

🔗 Google Discussions



Exam Professional Cloud Security Engineer All Questions

View all questions & answers for the Professional Cloud Security Engineer exam

[Go to Exam](#)

📄 EXAM PROFESSIONAL CLOUD SECURITY ENGINEER TOPIC 1 QUESTION 28 DISCUSSION

Actual exam question from Google's Professional Cloud Security Engineer

Question #: 28

Topic #: 1

[\[All Professional Cloud Security Engineer Questions\]](#)

A company has redundant mail servers in different Google Cloud Platform regions and wants to route customers to the nearest mail server based on location.

How should the company accomplish this?

- A. Configure TCP Proxy Load Balancing as a global load balancing service listening on port 995.
- B. Create a Network Load Balancer to listen on TCP port 995 with a forwarding rule to forward traffic based on location.
- C. Use Cross-Region Load Balancing with an HTTP(S) load balancer to route traffic to the nearest region.
- D. Use Cloud CDN to route the mail traffic to the closest origin mail server based on client IP address.

[Show Suggested Answer](#)

by [mozammil89](#) at March 19, 2020, 7:59 p.m.

Comments

Type your comment...

[Submit](#)

🗨️ [ESP_SAP](#) [Highly Voted](#) 4 years, 8 months ago

Correct Answer is (A):

TCP Proxy Load Balancing is implemented on GFEs that are distributed globally. If you choose the Premium Tier of Network Service Tiers, a TCP proxy load balancer is global. In Premium Tier, you can deploy backends in multiple regions, and the load balancer automatically directs user traffic to the closest region that has capacity. If you choose the Standard Tier, a TCP proxy load balancer can only direct traffic among backends in a single region.

<https://cloud.google.com/load-balancing/docs/load-balancing-overview#tcp-proxy-load-balancing>

   upvoted 27 times

  **Warren2020** Highly Voted  5 years ago

A is the correct answer. D is not correct. CDN works with HTTP(s) traffic and requires caching, which is not a valid feature used for mail server

   upvoted 9 times

  **lolanczos** Most Recent  5 months ago

Selected Answer: A

It's A. TCP is the only one that is global (multiple regions). A Network Load Balancer is regional. The HTTP(S) LB is only for http/https traffic and would not be suitable. Cloud CDN doesn't even make sense as an option.

   upvoted 1 times

  **SQLbox** 10 months, 2 weeks ago

TCP Proxy Load Balancing is a global load balancing service that works at Layer 4 (TCP/SSL) and is ideal for services like mail servers that use non-HTTP protocols, such as IMAP (port 993) or POP3 (port 995).

- TCP Proxy Load Balancing supports global load balancing, meaning it can route traffic to the nearest backend based on the geographic location of the user. This ensures that customers are routed to the nearest mail server, optimizing performance and latency.

   upvoted 1 times

  **Mr_MIXER007** 11 months ago

Selected Answer: A



Correct Answer is (A)

   upvoted 1 times

  **usercism007** 11 months, 2 weeks ago

Select Answer: A

   upvoted 1 times

  **3d9563b** 1 year ago

Selected Answer: A

TCP Proxy Load Balancing is the appropriate choice for globally routing TCP traffic, such as mail services, to the nearest server based on client location. It provides the necessary global load balancing capabilities to achieve this requirement.

   upvoted 1 times

  **pico** 1 year, 2 months ago

Selected Answer: B

why the other options are not the best fit:

A. TCP Proxy Load Balancing: This is a global load balancing solution, but it might not be the most efficient for routing mail traffic based on proximity.

C. Cross-Region Load Balancing with HTTP(S): This is designed for HTTP/HTTPS traffic, not mail protocols like POP3, SMTP, or IMAP.

