

**Google.Professional Cloud Network Engineer.vDec-2023.by.Huyry.95q**

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**Certification: Professional Cloud Network Engineer**  
**Certification Full Name: Professional Cloud Network Engineer**

## Exam A

### QUESTION 1

You want to implement an IPSec tunnel between your on-premises network and a VPC via Cloud VPN. You need to restrict reachability over the tunnel to specific local subnets, and you do not have a device capable of speaking Border Gateway Protocol (BGP).

Which routing option should you choose?

- A. Dynamic routing using Cloud Router
- B. Route-based routing using default traffic selectors
- C. Policy-based routing using a custom local traffic selector
- D. Policy-based routing using the default local traffic selector

**Correct Answer: C**

**Section:**

**Explanation:**

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

### QUESTION 2

You have enabled HTTP(S) load balancing for your application, and your application developers have reported that HTTP(S) requests are not being distributed correctly to your Compute Engine VirtualMachine instances. You want to find data about how the request are being distributed.

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

- A. On the Load Balancer details page of the GCP Console, click on the Monitoring tab, select your backend service, and look at the graphs.
- B. In Stackdriver Error Reporting, look for any unacknowledged errors for the Cloud Load Balancers service.
- C. In Stackdriver Monitoring, select Resources > Metrics Explorer and search for https/request\_bytes\_count metric.
- D. In Stackdriver Monitoring, select Resources > Google Cloud Load Balancers and review the Key Metrics graphs in the dashboard.
- E. In Stackdriver Monitoring, create a new dashboard and track the https/backend\_request\_count metric for the load balancer.

**Correct Answer: A, E**

**Section:**

### QUESTION 3

You want to use Partner Interconnect to connect your on-premises network with your VPC. You already have an Interconnect partner.

What should you first?

- A. Log in to your partner's portal and request the VLAN attachment there.
- B. Ask your Interconnect partner to provision a physical connection to Google.
- C. Create a Partner Interconnect type VLAN attachment in the GCP Console and retrieve the pairing key.
- D. Run `gcloud compute interconnect attachments partner update <attachment> / -- region <region> --admin-enabled`.

**Correct Answer: B**

**Section:**

**Explanation:**

<https://cloud.google.com/network-connectivity/docs/interconnect/concepts/partneroverview?hl=En#provisioning> "

To provision a Partner Interconnect connection with a serviceprovider, you start by connecting your on-premises network to a supported service provider. Work with the service provider to establish connectivity.

#### QUESTION 4

You need to centralize the Identity and Access Management permissions and email distribution for the WebServices Team as efficiently as possible. What should you do?

- A. Create a Google Group for the WebServices Team.
- B. Create a G Suite Domain for the WebServices Team.
- C. Create a new Cloud Identity Domain for the WebServices Team.
- D. Create a new Custom Role for all members of the WebServices Team.

**Correct Answer: A**

**Section:**

#### QUESTION 5

You are using the gcloud command line tool to create a new custom role in a project by copying a predefined role. You receive this error message: INVALID\_ARGUMENT: Permission resourcemanager.projects.list is not valid What should you do?

- A. Add the resourcemanager.projects.get permission, and try again.
- B. Try again with a different role with a new name but the same permissions.
- C. Remove the resourcemanager.projects.list permission, and try again.
- D. Add the resourcemanager.projects.setIamPolicy permission, and try again.

**Correct Answer: C**

**Section:**

**Explanation:**

Reference: <https://cloud.google.com/iam/docs/understanding-custom-roles>

#### QUESTION 6

One instance in your VPC is configured to run with a private IP address only. You want to ensure that even if this instance is deleted, its current private IP address will not be automatically assigned to a different instance. In the GCP Console, what should you do?

- A. Assign a public IP address to the instance.
- B. Assign a new reserved internal IP address to the instance.
- C. Change the instance's current internal IP address to static.
- D. Add custom metadata to the instance with key internal-address and value reserved.

**Correct Answer: C**

**Section:**

**Explanation:**

<https://cloud.google.com/compute/docs/ip-addresses/reserve-static-internal-ipaddress#reservenewip> Since here <https://cloud.google.com/compute/docs/ip-addresses/reserve-static-internal-ip-address#reservenewip> it is written that "automatically allocated or an unused address from an existing subnet".

#### QUESTION 7

After a network change window one of your company's applications stops working. The application uses an on-premises database server that no longer receives any traffic from the application. The database server IP address is 10.2.1.25.

You examine the change request, and the only change is that 3 additional VPC subnets were created. The new VPC subnets created are 10.1.0.0/16, 10.2.0.0/16, and 10.3.1.0/24/ The on-premises router is advertising 10.0.0.0/8.

What is the most likely cause of this problem?

- A. The less specific VPC subnet route is taking priority.
- B. The more specific VPC subnet route is taking priority.
- C. The on-premises router is not advertising a route for the database server.
- D. A cloud firewall rule that blocks traffic to the on-premises database server was created during the change.

