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Actual exam question from Google's Professional Cloud Security Engineer

Question #: 143

Topic #: 1

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Your organization hosts a financial services application running on Compute Engine instances for a third-party company. The third-party company's servers that will consume the application also run on Compute Engine in a separate Google Cloud organization. You need to configure a secure network connection between the Compute Engine instances. You have the following requirements:

- ⇒ The network connection must be encrypted.
- ⇒ The communication between servers must be over private IP addresses.

What should you do?

- A. Configure a Cloud VPN connection between your organization's VPC network and the third party's that is controlled by VPC firewall rules.
- B. Configure a VPC peering connection between your organization's VPC network and the third party's that is controlled by VPC firewall rules.
- C. Configure a VPC Service Controls perimeter around your Compute Engine instances, and provide access to the third party via an access level.
- D. Configure an Apigee proxy that exposes your Compute Engine-hosted application as an API, and is encrypted with TLS which allows access only to the third party.

[Show Suggested Answer](#)

by [deleted] at *Sept. 6, 2022, 5:46 a.m.*

Comments

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  **juanmacoelloccloudsecarch** 1 week, 6 days ago

Selected Answer: B

VPN works over Public IP so that's make no sense for this question. And It says "net connection must be encrypted" but is not asking you how and if you need to configure or not.

If you use VPC peering is only via private IP address and VPC peering is backbone encrypted so, B.

   upvoted 1 times

  **lolanczos** 5 months ago

Selected Answer: B

B is correct because VPC peering establishes a private connection between VPC networks, allowing the Compute Engine instances to communicate using private IP addresses over Google's encrypted backbone network. Option A (Cloud VPN) uses an encrypted tunnel but relies on public IP addresses; Option C (VPC Service Controls) is meant for securing service perimeters rather than direct network connectivity; and Option D (Apigee) is designed for API management, not for facilitating private network connections.

Google Cloud. (n.d.). VPC Network Peering. Retrieved from <https://cloud.google.com/vpc/docs/vpc-peering>

   upvoted 1 times

  **BPzen** 8 months ago

Selected Answer: A

Encrypted Network Connection:

A Cloud VPN connection encrypts traffic between the two VPC networks using IPsec. This satisfies the requirement for encryption.

Private IP Communication:

Cloud VPN enables communication between the two VPC networks over private IP addresses by establishing a secure tunnel.

Control via Firewall Rules:

Both organizations can manage traffic using VPC firewall rules, providing granular control over allowed communication.

Why Not the Other Options?

B. Configure a VPC peering connection between your organization's VPC network and the third party's that is controlled by VPC firewall rules:

VPC peering does not encrypt traffic between networks. It does not satisfy the requirement for encryption.

   upvoted 2 times

  **aygitci** 1 year, 9 months ago

Selected Answer: A



the traffic between the VPCs is not encrypted by default.

   upvoted 1 times

  **ppandher** 1 year, 9 months ago

It is encrypted by default at Network layer.

   upvoted 2 times



  **desertlotus1211** 1 year, 10 months ago

[https://cloud.google.com/docs/security/encryption-in-transit#:~:text=All%20VM%2Dto%2DVM%20traffic,End%20\(GFE\)%20using%20TLS](https://cloud.google.com/docs/security/encryption-in-transit#:~:text=All%20VM%2Dto%2DVM%20traffic,End%20(GFE)%20using%20TLS).

All VM-to-VM traffic within a VPC network and peered VPC networks is encrypted.



So for this fact and what I written below - Answer B.

   upvoted 4 times

  **desertlotus1211** 1 year, 10 months ago

Also ask for private IP communication, so technically no routing (policy or other) should be involved

   upvoted 1 times



  **desertlotus1211** 1 year, 10 months ago

So I think this question makes on sense...

If it's server to server calls then TLS/HTTPS/SSL is being used. So the answer can be VPC Peering since the APIs are encrypted.

It's poorly worded and you will use service account any communications and calls.
You can use VPN, but you need a cloud router on both side, policy routing, etc. for the CEs to talk.
Thoughts?

   upvoted 1 times

  **desertlotus1211** 1 year, 10 months ago

I meant to say NO sense....


   upvoted 1 times

  **Kouuupobol** 2 years, 2 months ago

Selected Answer: A

Answer is A, because it is explicitly said that traffic must be encrypted.
Moreover, communication within the VPN use private IPs.

   upvoted 3 times

  **deony** 2 years, 2 months ago

i don't think that Cloud VPN use public IP, but encrypted.

ref: <https://cloud.google.com/network-connectivity/docs/vpn/concepts/overview>

> Traffic traveling between the two networks is encrypted by one VPN gateway and then decrypted by the other VPN gateway. This action protects your data as it travels over the internet.

but, with cloud interconnect, Cloud VPN can use private IP.

i think it's too heavy works using VPN with cloud interconnect instead of using VPC peering.

   upvoted 2 times

  **deony** 2 years, 2 months ago

typo: i don't think -> i think

   upvoted 1 times

  **TNT87** 2 years, 3 months ago

Selected Answer: B

Answer B

   upvoted 1 times

  **alleinallein** 2 years, 3 months ago

Why not A? Any arguments?

   upvoted 2 times

  **TonytheTiger** 2 years, 8 months ago

B:

<https://cloud.google.com/vpc/docs/vpc-peering>

   upvoted 3 times

  **TonytheTiger** 2 years, 8 months ago

Sorry - Ans C - Key point "separate Google Cloud Organization"

Private Service Connect allows private consumption of services across VPC networks that belong to different groups, teams, projects, or organizations.

<https://cloud.google.com/vpc/docs/private-service-connect>

   upvoted 1 times

  **fad3r** 2 years, 4 months ago

You are right and wrong, You are right that yes Private Service Connect does indeed do this. You are wrong because that is not what C says. It says VPC Service Controls which is definitely wrong.

   upvoted 1 times

  **Littleivy** 2 years, 8 months ago

Selected Answer: B

B

VPC Network Peering gives you several advantages over using external IP addresses or VPNs to connect networks

<https://cloud.google.com/vpc/docs/vpc-peering>

   upvoted 3 times

  **AzureDP900** 2 years, 8 months ago

B. Configure a VPC peering connection between your organization's VPC network and the third party's that is controlled by VPC firewall rules.

   upvoted 2 times

☰  **soltium** 2 years, 9 months ago

A and B is correct, Cloud VPN are encrypted, VPC Peering might be unencrypted but this docs said it's encrypted.
https://cloud.google.com/docs/security/encryption-in-transit#virtual_machine_to_virtual_machine

   upvoted 3 times

☰  **AwesomeGCP** 2 years, 9 months ago

Selected Answer: B

B. Configure a VPC peering connection between your organization's VPC network and the third party's that is controlled by VPC firewall rules.

   upvoted 2 times

☰  **zelick** 2 years, 10 months ago

Selected Answer: B

B is the answer.

   upvoted 2 times

☰  **[Removed]** 2 years, 10 months ago

Selected Answer: B

final B

   upvoted 2 times

☰  **GHOST1985** 2 years, 10 months ago

Selected Answer: B

Google encrypts and authenticates data in transit at one or more network layers when data moves outside physical boundaries not controlled by Google or on behalf of Google. All VM-to-VM traffic within a VPC network and peered VPC networks is encrypted.

https://cloud.google.com/docs/security/encryption-in-transit#cio-level_summary

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