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Exam Associate Cloud Engineer All Questions

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EXAM ASSOCIATE CLOUD ENGINEER TOPIC 1 QUESTION 62 DISCUSSION

Actual exam question from Google's Associate Cloud Engineer

Question #: 62

Topic #: 1

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You want to run a single caching HTTP reverse proxy on GCP for a latency-sensitive website. This specific reverse proxy consumes almost no CPU. You want to have a 30-GB in-memory cache, and need an additional 2 GB of memory for the rest of the processes. You want to minimize cost. How should you run this reverse proxy?

- A. Create a Cloud Memorystore for Redis instance with 32-GB capacity.
- B. Run it on Compute Engine, and choose a custom instance type with 6 vCPUs and 32 GB of memory.
- C. Package it in a container image, and run it on Kubernetes Engine, using n1-standard-32 instances as nodes.
- D. Run it on Compute Engine, choose the instance type n1-standard-1, and add an SSD persistent disk of 32 GB.

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by [dan80](#) at June 3, 2020, 5:21 a.m.

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jzh Highly Voted 4 years, 2 months ago

Go to cloud console and create instance

select Memorystore with Basic tier, select us-central1 and us-central1-a, and capacity 32GB, the cost estimate is \$0.023/GB/hr

select VM instance with custom machine type with 6 vCPUs and 32 GB memory, the same region and zone as Memorystore setting, the cost estimate is \$0.239/hr

Option B will definitely cost more as it adds on CPU usage cost even it uses little in this scenario, but still charge you. So answer is A from real practice example.

upvoted 55 times

SSPC 4 years, 2 months ago

I agree with you

upvoted 1 times

Rothmansua 3 years ago

and what about HTTP, how are you supporting that with Redis?

upvoted 2 times

obeythefist 2 years, 7 months ago

A quick Bing search shows a number of solutions for caching HTTP services with Redis.

upvoted 2 times

smarty_arse 2 years, 3 months ago

Who uses Bing at this present day and age?

upvoted 12 times

RNSS 1 year, 11 months ago

believe me it is very good and clean. When I was doing my research I have used both google and bing. and find bing as more trusted and complete answer.

upvoted 1 times

mexblood1 4 years, 1 month ago

Using pricing calculator matching 730 hrs per month for both.. Memorystore is 537.28 per month and vm (6 cpus 32 gb memory) is 174.41 per month. So vm is still cheaper even with 6 cpus.

upvoted 7 times

[Removed] 4 years, 1 month ago

I agree its cheaper, but 2 drawbacks, 1 hit latency, 2 you need to install cache plain won't help even if check. So still think A.

upvoted 3 times

[Removed] 4 years, 1 month ago

Typo correct my statements. There are 2 issues If you create a VM how every cheap there will be a hit with latency when communicating with it. Second, you will need to install/implement a caching system on that.

Whereas cloud memorystore for redis is designed for the sole purpose of HTTP caching which has very low latency compared to any other solution we are thinking of doing.

upvoted 3 times

FenixRa73 3 years, 9 months ago

$\$0.023 * 32 = \0.736

is it cheaper?

upvoted 4 times

ESP_SAP Highly Voted 4 years, 2 months ago

Correct Answer should be A:

The question mention "You want to have a 30-GB in-memory cache, and need an additional 2 GB of memory for the rest of the processes"

What is Google Cloud Memorystore?

Overview. Cloud Memorystore for Redis is a fully managed Redis service for Google Cloud Platform. Applications running on Google Cloud Platform can achieve extreme performance by leveraging the highly scalable, highly available, and secure Redis service without the burden of managing complex Redis deployments.

upvoted 35 times

ESP_SAP 4 years, 2 months ago

Just to complement the answer:

VMs are definitely for "data processing tasks"

we are looking for "latency-sensitive website"

What it's good for

Memorystore for Redis provides a fast, in-memory store for use cases that require fast, real-time processing of data. From simple caching use cases to real time analytics, Memorystore for Redis provides the performance you need.

Caching: Cache is an integral part of modern application architectures. Memorystore for Redis provides low latency access and high throughput for heavily accessed data, compared to accessing the data from a disk based backend store. Session management, frequently accessed queries, scripts, and pages are common examples of caching.

https://cloud.google.com/memorystore/docs/redis/redis-overview#what_its_good_for

? ? ? upvoted 20 times

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

I agree with your reasoning. Given that the question stresses that this is for a 'latency sensitive website', that's a clue that Redis is part of the answer. Even if spinning up a similarly sized VM were more cost effective, I can't find any documentation that this would provide sufficiently low latency as a memory cache. Yes, you want to keep costs low, but not if it causes your latency-sensitive website problems. Thus I agree that option A is the answer.