**Correct Answer: B**

**Section:**

#### QUESTION 8

You need to create a new VPC network that allows instances to have IP addresses in both the 10.1.1.0/24 network and the 172.16.45.0/24 network.

What should you do?

- A. Configure global load balancing to point 172.16.45.0/24 to the correct instance.
- B. Create unique DNS records for each service that sends traffic to the desired IP address.
- C. Configure an alias-IP range of 172.16.45.0/24 on the virtual instances within the VPC subnet of 10.1.1.0/24.
- D. Use VPC peering to allow traffic to route between the 10.1.0.0/24 network and the 172.16.45.0/24 network.

**Correct Answer: C**

**Section:**

#### QUESTION 9

You are deploying a global external TCP load balancing solution and want to preserve the source IP address of the original layer 3 payload.

Which type of load balancer should you use?

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

**Correct Answer: D**

**Section:**

**Explanation:**

By default TCP/SSL proxy load balancer original client IP address and port information is not preserved, but it can be preserved using the PROXY protocol: <https://cloud.google.com/loadbalancing/docs/tcp#target-proxies>

<https://medium.com/google-cloud/preserving-client-ips-through-google-clouds-global-tcp-and-sslproxy-load-balancers-3697d76feeb1>

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

#### QUESTION 10

Your company has a single Virtual Private Cloud (VPC) network deployed in Google Cloud with access from your on-premises network using Cloud Interconnect. You must configure access only to Google APIs and services that are supported by VPC Service Controls through hybrid connectivity with a service level agreement (SLA) in place. What should you do?

- A. Configure the existing Cloud Routers to advertise the Google API's public virtual IP addresses.
- B. Use Private Google Access for on-premises hosts with restricted.googleapis.com virtual IP addresses.
- C. Configure the existing Cloud Routers to advertise a default route, and use Cloud NAT to translate traffic from your on-premises network.
- D. Add Direct Peering links, and use them for connectivity to Google APIs that use public virtual IP addresses.

**Correct Answer: B**

**Section:**

**QUESTION 11**

Your company's security team tends to use managed services when possible. You need to build a dashboard to show the number of deny hits that occur against configured firewall rules without increasing operational overhead. What should you do?

- A. Configure Firewall Rules Logging. Use Firewall Insights to display the number of hits.
- B. Configure Firewall Rules Logging. View the logs in Cloud Logging, and create a custom dashboard in Cloud Monitoring to display the number of hits.
- C. Configure a firewall appliance from the Google Cloud Marketplace. Route all traffic through this appliance, and apply the firewall rules at this layer. Use the firewall appliance to display the number of hits.
- D. Configure Packet Mirroring on the VPC. Apply a filter with an IP address list of the Denied Firewall rules. Configure an intrusion detection system (IDS) appliance as the receiver to display the number of hits.

**Correct Answer: A**

**Section:**

**QUESTION 12**

You are configuring your Google Cloud environment to connect to your on-premises network. Your configuration must be able to reach Cloud Storage APIs and your Google Kubernetes Engine nodes across your private Cloud Interconnect network. You have already configured a Cloud Router with your Interconnect VLAN attachments. You now need to set up the appropriate router advertisement configuration on the Cloud Router. What should you do?

- A. Configure the route advertisement to the default setting.
- B. On the on-premises router, configure a static route for the storage API virtual IP address which points to the Cloud Router's link-local IP address.
- C. Configure the route advertisement to the custom setting, and manually add prefix 199.36.153.8/30 to the list of advertisements. Leave all other options as their default settings.
- D. Configure the route advertisement to the custom setting, and manually add prefix 199.36.153.8/30 to the list of advertisements. Advertise all visible subnets to the Cloud Router.

**Correct Answer: D**

**Section:**

**QUESTION 13**

You are configuring load balancing for a standard three-tier (web, application, and database) application. You have configured an external HTTP(S) load balancer for the web servers. You need to configure load balancing for the application tier of servers. What should you do?

- A. Configure a forwarding rule on the existing load balancer for the application tier.
- B. Configure equal cost multi-path routing on the application servers.
- C. Configure a new internal HTTP(S) load balancer for the application tier.
- D. Configure a URL map on the existing load balancer to route traffic to the application tier.

**Correct Answer: A**

**Section:**

**QUESTION 14**

Your organization has a new security policy that requires you to monitor all egress traffic payloads from your virtual machines in region us-west2. You deployed an intrusion detection system (IDS) virtual appliance in the same region to meet the new policy. You now need to integrate the IDS into the environment to monitor all egress traffic payloads from us-west2. What should you do?

- A. Enable firewall logging, and forward all filtered egress firewall logs to the IDS.
- B. Enable VPC Flow Logs. Create a sink in Cloud Logging to send filtered egress VPC Flow Logs to the IDS.
- C. Create an internal TCP/UDP load balancer for Packet Mirroring, and add a packet mirroring policy filter for egress traffic.

D. Create an internal HTTP(S) load balancer for Packet Mirroring, and add a packet mirroring policyfilter for egress traffic.

