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Exam Associate Cloud Engineer All Questions

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⌧ **EXAM ASSOCIATE CLOUD ENGINEER TOPIC 1 QUESTION 94 DISCUSSION**

Actual exam question from Google's Associate Cloud Engineer

Question #: 94

Topic #: 1

[All Associate Cloud Engineer Questions]

You create a Deployment with 2 replicas in a Google Kubernetes Engine cluster that has a single preemptible node pool. After a few minutes, you use kubectl to examine the status of your Pod and observe that one of them is still in Pending status:

```
$ kubectl get pods -l app=myapp
NAME                                 READY    STATUS     RESTART    AGE
myapp-deployment-58ddbbb995-lp86m    0/1      Pending    0          9m
myapp-deployment-58ddbbb995-qjpkg    1/1      Running    0          9m
```

What is the most likely cause?

A. The pending Pod's resource requests are too large to fit on a single node of the cluster.

B. Too many Pods are already running in the cluster, and there are not enough resources left to schedule the pending Pod.

C. The node pool is configured with a service account that does not have permission to pull the container image used by the pending Pod.

D. The pending Pod was originally scheduled on a node that has been preempted between the creation of the Deployment and your verification of the Pods' status. It is currently being rescheduled on a new node.

[Show Suggested Answer]

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by ⌧torres_xyz at *June 11, 2020, 2:30 p.m.*

Comments

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[?] [?] **ESP_SAP** `Highly Voted` [?] 4 years, 2 months ago

Correct Answer is (B):

Reasons for a Pod Status Pending:
Troubleshooting Reason #1: Not enough CPU
Troubleshooting Reason #2: Not enough memory
Troubleshooting Reason #3: Not enough CPU and memory
https://managedkube.com/kubernetes/k8sbot/troubleshooting/pending/pod/2019/02/22/pending-pod.html

[?] [?] [?] upvoted 55 times

   [?] [?] **SSPC** 4 years, 2 months ago

   I agree with you. The correct answer is B

   [?] [?] [?] upvoted 5 times

      [?] [?] **[Removed]** 4 years, 1 month ago

      D gives you the reason why the resource could not be available a it was preempted

      [?] [?] [?] upvoted 3 times

         [?] [?] **tavva_prudhvi** 3 years, 6 months ago

         If it was preempted, then it has to be restarted right? then it will show its failing not pending, check the articles mentioned by ESP_SAP

         [?] [?] [?] upvoted 3 times

            [?] [?] **ashtonez** 1 year, 7 months ago

            No, it will show as pending initially while realocating

            [?] [?] [?] upvoted 1 times

         [?] [?] **Finger41** 3 years, 4 months ago

         Its in a deployment, the pod will be recreated. There is insufficient resources in the node, not because its preemptible but because there is no memory/cpu......

         [?] [?] [?] upvoted 2 times

   [?] [?] **Linus11** 3 years, 6 months ago

   The real crux of this question is the mention about "Pre-emptible Node pool". That need to take into consider while determining the answer. If we choose B, then the importance of "Pre-emptible node pool" is not there. Whether the node pool is pre-emptible or not, resource scarcity can lead to pending pods.

   When we consider the mention of "Pre-emptible Node Poll" , then the answer is obviously D. if a pre-meptible Node get pre-empted there will be a delay in cluster to sync it.

   Answer is D.

   [?] [?] [?] upvoted 28 times

      [?] [?] **iooj** 1 month, 2 weeks ago

      they just wanted to confuse us and added "preemptible", be strong

      [?] [?] [?] upvoted 1 times

      [?] [?] **alexgrig** 3 years ago

      Questions says "Single Node" at that case the second pod can't be in running state.

      [?] [?] [?] upvoted 4 times

         [?] [?] **brvinod** 2 years, 8 months ago

         A node can have multiple pods. So that is not a problem.

         [?] [?] [?] upvoted 2 times

         [?] [?] **MidhunJose** 2 years, 9 months ago

         It says a single node pool, not a single node. Meaning there can be multiple nodes, right?

         [?] [?] [?] upvoted 9 times

   [?] [?] **brvinod** 2 years, 8 months ago

Pre-emptible would have been an issue if the cluster had more than one node. The question clearly states that it is a single node cluster. That means if that single VM was pre-empted, neither of the pods should have been running. Since one pod is running, that means that (the only) VM is running. So, the reason the second pod is still pending because the VM is not having enough resources to run both the pods. Hence B.