? ? ? upvoted 2 times

? ? **magistrum** 3 years, 9 months ago

Agree, don't think anything you create with the Compute Engine will meet the "You want to have a 30-GB in-memory cache" requirement...that's a very different technology

? ? ? upvoted 2 times

? ? **nubelukita45852** **Most Recent** ? 1 month ago

Selected Answer: D

La n1-standard-1 es una instancia de bajo costo con 1 vCPU y 3.75 GB de memoria, suficiente para los procesos adicionales del proxy. Dado que el proxy inverso prácticamente no consume CPU, no es necesario optar por una instancia más grande. El disco persistente SSD de 32 GB puede actuar como almacenamiento para la caché en lugar de usar costosas soluciones en memoria, lo que ayuda a minimizar costos, mientras proporciona un almacenamiento rápido, suficiente para el sitio sensible a la latencia.

? ? ? upvoted 1 times

? ? **spatters** 2 months, 3 weeks ago

A might be a fine answer, except that Redis is not an http reverse proxy. It is a data cache. So A, regardless of the cost, does not work for this use case.

? ? ? upvoted 1 times

? ? **subha.elumalai** 5 months ago

Correct Answer:B

? ? ? upvoted 1 times

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

Selected Answer: A

A is correct because The question mention "You want to have a 30-GB in-memory cache, and Redis is inmemory

? ? ? upvoted 1 times

? ? **ekta25** 1 year ago

B. Run it on Compute Engine, and choose a custom instance type with 6 vCPUs and 32 GB of memory.

? ? ? upvoted 1 times

? ? **Captain1212** 1 year, 1 month ago

Selected Answer: A

A is the correct as redis for low latency

? ? ? upvoted 1 times

? ? **marcus021** 1 year, 4 months ago

Selected Answer: A

Low latency should be A.

? ? ? upvoted 2 times

? ? **sana_sree** 1 year, 4 months ago

correct answer is A

<https://www.youtube.com/watch?v=a1p1pB375lk>

? ? ? upvoted 1 times

? ? **Buruguduystunstugudunstuy** 1 year, 8 months ago

Selected Answer: A

ANSWER A is the most cost-effective solution for running a caching HTTP reverse proxy on GCP. Cloud Memorystore for

Redis is a managed service that provides an in-memory cache for your applications. It offers a high throughput and low latency access to the Redis protocol. Cloud Memorystore offers an SLA of 99.9% availability and automatic failover for Redis instances. In this case, a 32-GB Redis instance is sufficient to accommodate the 30-GB cache and the additional 2 GB of memory required for the rest of the processes. This solution is highly scalable and allows you to increase the size of the Redis instance as your needs grow.

? ? ? upvoted 7 times

? ? **Buruguduystunstugudunstuy** 1 year, 8 months ago

INCORRECT:

ANSWER B is not a cost-effective solution since it requires a custom instance type with 6 vCPUs and 32 GB of memory, which is over-provisioned for a caching HTTP reverse proxy.

ANSWER C is also not a cost-effective solution since it uses Kubernetes Engine, which has a higher management overhead and may not be necessary for a single caching HTTP reverse proxy. Additionally, using n1-standard-32 instances as nodes is over-provisioned for the requirements of the caching HTTP reverse proxy.

ANSWER D is not a viable solution since the instance type n1-standard-1 only provides 3.75 GB of memory, which is insufficient for the 30-GB cache and the additional 2 GB of memory required for the rest of the processes. Adding an SSD persistent disk of 32 GB will not provide enough memory for the reverse proxy.

? ? ? upvoted 4 times

? ? **kaisehhop** 1 year, 8 months ago

Selected Answer: A

A. Create a Cloud Memorystore for Redis instance with 32-GB capacity is the recommended option. This option provides the required memory and is cost-effective since the proxy requires almost no CPU. Cloud Memorystore for Redis is designed specifically for in-memory caching, making it the best choice for your use case.

? ? ? upvoted 2 times

? ? **csllince** 1 year, 10 months ago

Selected Answer: A

answer is A

? ? ? upvoted 1 times

? ? **fragment137** 1 year, 10 months ago

Selected Answer: B

While Redis is definitely the easiest and best solution for a latency sensitive workload, the question is worded in such a way to emphasize the requirement of cost. "You want to have a 30-GB in-memory cache, and need an additional 2 GB of memory for the rest of the processes. You want to minimize cost". Given this, the answer has to be B, even if that's not the best technical solution for the problem.

? ? ? upvoted 1 times

? ? **Zoze** 1 year, 11 months ago

Selected Answer: A

A is correct, he only wants to have memory capacity, and doesn't care about CPU at all. In addition Memory-store is already configured to use is a cache memory.

? ? ? upvoted 1 times

? ? **dennydream** 1 year, 11 months ago

How do you figure the correct answer here? The votes overwhelmingly say one thing, but the correct answer is another.

? ? ? upvoted 1 times

? ? **PKookNN** 2 years ago

Selected Answer: B

I changed my mind - cost effective is B (while A is easiest)

? ? ? upvoted 1 times

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