**Correct Answer: B**

**Section:**

#### QUESTION 15

You are using a third-party next-generation firewall to inspect traffic. You created a custom route of 0.0.0.0/0 to route egress traffic to the firewall. You want to allow your VPC instances without public IP addresses to access the BigQuery and Cloud Pub/Sub APIs, without sending the traffic through the firewall.

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

- A. Turn on Private Google Access at the subnet level.
- B. Turn on Private Google Access at the VPC level.
- C. Turn on Private Services Access at the VPC level.
- D. Create a set of custom static routes to send traffic to the external IP addresses of Google APIs and services via the default internet gateway.
- E. Create a set of custom static routes to send traffic to the internal IP addresses of Google APIs and services via the default internet gateway.

**Correct Answer: A, D**

**Section:**

**Explanation:**

<https://cloud.google.com/vpc/docs/private-access-options#pga> Private Google Access VM instances that only have internal IP addresses (no external IP addresses) can use Private Google Access. They can reach the \_external IP addresses\_ of Google APIs and services.

#### QUESTION 16

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.

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: A**

**Section:**

#### QUESTION 17

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: A**

**Section:**

**Explanation:**

<https://cloud.google.com/interconnect/docs/how-to/dedicated/using-interconnects-other-projects>

Using Cloud Interconnect with Shared VPC You can use Shared VPC to share your VLAN attachment in a project with other VPC networks. Choosing Shared VPC is preferable if you need to create many projects and would like to prevent individual project owners from managing their connectivity back to your on-premises network. In this scenario, the host project contains a common Shared VPC network usable by VMs in service projects. Because VMs in the service projects use this network, Service Project Admins don't need to create other VLAN attachments or Cloud Routers in the service projects. In this scenario, you must create VLAN attachments and Cloud Routers for a Cloud Interconnect connection only in the Shared VPC host project. The combination of a VLAN attachment and its associated Cloud Router are unique to a given Shared VPC network.

[https://cloud.google.com/network-connectivity/docs/interconnect/how-to/enabling-multiplenetworks-access-same-attachment#using\\_with](https://cloud.google.com/network-connectivity/docs/interconnect/how-to/enabling-multiplenetworks-access-same-attachment#using_with)

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

#### QUESTION 18

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:**

#### QUESTION 19

You created a new VPC network named Dev with a single subnet. You added a firewall rule for the network Dev to allow HTTP traffic only and enabled logging. When you try to log in to an instance in the subnet via Remote Desktop Protocol, the login fails. You look for the Firewall rules logs in Stackdriver Logging, but you do not see any entries for blocked traffic. You want to see the logs for blocked traffic.

What should you do?

- A. Check the VPC flow logs for the instance.
- B. Try connecting to the instance via SSH, and check the logs.
- C. Create a new firewall rule to allow traffic from port 22, and enable logs.
- D. Create a new firewall rule with priority 65500 to deny all traffic, and enable logs.

**Correct Answer: D**

**Section:**

**Explanation:**

Ingress packets in VPC Flow Logs are sampled after ingress firewall rules. If an ingress firewall rule denies inbound packets, those packets are not sampled by VPC Flow Logs. We want to see the logs for blocked traffic so we have to look for them in firewall logs.

[https://cloud.google.com/vpc/docs/flow-logs#key\\_properties](https://cloud.google.com/vpc/docs/flow-logs#key_properties)

#### QUESTION 20

You are trying to update firewall rules in a shared VPC for which you have been assigned only Network Admin permissions. You cannot modify the firewall rules. Your organization requires using the least privilege necessary. Which level of permissions should you request?

- A. Security Admin privileges from the Shared VPC Admin.
- B. Service Project Admin privileges from the Shared VPC Admin.
- C. Shared VPC Admin privileges from the Organization Admin.

D. Organization Admin privileges from the Organization Admin.

**Correct Answer: A**

**Section:**

**Explanation:**

A Shared VPC Admin can define a Security Admin by granting an IAM member the Security Admin (compute.securityAdmin) role to the host project. Security Admins manage firewall rules and SSL certificates.

#### QUESTION 21

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:**

**Explanation:**

<https://cloud.google.com/load-balancing/docs/load-balancing-overview> mentions to use global loadbalancer for IPv6 termination.

#### QUESTION 22

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: B**

**Section:**

**Explanation:**

[https://cloud.google.com/network-connectivity/docs/vpn/how-to/creating-staticvpns#creating\\_a\\_gateway\\_and\\_tunnel](https://cloud.google.com/network-connectivity/docs/vpn/how-to/creating-staticvpns#creating_a_gateway_and_tunnel)

#### QUESTION 23

You are increasing your usage of Cloud VPN between on-premises and GCP, and you want to support more traffic than a single tunnel can handle. You want to increase the available bandwidth using Cloud VPN.

What should you do?