D. Cloud CDN: While Cloud CDN can cache content for faster delivery, it's not designed to handle real-time mail traffic routing.

   upvoted 1 times

  **shanwford** 1 year, 3 months ago

Selected Answer: A

I go for (A) because Network Load Balancers are Layer 4 regional, passthrough load balancers: so it didnt work as global LB ("different GCP regions")

   upvoted 1 times

  **eeghai7thioyaiR4** 1 year, 3 months ago

This is probably an old question

2-3 years ago, GCP introduces a "proxy network load balancer"

So, in 2024, we have:

- application load balancer, global, external-only, multi-region backends, only for HTTP and HTTPS, do not preserve clients' IP

- "legacy" network load balancer (aka "passthrough"), external or internal, single-region, tcp or udp, preserve clients' IP

- "new" network load balancer (aka "proxy"), global, external or internal, multi-region backends, tcp or udp, do not preserve

clients' IP

Here, we want:

- global
- external
- multi-region
- non-http

=> proxy network load balancer is the solution

This maps to A (generic answer) or B (but only in proxy mode: passthrough won't work)

   upvoted 2 times

  **eeghai7thioyaiR4** 1 year, 2 months ago

On the other hand, B says "with forwarding rule". So this implies passthrough mode
This left only A as a solution

   upvoted 1 times

  **Roro_Brother** 1 year, 3 months ago

Selected Answer: B

The company can achieve location-based routing of customers to the nearest mail server in Google Cloud Platform (GCP) using a Network Load Balancer (NLB)

   upvoted 1 times

  **JOKERO** 10 months, 1 week ago

NLB is not global

   upvoted 1 times

  **dija123** 1 year, 4 months ago

Selected Answer: B

The company can achieve location-based routing of customers to the nearest mail server in Google Cloud Platform (GCP) using a Network Load Balancer (NLB)

   upvoted 2 times

  **okhascorprio** 1 year, 5 months ago

There is no direct SMTP support in TCP proxy load balancer, hence it cannot be A. Google Cloud best practices recommend Network Load Balancing (NLB) for Layer 4 protocols like SMTP.

   upvoted 3 times

  **ErenYeager** 1 year, 5 months ago

Selected Answer: B

B) Create a Network Load Balancer to listen on TCP port 995 with a forwarding rule to forward traffic based on location.

Explanation:

Port 995 implies this is SSL/TLS encrypted mail traffic (IMAP).

Network Load Balancing allows creating forwarding rules to route traffic based on IP location.

This can send users to the closest backend mail server.


TCP Proxy LB does not allow location-based routing.

HTTP(S) LB is for HTTP only, not generic TCP traffic.

Cloud CDN works at the HTTP level so cannot route TCP mail traffic.

So a Network Load Balancer with IP based forwarding rules provides the capability to direct mail users to the closest regional mail server based on their location, meeting the requirement.

   upvoted 3 times

  **gcpengineer** 2 years, 2 months ago

Selected Answer: A

<https://cloud.google.com/load-balancing/docs/tcp>

   upvoted 2 times

  **gcpengineer** 2 years, 2 months ago

Selected Answer: B

B is the ans

   upvoted 2 times

  **gcpengineer** 2 years, 2 months ago

A is the ans. <https://cloud.google.com/load-balancing/docs/tcp>

   upvoted 2 times

  **aashishh** 2 years, 3 months ago


Selected Answer: B

The correct answer is B.

To route customers to the nearest mail server based on location, the company can create a Network Load Balancer. The Network Load Balancer can listen on a specific TCP port (e.g., port 995 for mail traffic) and use a forwarding rule to forward traffic to the nearest mail server based on the client's location. This can be achieved by using a combination of the Load Balancing service and the Geo Map feature to route traffic based on the client's IP address.

TCP Proxy Load Balancing (A) is not suitable for this scenario as it is designed for non-HTTP(S) traffic, and it does not use client location information for traffic routing. Cross-Region Load Balancing (C) is also not suitable as it is designed for HTTP(S) traffic and does not use client location information for traffic routing. Cloud CDN (D) is designed for caching content and delivering it from the nearest point of presence (POP) to the user, but it does not route traffic to different servers based on the client's location.

   upvoted 4 times

  **gcpengineer** 2 years, 2 months ago

TCP proxy LB is relevant in this case

   upvoted 2 times

[Load full discussion...](#)



Platform

> [Home](#)

> [Examtopics PRO](#)

> [All Exams](#)

> [Training Courses](#)



© 2024 ExamTopics