❓ ❓ ❓ upvoted 9 times

___

❓ ❓ mplibunao 2 years, 4 months ago

Actually the question stated "single preemptible node pool" and not "single node" so it's possible that there are multiple nodes and one of the node on which the pod was scheduled on was preempted

❓ ❓ ❓ upvoted 3 times

Load full discussion...

___

❓ ❓ cloudenthu01 `Highly Voted ❓` 4 years, 3 months ago

D is correct as the node on which pod was scheduled to run was preempted & now this pod is scheduled to run on different preemtible node from the node-pool

❓ ❓ ❓ upvoted 21 times

___

❓ ❓ myuniquename 3 years ago

Incorrect. There is a single preemtible instance, if it was preempted then both pods would show as 'Pending'. B is correct.

❓ ❓ ❓ upvoted 6 times

___

❓ ❓ ashtonez 1 year, 7 months ago

No, because one of the pods may run on another node that its still up

❓ ❓ ❓ upvoted 2 times

___

❓ ❓ obeythefist 2 years, 7 months ago

> There is a single preemtible instance

Where does it say that? It doesn't. Don't make things up. There's a single pre-emptible node pool. A single pool is not the same as a single node.

❓ ❓ ❓ upvoted 11 times

___

❓ ❓ denno22 `Most Recent ❓` 3 weeks, 3 days ago

`Selected Answer: D`

The most likely cause is given in the question. We have a single preemptible node pool.

❓ ❓ ❓ upvoted 1 times

___

❓ ❓ iooj 1 month, 2 weeks ago

`Selected Answer: B`

100% - not enough CPU / memory.

❓ ❓ ❓ upvoted 1 times

___

❓ ❓ Timfdklfajlksdjlakf 1 month, 3 weeks ago

`Selected Answer: D`

The correct answer is D.

❓ ❓ ❓ upvoted 1 times

___

❓ ❓ BuenaCloudDE 3 months, 1 week ago

`Selected Answer: D`

I think so because main word of the question is preemptible pool nodes it can initialize some latency during creating node to find compliance machine.

❓ ❓ ❓ upvoted 1 times

___

❓ ❓ tmwf 7 months, 3 weeks ago

`Selected Answer: B`

B is more correct. Maybe Troubleshooting Reason Not enough CPU or Memory or both of them.

❓ ❓ ❓ upvoted 1 times

___

❓ ❓ blackBeard33 7 months, 3 weeks ago

`Selected Answer: B`

I would go for B

❓ ❓ ❓ upvoted 1 times

___

❓ ❓ moumou 8 months ago

`Selected Answer: D`

D good choice

❓ ❓ ❓ upvoted 1 times

☐ ☐ upvoted 1 times

☐ ☐ **jareiner** 8 months, 2 weeks ago

The term 'preemptible node pool' is in the question. D is the answer.

☐ ☐ ☐ upvoted 1 times

☐ ☐ **Cynthia2023** 9 months, 3 weeks ago

Selected Answer: B

I would go with B.
While D is possible, this scenario is less likely compared to the resource constraint issue, especially if the Pending status is observed consistently over a few minutes. Preemption would usually lead to a quicker rescheduling unless there are resource constraints.

☐ ☐ ☐ upvoted 1 times

☐ ☐ **yash_1199** 9 months, 4 weeks ago

Selected Answer: B

B is correct

☐ ☐ ☐ upvoted 1 times

☐ ☐ **BAofBK** 11 months, 2 weeks ago

I go with B

☐ ☐ ☐ upvoted 1 times

☐ ☐ **wongwong** 11 months, 3 weeks ago

Selected Answer: B

answer is B

☐ ☐ ☐ upvoted 1 times

☐ ☐ **gsmasad** 11 months, 3 weeks ago

Selected Answer: D

When we consider the mention of "Pre-emptible Node Poll" , then the answer is obviously D.

☐ ☐ ☐ upvoted 2 times

☐ ☐ **abhiishere** 1 year ago

I will pick option D

☐ ☐ ☐ upvoted 1 times

☐ ☐ **Captain1212** 1 year, 1 month ago

Selected Answer: B

B , seems more correct as it dont have enough resources

☐ ☐ ☐ upvoted 2 times

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