- A. Double the MTU on your on-premises VPN gateway from 1460 bytes to 2920 bytes.
- B. Create two VPN tunnels on the same Cloud VPN gateway that point to the same destination VPN gateway IP address.
- C. Add a second on-premises VPN gateway with a different public IP address. Create a second tunnel on the existing Cloud VPN gateway that forwards the same IP range, but points at the new on-premises gateway IP.
- D. Add a second Cloud VPN gateway in a different region than the existing VPN gateway. Create a new tunnel on the second Cloud VPN gateway that forwards the same IP range, but points to the existing on-premises VPN gateway IP address.

**Correct Answer: C**

**Section:**



**Explanation:**

<https://cloud.google.com/network-connectivity/docs/vpn/concepts/classic-topologies#redundancyoptions>

**QUESTION 24**

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:**

**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.

**QUESTION 25**

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:**

**QUESTION 26**

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:****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.

**QUESTION 27**

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.

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:****QUESTION 28**

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: A, E**

**Section:****Explanation:**

<https://cloud.google.com/nat/docs/overview#interaction-pga> Specifications

<https://cloud.google.com/vpc/docs/configure-private-google-access#specifications>

**QUESTION 29**

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:**

**QUESTION 30**

You are adding steps to a working automation that uses a service account to authenticate. You need to drive the automation the ability to retrieve files from a Cloud Storage bucket. Your organization requires using the least privilege possible.

What should you do?

- A. Grant the compute.instanceAdmin to your user account.
- B. Grant the iam.serviceAccountUser to your user account.
- C. Grant the read-only privilege to the service account for the Cloud Storage bucket.
- D. Grant the cloud-platform privilege to the service account for the Cloud Storage bucket.

**Correct Answer: C**

**Section:**

**QUESTION 31**

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:**

**QUESTION 32**

You have recently been put in charge of managing identity and access management for your organization. You have several projects and want to use scripting and automation wherever possible.

You want to grant the editor role to a project member.

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

- A. GetIamPolicy() via REST API
- B. setIamPolicy() via REST API
- C. gcloud pubsub add-iam-policy-binding Sprojectname --member user:Susername --role roles/editor
- D. gcloud projects add-iam-policy-binding Sprojectname --member user:Susername --role roles/editor
- E. Enter an email address in the Add members field, and select the desired role from the drop-down menu in the GCP Console.

**Correct Answer: D, E**

**Section:**

**QUESTION 33**

You are using a 10-Gbps direct peering connection to Google together with the gsutil tool to upload files to Cloud Storage buckets from on-premises servers. The on-premises servers are 100 milliseconds away from the Google peering point. You notice that your uploads are not using the full 10-Gbps bandwidth available to you. You want to optimize the bandwidth utilization of the connection.

What should you do on your on-premises servers?

- A. Tune TCP parameters on the on-premises servers.

- B. Compress files using utilities like tar to reduce the size of data being sent.
- C. Remove the -m flag from the gsutil command to enable single-threaded transfers.
- D. Use the perfdiag parameter in your gsutil command to enable faster performance: gsutil perfdiag gs://[BUCKET NAME].

**Correct Answer: A**

**Section:**

**Explanation:**

<https://cloud.google.com/solutions/tcp-optimization-for-network-performance-in-gcp-and-hybrid>

<https://cloud.google.com/solutions/tcp-optimization-for-network-performance-in-gcp-and-hybrid>

<https://cloud.google.com/blog/products/gcp/5-steps-to-better-gcp-network-performance?hl=ml>

#### QUESTION 34

You work for a multinational enterprise that is moving to GCP.

These are the cloud requirements:

- An on-premises data center located in the United States in Oregon and New York with Dedicated Interconnects connected to Cloud regions us-west1 (primary HQ) and us-east4 (backup)
- Multiple regional offices in Europe and APAC
- Regional data processing is required in europe-west1 and australia-southeast1
- Centralized Network Administration Team

Your security and compliance team requires a virtual inline security appliance to perform L7 inspection for URL filtering. You want to deploy the appliance in us-west1.

What should you do?

- A. • Create 2 VPCs in a Shared VPC Host Project. • Configure a 2-NIC instance in zone us-west1-a in the Host Project. • Attach NIC0 in VPC #1 us-west1 subnet of the Host Project. • Attach NIC1 in VPC #2 us-west1 subnet of the Host Project. • Deploy the instance. • Configure the necessary routes and firewall rules to pass traffic through the instance.
- B. • Create 2 VPCs in a Shared VPC Host Project. • Configure a 2-NIC instance in zone us-west1-a in the Service Project. • Attach NIC0 in VPC #1 us-west1 subnet of the Host Project. • Attach NIC1 in VPC #2 us-west1 subnet of the Host Project. • Deploy the instance. • Configure the necessary routes and firewall rules to pass traffic through the instance.
- C. • Create 1 VPC in a Shared VPC Host Project. • Configure a 2-NIC instance in zone us-west1-a in the Host Project. • Attach NIC0 in us-west1 subnet of the Host Project. • Attach NIC1 in us-west1 subnet of the Host Project. • Deploy the instance. • Configure the necessary routes and firewall rules to pass traffic through the instance.
- D. • Create 1 VPC in a Shared VPC Service Project. • Configure a 2-NIC instance in zone us-west1-a in the Service Project. • Attach NIC0 in us-west1 subnet of the Service Project. • Attach NIC1 in us-west1 subnet of the Service Project. • Deploy the instance. • Configure the necessary routes and firewall rules to pass traffic through the instance.

