

## Google Cloud Certified - Professional Cloud Network Engineer.23q

Number: GoogleCloudEngineer

Passing Score: 800

Time Limit: 120 min

Google Cloud Certified - Professional Cloud Network Engineer



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**Exam A**

**QUESTION 1**

All the instances in your project are configured with the custom metadata `enable-oslogin` value set to `FALSE` and to block project-wide SSH keys. None of the instances are set with any SSH key, and no project-wide SSH keys have been configured. Firewall rules are set up to allow SSH sessions from any IP address range. You want to SSH into one instance.



<https://vceplus.com/> What should

you do?

- A. Open the Cloud Shell SSH into the instance using `gcloud compute ssh`.
- B. Set the custom metadata `enable-oslogin` to `TRUE`, and SSH into the instance using a third-party tool like `putty` or `ssh`.
- C. Generate a new SSH key pair. Verify the format of the private key and add it to the instance. SSH into the instance using a third-party tool like `putty` or `ssh`.
- D. Generate a new SSH key pair. Verify the format of the public key and add it to the project. SSH into the instance using a third-party tool like `putty` or `ssh`.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://cloud.google.com/compute/docs/storing-retrieving-metadata>

## QUESTION 2

You work for a university that is migrating to GCP.

These are the cloud requirements:

- On-premises connectivity with 10 Gbps
- Lowest latency access to the cloud
- Centralized Networking Administration Team

New departments are asking for on-premises connectivity to their projects. You want to deploy the most cost-efficient interconnect solution for connecting the campus to Google Cloud.

What should you do?

- A. Use Shared VPC, and deploy the VLAN attachments and Interconnect in the host project.
- B. Use Shared VPC, and deploy the VLAN attachments in the service projects. Connect the VLAN attachment to the Shared VPC's host project.
- C. Use standalone projects, and deploy the VLAN attachments in the individual projects. Connect the VLAN attachment to the standalone projects' Interconnects.
- D. Use standalone projects and deploy the VLAN attachments and Interconnects in each of the individual projects.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 3

You have deployed a new internal application that provides HTTP and TFTP services to on-premises hosts. You want to be able to distribute traffic across multiple Compute Engine instances, but need to ensure that clients are sticky to a particular instance across both services.

Which session affinity should you choose?

- A. None
- B. Client IP
- C. Client IP and protocol
- D. Client IP, port and protocol



**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 4

You want to create a service in GCP using IPv6.

What should you do?

- A. Create the instance with the designated IPv6 address.
- B. Configure a TCP Proxy with the designated IPv6 address.

- C. Configure a global load balancer with the designated IPv6 address.
- D. Configure an internal load balancer with the designated IPv6 address.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://cloud.google.com/load-balancing/docs/ipv6>

### QUESTION 5

You want to deploy a VPN Gateway to connect your on-premises network to GCP. You are using a non BGP-capable on-premises VPN device. You want to minimize downtime and operational overhead when your network grows. The device supports only IKEv2, and you want to follow Google-recommended practices.

What should you do?

- A.
  - Create a Cloud VPN instance.
  - Create a policy-based VPN tunnel per subnet.
  - Configure the appropriate local and remote traffic selectors to match your local and remote networks.
  - Create the appropriate static routes.
- B.
  - Create a Cloud VPN instance.
  - Create a policy-based VPN tunnel.
  - Configure the appropriate local and remote traffic selectors to match your local and remote networks.
  - Configure the appropriate static routes.
- C.
  - Create a Cloud VPN instance.
  - Create a route-based VPN tunnel.
  - Configure the appropriate local and remote traffic selectors to match your local and remote networks.
  - Configure the appropriate static routes.
- D.
  - Create a Cloud VPN instance.
  - Create a route-based VPN tunnel.
  - Configure the appropriate local and remote traffic selectors to 0.0.0.0/0.
  - Configure the appropriate static routes.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://cloud.google.com/vpn/docs/concepts/choosing-networks-routing>

### QUESTION 6

Your company just completed the acquisition of Altostrat (a current GCP customer). Each company has a separate organization in GCP and has implemented a custom DNS solution. Each organization will retain its current domain and host names until after a full transition and architectural review is done in one year. These are the assumptions for both GCP environments.

