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## Exam Professional Data Engineer All Questions

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## EXAM PROFESSIONAL DATA ENGINEER TOPIC 1 QUESTION 218 DISCUSSION

Actual exam question from Google's Professional Data Engineer
Question #: 218
Topic #: 1
[All Professional Data Engineer Questions]

You have a Cloud SQL for PostgreSQL instance in Region' with one read replica in Region2 and another read replica in Region3. An unexpected event in Region' requires that you perform disaster recovery by promoting a read replica in Region2. You need to ensure that your application has the same database capacity available before you switch over the connections. What should you do?

A. Enable zonal high availability on the primary instance. Create a new read replica in a new region.

B. Create a cascading read replica from the existing read replica in Region3.

C. Create two new read replicas from the new primary instance, one in Region3 and one in a new region.

D. Create a new read replica in Region1, promote the new read replica to be the primary instance, and enable zonal high availability.

Show Suggested Answer

by e70ea9e at *Dec. 30, 2023, 9:43 a.m.*

### Comments

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**raaad** Highly Voted 1 year, 4 months ago

Selected Answer: C

After promoting the read replica in Region2 to be the new primary instance, creating additional read replicas from it can help distribute the read load and maintain or increase the database's total capacity.

upvoted 5 times

**skhaire** Most Recent 2 months ago

Selected Answer: C

Corrected answer: C

If the primary instance (db-a-0) becomes unavailable, you can promote the replica in region B to become the primary. To again have additional replicas in regions A and C, delete the old instances (the former primary instance in A, and the replica in C), and create new read replicas from the new primary instance in B.

upvoted 1 times

**skhaire** 2 months ago

Selected Answer: D

Question is flawed but the closest answer would be D since C will result in 2 read replicas on Region 3 (original one and new now)
Option C- Create two new read replicas from the new primary instance - contradicts with the requirements - You need to ensure that your application has the same database capacity available 'before you switch over the connections.'
Option D- Create a new read replica in Region1, promote the new read replica to be the primary instance - contradicts with the requirement - 'requires that you perform disaster
recovery by promoting a read replica in Region2.' How does this affect the answer choices?

upvoted 1 times

**josech** 11 months, 3 weeks ago

Selected Answer: C

https://cloud.google.com/sql/docs/mysql/replication#cross-region-read-replicas

upvoted 3 times

**nadavw** 8 months, 1 week ago

requires 2 new read replicas as the read replica that wasn't promoted isn't capable to be a replica any more as the primary isa gone

upvoted 1 times

**CGS22** 1 year ago

Selected Answer: C

The best option here is C. Create two new read replicas from the new primary instance, one in Region3 and one in a new region.

Here's the breakdown:

Capacity Restoration: Promoting the Region2 replica makes it the new primary. You need to replicate from this new primary to maintain redundancy and capacity. Creating two replicas (Region3, new region) accomplishes this.
Geographic Distribution: Distributing replicas across regions ensures availability if another regional event occurs.
Speed: Creating new replicas from the promoted primary is likely faster than promoting another existing replica.

upvoted 4 times

**BigDataBB** 1 year ago

Who said that i can use a 4° region? If have constraint that i can't go out from that 3 regions?
By My opinion will be a right solution if the new replica will in another zona of the region 1 or 3.
may be the best solution is the case D

upvoted 1 times

**BigDataBB** 1 year ago

https://cloud.google.com/sql/docs/postgres/replication/cross-region-replicas?hl=en

upvoted 1 times

**JyoGCP** 1 year, 2 months ago

Selected Answer: C

Option C

upvoted 1 times

**e70ea9e** 1 year, 4 months ago

Selected Answer: C

Immediate Failover:

Promoting the read replica in Region2 quickly restores database operations in a different region, aligning with disaster recovery goals.
Capacity Restoration:

Creates two new read replicas from the promoted primary instance (formerly the read replica in Region2).
This replaces the lost capacity in Region1 and adds a read replica in a new region for further redundancy.

upvoted 2 times