**Correct Answer: A**

**Section:**

**Explanation:**

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

#### QUESTION 35

You are designing a Google Kubernetes Engine (GKE) cluster for your organization. The current cluster size is expected to host 10 nodes, with 20 Pods per node and 150 services. Because of the migration of new services over the next 2 years, there is a planned growth for 100 nodes, 200 Pods per node, and 1500 services. You want to use VPC-native clusters with alias IP ranges, while minimizing address consumption.

How should you design this topology?

- A. Create a subnet of size/25 with 2 secondary ranges of: /17 for Pods and /21 for Services. Create a VPC-native cluster and specify those ranges.
- B. Create a subnet of size/28 with 2 secondary ranges of: /24 for Pods and /24 for Services. Create a VPC-native cluster and specify those ranges. When the services are ready to be deployed, resize the subnets.
- C. Use gcloud container clusters create [CLUSTER NAME]--enable-ip-alias to create a VPC-native cluster.
- D. Use gcloud container clusters create [CLUSTER NAME] to create a VPC-native cluster.

**Correct Answer: A**

**Section:**

**Explanation:**

The service range setting is permanent and cannot be changed. Please see

<https://stackoverflow.com/questions/60957040/how-to-increase-the-service-address-range-of-agke-cluster>

I think the correct answer is A since: Grow is expected to up to 100 nodes (that would be /25), then up to 200 pods per node (100 times 200 = 20000 so /17 is 32768), then 1500 services in a /21 (up to 2048)

<https://docs.netgate.com/pfsense/en/latest/book/network/understanding-cidr-subnet-masknotation.html>

### QUESTION 36

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: D**

**Section:**

**Explanation:**

<https://cloud.google.com/security/encryption-in-transit/> Automatic encryption between GFEs and backends For the following load balancer types, Google automatically encrypts traffic between Google Front Ends (GFEs) and your backends that reside within Google Cloud VPC networks: HTTP(S) Load Balancing TCP Proxy Load Balancing SSL Proxy Load Balancing

### QUESTION 37

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: A, C**

**Section:**

**Explanation:**

Google Cloud VPC Network Peering allows internal IP address connectivity across two Virtual Private Cloud (VPC) networks regardless of whether they belong to the same project or the same organization.

### QUESTION 38

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: B**

**Section:**

**Explanation:**

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/Invalidation.html>

#### QUESTION 39

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: A, B**

**Section:**

**Explanation:**

A: Using VPC Flow Logs VPC Flow Logs records a sample of network flows sent from and received by VM instances, including instances used as GKE nodes. These logs can be used for network monitoring, forensics, real-time security analysis, and expense optimization.

<https://cloud.google.com/vpc/docs/using-flow-logs> (B): Firewall Rules Logging overview Firewall Rules Logging allows you to audit, verify, and analyze the effects of your firewall rules. For example, you can determine if a firewall rule designed to deny traffic is functioning as intended. Firewall Rules Logging is also useful if you need to determine how many connections are affected by a given firewall rule. You enable Firewall Rules Logging individually for each firewall rule whose connections you need to log. Firewall Rules Logging is an option for any firewall rule, regardless of the action (allow or deny) or direction (ingress or egress) of the rule.

<https://cloud.google.com/vpc/docs/firewall-rules-logging>

#### QUESTION 40

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: D**

**Section:**

**Explanation:**

Cloud Armour is applied at load balancers Configuring Google Cloud Armor through Ingress.

<https://cloud.google.com/kubernetes-engine/docs/how-to/ingress-features> Security policy features Google Cloud Armor security policies have the following core features: You can optionally use the QUIC protocol with load balancers that use Google Cloud Armor. You can use Google Cloud Armor with external HTTP(S) load balancers that are in either Premium Tier or Standard Tier. You can use security policies with GKE and the default Ingress controller.

#### QUESTION 41

You want to use Cloud Interconnect to connect your on-premises network to a GCP VPC. You cannot meet Google at one of its point-of-presence (POP) locations, and your on-premises router cannot run a Border Gateway

Protocol (BGP) configuration.

Which connectivity model should you use?

- A. Direct Peering
- B. Dedicated Interconnect
- C. Partner Interconnect with a layer 2 partner
- D. Partner Interconnect with a layer 3 partner

**Correct Answer: D**

**Section:**

**Explanation:**

<https://cloud.google.com/network-connectivity/docs/interconnect/concepts/partner-overview> For Layer 3 connections, your service provider establishes a BGP session between your Cloud Routers and their edge routers for each VLAN attachment. You don't need to configure BGP on your on-premises router. Google and your service provider automatically set the correct configurations.