- Each organization has enabled full connectivity between all of its projects by using Shared VPC.
- Both organizations strictly use the 10.0.0.0/8 address space for their instances, except for bastion hosts (for accessing the instances) and load balancers for serving web traffic.
- There are no prefix overlaps between the two organizations.
- Both organizations already have firewall rules that allow all inbound and outbound traffic from the 10.0.0.0/8 address space.
- Neither organization has Interconnects to their on-premises environment.

You want to integrate networking and DNS infrastructure of both organizations as quickly as possible and with minimal downtime.

Which two steps should you take? (Choose two.)

- A. Provision Cloud Interconnect to connect both organizations together.
- B. Set up some variant of DNS forwarding and zone transfers in each organization.
- C. Connect VPCs in both organizations using Cloud VPN together with Cloud Router.
- D. Use Cloud DNS to create A records of all VMs and resources across all projects in both organizations.
- E. Create a third organization with a new host project, and attach all projects from your company and Altostrat to it using shared VPC.

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 7

Your on-premises data center has 2 routers connected to your Google Cloud environment through a VPN on each router. All applications are working correctly; however, all of the traffic is passing across a single VPN instead of being load-balanced across the 2 connections as desired.

During troubleshooting you find:

- Each on-premises router is configured with a unique ASN.
- Each on-premises router is configured with the same routes and priorities.

- Both on-premises routers are configured with a VPN connected to a single Cloud Router.
- BGP sessions are established between both on-premises routers and the Cloud Router.
- Only 1 of the on-premises router's routes are being added to the routing table.

What is the most likely cause of this problem?

- A. The on-premises routers are configured with the same routes.
- B. A firewall is blocking the traffic across the second VPN connection.
- C. You do not have a load balancer to load-balance the network traffic.
- D. The ASNs being used on the on-premises routers are different.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 8

You have ordered Dedicated Interconnect in the GCP Console and need to give the Letter of Authorization/Connecting Facility Assignment (LOA-CFA) to your cross-connect provider to complete the physical connection.

Which two actions can accomplish this? (Choose two.)

- A. Open a Cloud Support ticket under the Cloud Interconnect category.
- B. Download the LOA-CFA from the Hybrid Connectivity section of the GCP Console.
- C. Run `gcloud compute interconnects describe <interconnect>`.
- D. Check the email for the account of the NOC contact that you specified during the ordering process.
- E. Contact your cross-connect provider and inform them that Google automatically sent the LOA/CFA to them via email, and to complete the connection.

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 9

You are disabling DNSSEC for one of your Cloud DNS-managed zones. You removed the DS records from your zone file, waited for them to expire from the cache, and disabled DNSSEC for the zone. You receive reports that DNSSEC validating resolves are unable to resolve names in your zone.

What should you do?

- A. Update the TTL for the zone.
- B. Set the zone to the TRANSFER state.
- C. Disable DNSSEC at your domain registrar.
- D. Transfer ownership of the domain to a new registrar.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Before disabling DNSSEC for a managed zone you want to use, you must deactivate DNSSEC at your domain registrar to ensure that DNSSEC-validating resolvers can still resolve names in the zone.

Reference: <https://cloud.google.com/dns/docs/dnssec-config>



#### QUESTION 10

You have an application hosted on a Compute Engine virtual machine instance that cannot communicate with a resource outside of its subnet. When you review the flow and firewall logs, you do not see any denied traffic listed.

