the target version.
Resource: Automatically apply VM configuration updates in a MIG | Compute Engine Documentation | Google Cloud

Question: What is the primary advantage of the Blue/Green deployment pattern in MIGs?

- A. It allows for A/B testing of new features.
- B. It ensures zero downtime during deployments.
- C. It automatically scales the application based on traffic.
- D. It provides automatic backup of the application data.

Correct Answer: B. It ensures zero downtime during deployments.

Explanation: The Blue/Green deployment pattern involves having two environments: "Blue" for the current live production and "Green" for the new version. When deploying, the traffic is switched from Blue to Green, ensuring that there's no downtime.
Resource: Application deployment and testing strategies - Google Cloud

Question: In a Managed Instance Group (MIG), which update type allows you to apply new configurations to existing VMs only when you selectively target specific VMs to be updated?

- A. Proactive
- B. Reactive
- C. Opportunistic
- D. Immediate

Correct Answer: C. Opportunistic

Explanation: The "opportunistic" update type in a MIG allows you to apply new configurations to existing VMs only when you selectively target specific VMs for the update. This gives you control over the timing and sequence of updates.
Resource: Automatically apply VM configuration updates in a MIG - Google Cloud

Question: When using the "opportunistic" update mode in a Managed Instance Group, what is the primary advantage?

- A. The rollout of an update happens automatically.
- B. You can select the VMs that you want to update.
- C. All VMs are updated simultaneously.
- D. The update is applied only during system downtime.

Correct Answer: B. You can select the VMs that you want to update.

Explanation: The "opportunistic" update mode allows you to control which VMs get updated by selectively targeting specific VMs. This provides flexibility and control over the update process.
Resource: Apply new VM configurations in a MIG - Google Cloud