<https://cloud.google.com/network-connectivity/docs/interconnect/concepts/partner-overview#connectivity-type>

#### QUESTION 42

You have configured a Compute Engine virtual machine instance as a NAT gateway. You execute the following command:

```
gcloud compute routes create no-ip-internet-route \  
--network custom-network1 \  
--destination-range 0.0.0.0/0 \  
--next-hop instance nat-gateway \  
--next-hop instance-zone us-central1-a \  
--tags no-ip --priority 800
```

You want existing instances to use the new NAT gateway. Which command should you execute?

- A. `sudo sysctl -w net.ipv4.ip_forward=1`
- B. `gcloud compute instances add-tags [existing-instance] --tags no-ip`
- C. `gcloud builds submit --config=cloudbuild.waml --substitutions=TAG_NAME=no-ip`
- D. `gcloud compute instances create example-instance --network custom-network1 \  
--subnet subnet-us-central \  
--no-address \  
--zone us-central1-a \  
--image-family debian-9 \  
--image-project debian-cloud \  
--tags no-ip`

**Correct Answer: B**

**Section:**

**Explanation:**

<https://cloud.google.com/sdk/gcloud/reference/compute/routes/create>

In order to apply a route to an existing instance we should use a tag to bind the route to it.

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

#### QUESTION 43

You need to configure a static route to an on-premises resource behind a Cloud VPN gateway that is configured for policy-based routing using the gcloud command.

Which next hop should you choose?

- A. The default internet gateway
- B. The IP address of the Cloud VPN gateway

- C. The name and region of the Cloud VPN tunnel
- D. The IP address of the instance on the remote side of the VPN tunnel

**Correct Answer: C**

**Section:**

**Explanation:**

When you create a route based tunnel using the Cloud Console, Classic VPN performs both of the following tasks: Sets the tunnel's local and remote traffic selectors to any IP address (0.0.0.0/0) For each range in Remote network IP ranges, Google Cloud creates a custom static route whose destination (prefix) is the range's CIDR, and whose next hop is the tunnel.

<https://cloud.google.com/network-connectivity/docs/vpn/how-to/creating-static-vpns>

Reference: <https://cloud.google.com/vpn/docs/how-to/creating-static-vpns>

#### QUESTION 44

You need to enable Cloud CDN for all the objects inside a storage bucket. You want to ensure that all the object in the storage bucket can be served by the CDN.

What should you do in the GCP Console?

- A. Create a new cloud storage bucket, and then enable Cloud CDN on it.
- B. Create a new TCP load balancer, select the storage bucket as a backend, and then enable Cloud CDN on the backend.
- C. Create a new SSL proxy load balancer, select the storage bucket as a backend, and then enable Cloud CDN on the backend.
- D. Create a new HTTP load balancer, select the storage bucket as a backend, enable Cloud CDN on the backend, and make sure each object inside the storage bucket is shared publicly.

**Correct Answer: D**

**Section:**

**Explanation:**

[https://cloud.google.com/load-balancing/docs/https/adding-backend-buckets-to-loadbalancers#using\\_cloud\\_cdn\\_with\\_cloud\\_storage\\_buckets](https://cloud.google.com/load-balancing/docs/https/adding-backend-buckets-to-loadbalancers#using_cloud_cdn_with_cloud_storage_buckets)

Cloud CDN needs HTTP(S) Load Balancers and Cloud Storage bucket has to be shared publicly.

<https://cloud.google.com/cdn/docs/setting-up-cdn-with-bucket>

#### QUESTION 45

You are creating an instance group and need to create a new health check for HTTP(s) load balancing.

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

- A. Create a new health check using the gcloud command line tool.
- B. Create a new health check using the VPC Network section in the GCP Console.
- C. Create a new health check, or select an existing one, when you complete the load balancer's backend configuration in the GCP Console.
- D. Create a new legacy health check using the gcloud command line tool.
- E. Create a new legacy health check using the Health checks section in the GCP Console.

**Correct Answer: A, C**

**Section:**

**Explanation:**

[https://cloud.google.com/load-balancing/docs/healthchecks#creating\\_and\\_modifying\\_health\\_checks](https://cloud.google.com/load-balancing/docs/healthchecks#creating_and_modifying_health_checks)

#### QUESTION 46

You are in the early stages of planning a migration to GCP. You want to test the functionality of your hybrid cloud design before you start to implement it in production. The design includes services running on a Compute Engine Virtual Machine instance that need to communicate to on-premises servers using private IP addresses. The on-premises servers have connectivity to the internet, but you have not yet established any Cloud Interconnect connections. You want to choose the lowest cost method of enabling connectivity between your instance and on-premises servers and complete the test in 24 hours.

Which connectivity method should you choose?