During troubleshooting you find:

- Flow logs are enabled for the VPC subnet, and all firewall rules are set to log.
- The subnetwork logs are not excluded from Stackdriver.
- The instance that is hosting the application can communicate outside the subnet.
- Other instances within the subnet can communicate outside the subnet.
- The external resource initiates communication.

What is the most likely cause of the missing log lines?

- A. The traffic is matching the expected ingress rule.
- B. The traffic is matching the expected egress rule.
- C. The traffic is not matching the expected ingress rule.
- D. The traffic is not matching the expected egress rule.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 11**

You have configured Cloud CDN using HTTP(S) load balancing as the origin for cacheable content. Compression is configured on the web servers, but responses served by Cloud CDN are not compressed.

What is the most likely cause of the problem?

- A. You have not configured compression in Cloud CDN.
- B. You have configured the web servers and Cloud CDN with different compression types.
- C. The web servers behind the load balancer are configured with different compression types.
- D. You have to configure the web servers to compress responses even if the request has a Via header.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

If responses served by Cloud CDN are not compressed but should be, check that the web server software running on your instances is configured to compress responses. By default, some web server software will automatically disable compression for requests that include a Via header. The presence of a Via header indicates the request was forwarded by a proxy. HTTP proxies such as HTTP(S) load balancing add a Via header to each request as required by the HTTP specification. To enable compression, you may have to override your web server's default configuration to tell it to compress responses even if the request had a Via header.

Reference: <https://cloud.google.com/cdn/docs/troubleshooting-steps>

**QUESTION 12**

You have a web application that is currently hosted in the us-central1 region. Users experience high latency when traveling in Asia. You've configured a network load balancer, but users have not experienced a performance improvement. You want to decrease the latency.







<https://vceplus.com/> What should

you do?

- A. Configure a policy-based route rule to prioritize the traffic.
- B. Configure an HTTP load balancer, and direct the traffic to it.
- C. Configure Dynamic Routing for the subnet hosting the application.
- D. Configure the TTL for the DNS zone to decrease the time between updates.

**Correct Answer:** B

**Section:** (none)

**Explanation**



**Explanation/Reference:**

Reference: <https://cloud.google.com/load-balancing/docs/tutorials/optimize-app-latency>

### QUESTION 13

You have an application running on Compute Engine that uses BigQuery to generate some results that are stored in Cloud Storage. You want to ensure that none of the application instances have external IP addresses.

Which two methods can you use to accomplish this? (Choose two.)

- A. Enable Private Google Access on all the subnets.
- B. Enable Private Google Access on the VPC.
- C. Enable Private Services Access on the VPC.
- D. Create network peering between your VPC and BigQuery.
- E. Create a Cloud NAT, and route the application traffic via NAT gateway.

**Correct Answer:** BE

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 14**

You are designing a shared VPC architecture. Your network and security team has strict controls over which routes are exposed between departments. Your Production and Staging departments can communicate with each other, but only via specific networks. You want to follow Google-recommended practices.

How should you design this topology?

- A. Create 2 shared VPCs within the shared VPC Host Project, and enable VPC peering between them. Use firewall rules to filter access between the specific networks.
- B. Create 2 shared VPCs within the shared VPC Host Project, and create a Cloud VPN/Cloud Router between them. Use Flexible Route Advertisement (FRA) to filter access between the specific networks.
- C. Create 2 shared VPCs within the shared VPC Service Project, and create a Cloud VPN/Cloud Router between them. Use Flexible Route Advertisement (FRA) to filter access between the specific networks.
- D. Create 1 VPC within the shared VPC Host Project, and share individual subnets with the Service Projects to filter access between the specific networks.

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

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

#### **QUESTION 15**

You converted an auto mode VPC network to custom mode. Since the conversion, some of your Cloud Deployment Manager templates are no longer working. You want to resolve the problem.

What should you do?

