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EXAM PROFESSIONAL DATA ENGINEER TOPIC 1 QUESTION 290 DISCUSSION

Actual exam question from Google's Professional Data Engineer

Question #: 290

Topic #: 1

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You are designing a messaging system by using Pub/Sub to process clickstream data with an event-driven consumer app that relies on a push subscription. You need to configure the messaging system that is reliable enough to handle temporary downtime of the consumer app. You also need the messaging system to store the input messages that cannot be consumed by the subscriber. The system needs to retry failed messages gradually, avoiding overloading the consumer app, and store the failed messages after a maximum of 10 retries in a topic. How should you configure the Pub/Sub subscription?

- A. Increase the acknowledgement deadline to 10 minutes.
- B. Use immediate redelivery as the subscription retry policy, and configure dead lettering to a different topic with maximum delivery attempts set to 10.
- C. Use exponential backoff as the subscription retry policy, and configure dead lettering to the same source topic with maximum delivery attempts set to 10.
- D. Use exponential backoff as the subscription retry policy, and configure dead lettering to a different topic with maximum delivery attempts set to 10.

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by [scaenruy](#) at Jan. 4, 2024, 11:15 a.m.

Comments

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🗄️ 👤 **raaad** Highly Voted 10 months ago

Selected Answer: D

- Exponential Backoff: This retry policy gradually increases the delay between retries, which helps to avoid overloading the consumer app.
- Dead Lettering to a Different Topic: Configuring dead lettering sends messages that couldn't be processed after the specified number of delivery attempts (10 in this case) to a separate topic. This allows for handling of failed messages without interrupting the regular flow of new messages.
- Maximum Delivery Attempts Set to 10: This setting ensures that the system retries each message up to 10 times before considering it a failure and moving it to the dead letter topic.

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🗄️ 👤 **Pime13** Most Recent 3 months, 4 weeks ago

Selected Answer: D

<https://cloud.google.com/pubsub/docs/subscription-overview>

D. Use exponential backoff as the subscription retry policy, and configure dead lettering to a different topic with maximum delivery attempts set to 10.
Exponential Backoff: This retry policy helps to avoid overloading the consumer app by gradually increasing the time between retries, which is more efficient than immediate redelivery.
Dead Lettering: Configuring dead lettering to a different topic ensures that messages that cannot be processed after the maximum number of retries (10 in this case) are stored separately. This allows you to handle these messages later without losing any data.
Reliability: This configuration ensures that your messaging system is reliable and can handle temporary downtime of the consumer app while maintaining data integrity

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🗄️ 👤 **JyoGCP** 8 months, 2 weeks ago

Selected Answer: D

Option D

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🗄️ 👤 **Matt_108** 9 months, 3 weeks ago

Selected Answer: D

Option D - agree with other comments explanation

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🗄️ 👤 **GCP001** 10 months ago

D. Use exponential backoff as the subscription retry policy, and configure dead lettering to a different topic with maximum delivery attempts set to 10

Best suitable options for graceful retry and storing failed messages

👍 🔄 🚩 upvoted 3 times

🗄️ 👤 **scaenruy** 10 months ago

Selected Answer: D

D. Use exponential backoff as the subscription retry policy, and configure dead lettering to a different topic with maximum delivery attempts set to 10.

👍 🔄 🚩 upvoted 2 times

🗄️ 👤 **Smakye179** 10 months ago

Exponential backoff will help in managing the load on the consumer app by gradually increasing the delay between retries. Configuring dead lettering to a different topic after a maximum of 10 delivery attempts ensures that undeliverable messages are stored separately, preventing them from being retried endlessly and cluttering the main message flow.

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