- A. Cloud VPN
- B. 50-Mbps Partner VLAN attachment
- C. Dedicated Interconnect with a single VLAN attachment
- D. Dedicated Interconnect, but don't provision any VLAN attachments

**Correct Answer: A**

**Section:**

#### QUESTION 47

You are developing an HTTP API hosted on a Compute Engine virtual machine instance that must be invoked only by multiple clients within the same Virtual Private Cloud (VPC). You want clients to be able to get the IP address of the service. What should you do?

- A. Reserve a static external IP address and assign it to an HTTP(S) load balancing service's forwarding rule. Clients should use this IP address to connect to the service.
- B. Ensure that clients use Compute Engine internal DNS by connecting to the instance name with the url `https://[INSTANCE_NAME].[ZONE].c.[PROJECT_ID].internal/`.
- C. Reserve a static external IP address and assign it to an HTTP(S) load balancing service's forwarding rule. Then, define an A record in Cloud DNS. Clients should use the name of the A record to connect to the service.
- D. Ensure that clients use Compute Engine internal DNS by connecting to the instance name with the url `https://[API_NAME]/[API_VERSION]/`.

**Correct Answer: B**

**Section:**

#### QUESTION 48

You recently deployed Cloud VPN to connect your on-premises data center to Google Cloud. You need to monitor the usage of this VPN and set up alerts in case traffic exceeds the maximum allowed. You need to be able to quickly decide whether to add extra links or move to a Dedicated Interconnect. What should you do?

- A. In the Network Intelligence Center, check for the number of packet drops on the VPN.
- B. In the Google Cloud Console, use Monitoring Query Language to create a custom alert for bandwidth utilization.
- C. In the Monitoring section of the Google Cloud Console, use the Dashboard section to select a default dashboard for VPN usage.
- D. In the VPN section of the Google Cloud Console, select the VPN under hybrid connectivity, and then select monitoring to display utilization on the dashboard.

**Correct Answer: A**

**Section:**

#### QUESTION 49

You have applications running in the us-west1 and us-east1 regions. You want to build a highly available VPN that provides 99.99% availability to connect your applications from your project to the cloud services provided by your partner's project while minimizing the amount of infrastructure required. Your partner's services are also in the us-west1 and us-east1 regions. You want to implement the simplest solution. What should you do?

- A. Create one Cloud Router and one HA VPN gateway in each region of your VPC and your partner's VPC. Connect your VPN gateways to the partner's gateways. Enable global dynamic routing in each VPC.
- B. Create one Cloud Router and one HA VPN gateway in the us-west1 region of your VPC. Create one OpenVPN Access Server in each region of your partner's VPC. Connect your VPN gateway to your partner's servers.
- C. Create one OpenVPN Access Server in each region of your VPC and your partner's VPC. Connect your servers to the partner's servers.
- D. Create one Cloud Router and one HA VPN gateway in the us-west1 region of your VPC and your partner's VPC. Connect your VPN gateways to the partner's gateways with a pair of tunnels. Enable global dynamic routing in each VPC.

**Correct Answer: A**

**Section:**

#### QUESTION 50

You need to create the network infrastructure to deploy a highly available web application in the useast1 and us-west1 regions. The application runs on Compute Engine instances, and it does not require the use of a

database. You want to follow Google-recommended practices. What should you do?

- A. Create one VPC with one subnet in each region.  
Create a regional network load balancer in each region with a static IP address.  
Enable Cloud CDN on the load balancers.  
Create an A record in Cloud DNS with both IP addresses for the load balancers.
- B. Create one VPC with one subnet in each region.  
Create a global load balancer with a static IP address.  
Enable Cloud CDN and Google Cloud Armor on the load balancer.  
Create an A record using the IP address of the load balancer in Cloud DNS.
- C. Create one VPC in each region, and peer both VPCs.  
Create a global load balancer.  
Enable Cloud CDN on the load balancer.  
Create a CNAME for the load balancer in Cloud DNS.
- D. Create one VPC with one subnet in each region.  
Create an HTTP(S) load balancer with a static IP address.  
Choose the standard tier for the network.  
Enable Cloud CDN on the load balancer.  
Create a CNAME record using the load balancer's IP address in Cloud DNS.

**Correct Answer: B**

**Section:**

#### QUESTION 51

You recently configured Google Cloud Armor security policies to manage traffic to your application.

You discover that Google Cloud Armor is incorrectly blocking some traffic to your application. You need to identify the web application firewall (WAF) rule that is incorrectly blocking traffic. What should you do?

- A. Enable firewall logs, and view the logs in Firewall Insights.
- B. Enable HTTP(S) Load Balancing logging with sampling rate equal to 1, and view the logs in CloudLogging.
- C. Enable VPC Flow Logs, and view the logs in Cloud Logging.
- D. Enable Google Cloud Armor audit logs, and view the logs on the Activity page in the Google Cloud Console.

**Correct Answer: A**

**Section:**

#### QUESTION 52

You are the Organization Admin for your company. One of your engineers is responsible for setting up multiple host projects across multiple folders and sharing subnets with service projects. You need to enable the engineer's Identity and Access Management (IAM) configuration to complete their task in the fewest number of steps. What should you do?