- A. Apply an additional IAM role to the Google API's service account to allow custom mode networks.
- B. Update the VPC firewall to allow the Cloud Deployment Manager to access the custom mode networks.
- C. Explicitly reference the custom mode networks in the Cloud Armor whitelist.
- D. Explicitly reference the custom mode networks in the Deployment Manager templates.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 16

Your company has recently expanded their EMEA-based operations into APAC. Globally distributed users report that their SMTP and IMAP services are slow. Your company requires end-to-end encryption, but you do not have access to the SSL certificates.

Which Google Cloud load balancer should you use?

- A. SSL proxy load balancer
- B. Network load balancer
- C. HTTPS load balancer
- D. TCP proxy load balancer

**Correct Answer:** A

**Section:** (none)

**Explanation**



**Explanation/Reference:**

Reference: <https://cloud.google.com/security/encryption-in-transit/>

#### QUESTION 17

Your company is working with a partner to provide a solution for a customer. Both your company and the partner organization are using GCP. There are applications in the partner's network that need access to some resources in your company's VPC. There is no CIDR overlap between the VPCs.

Which two solutions can you implement to achieve the desired results without compromising the security? (Choose two.)

- A. VPC peering
- B. Shared VPC
- C. Cloud VPN
- D. Dedicated Interconnect
- E. Cloud NAT

**Correct Answer:** CD

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference: <https://cloud.google.com/vpc/docs/vpc>

**QUESTION 18**

You have a storage bucket that contains the following objects:

- folder-a/image-a-1.jpg
- folder-a/image-a-2.jpg
- folder-b/image-b-1.jpg
- folder-b/image-b-2.jpg

Cloud CDN is enabled on the storage bucket, and all four objects have been successfully cached. You want to remove the cached copies of all the objects with the prefix folder-a, using the minimum number of commands.

What should you do?

- A. Add an appropriate lifecycle rule on the storage bucket.
- B. Issue a cache invalidation command with pattern /folder-a/\*.
- C. Make sure that all the objects with prefix folder-a are not shared publicly.
- D. Disable Cloud CDN on the storage bucket. Wait 90 seconds. Re-enable Cloud CDN on the storage bucket.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 19**

Your company is running out of network capacity to run a critical application in the on-premises data center. You want to migrate the application to GCP. You also want to ensure that the Security team does not lose their ability to monitor traffic to and from Compute Engine instances. Which two products should you incorporate into the solution? (Choose two.)

- A. VPC flow logs
- B. Firewall logs

- C. Cloud Audit logs
- D. Stackdriver Trace
- E. Compute Engine instance system logs

**Correct Answer:** CD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://cloud.google.com/docs/enterprise/best-practices-for-enterprise-organizations>

#### QUESTION 20

You want to apply a new Cloud Armor policy to an application that is deployed in Google Kubernetes Engine (GKE). You want to find out which target to use for your Cloud Armor policy.

Which GKE resource should you use?

- A. GKE Node
- B. GKE Pod
- C. GKE Cluster
- D. GKE Ingress



**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://cloud.google.com/kubernetes-engine/docs/how-to/cloud-armor-backendconfig>

#### QUESTION 21

You create multiple Compute Engine virtual machine instances to be used at TFTP servers.

Which type of load balancer should you use?

- A. HTTP(S) load balancer
- B. SSL proxy load balancer
- C. TCP proxy load balancer
- D. Network load balancer

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 22**

You want to configure load balancing for an internet-facing, standard voice-over-IP (VOIP) application.

Which type of load balancer should you use?

- A. HTTP(S) load balancer
- B. Network load balancer
- C. Internal TCP/UDP load balancer
- D. TCP/SSL proxy load balancer

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**



#### **QUESTION 23**

You want to configure a NAT to perform address translation between your on-premises network blocks and GCP.

Which NAT solution should you use?

- A. Cloud NAT
- B. An instance with IP forwarding enabled
- C. An instance configured with iptables DNAT rules
- D. An instance configured with iptables SNAT rules

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference: <https://cloud.google.com/nat/docs/overview>



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