- A. Set up the engineer with Compute Shared VPC Admin IAM role at the folder level.
- B. Set up the engineer with Compute Shared VPC Admin IAM role at the organization level.
- C. Set up the engineer with Compute Shared VPC Admin IAM role and Project IAM Admin role at the folder level.
- D. Set up the engineer with Compute Shared VPC Admin IAM role and Project IAM Admin role at the organization level.

**Correct Answer: B**

**Section:**

#### QUESTION 53

You recently deployed Compute Engine instances in regions us-west1 and us-east1 in a Virtual Private Cloud (VPC) with default routing configurations. Your company security policy mandates that virtual machines (VMs) must not have public IP addresses attached to them. You need to allow your instances to fetch updates from the internet while preventing external access. What should you do?

- A. Create a Cloud NAT gateway and Cloud Router in both us-west1 and us-east1.
- B. Create a single global Cloud NAT gateway and global Cloud Router in the VPC.
- C. Change the instances' network interface external IP address from None to Ephemeral.
- D. Create a firewall rule that allows egress to destination 0.0.0.0/0.

**Correct Answer: A**

**Section:**

#### QUESTION 54

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: B, C**

**Section:**

**Explanation:**

<https://cloud.google.com/dns/docs/best-practices>

#### QUESTION 55

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: D**

**Section:**

**Explanation:**

<https://cloud.google.com/network-connectivity/docs/router/support/troubleshooting#ecmp>

#### QUESTION 56

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: D, E**

**Section:**

**Explanation:**

<https://cloud.google.com/network-connectivity/docs/interconnect/how-to/dedicated/retrievingloas>

#### QUESTION 57

Your company offers a popular gaming service. Your instances are deployed with private IP addresses, and external access is granted through a global load balancer. You believe you have identified a potential malicious actor, but aren't certain you have the correct client IP address. You want to identify this actor while minimizing disruption to your legitimate users.

What should you do?

- A. Create a Cloud Armor Policy rule that denies traffic and review necessary logs.
- B. Create a Cloud Armor Policy rule that denies traffic, enable preview mode, and review necessary logs.
- C. Create a VPC Firewall rule that denies traffic, enable logging and set enforcement to disabled, and review necessary logs.
- D. Create a VPC Firewall rule that denies traffic, enable logging and set enforcement to enabled, and review necessary logs.

**Correct Answer: B**

**Section:**

**Explanation:**

[https://cloud.google.com/armor/docs/security-policy-concepts#preview\\_mode](https://cloud.google.com/armor/docs/security-policy-concepts#preview_mode)

#### QUESTION 58

Your company's web server administrator is migrating on-premises backend servers for an application to GCP. Libraries and configurations differ significantly across these backend servers. The migration to GCP will be lift-and-shift, and all requests to the servers will be served by a single network load balancer frontend. You want to use a GCP-native solution when possible.

How should you deploy this service in GCP?

- A. Create a managed instance group from one of the images of the on-premises servers, and link this instance group to a target pool behind your load balancer.
- B. Create a target pool, add all backend instances to this target pool, and deploy the target pool behind your load balancer.
- C. Deploy a third-party virtual appliance as frontend to these servers that will accommodate the significant differences between these backend servers.
- D. Use GCP's ECMP capability to load-balance traffic to the backend servers by installing multiple equal-priority static routes to the backend servers.

**Correct Answer: B**

**Section:**

**QUESTION 59**

You decide to set up Cloud NAT. After completing the configuration, you find that one of your instances is not using the Cloud NAT for outbound NAT. What is the most likely cause of this problem?

- A. The instance has been configured with multiple interfaces.
- B. An external IP address has been configured on the instance.
- C. You have created static routes that use RFC1918 ranges.
- D. The instance is accessible by a load balancer external IP address.

**Correct Answer: B**

**Section:**

**QUESTION 60**

You want to set up two Cloud Routers so that one has an active Border Gateway Protocol (BGP) session, and the other one acts as a standby. Which BGP attribute should you use on your on-premises router?

- A. AS-Path
- B. Community
- C. Local Preference
- D. Multi-exit Discriminator

**Correct Answer: D**

**Section:**

**QUESTION 61**

You are designing a new global application using Compute Engine instances that will be exposed by a global HTTP(S) load balancer. You need to secure your application from distributed denial-of-service and application layer (layer 7) attacks. What should you do?

- A. Configure VPC Service Controls and create a secure perimeter. Define fine-grained perimeter controls and enforce that security posture across your Google Cloud services and projects.
- B. Configure a Google Cloud Armor security policy in your project, and attach it to the backend service to secure the application.
- C. Configure VPC firewall rules to protect the Compute Engine instances against distributed denial-of-service attacks.
- D. Configure hierarchical firewall rules for the global HTTP(S) load balancer public IP address at the organization level.

**Correct Answer: C**

**Section:**

**QUESTION 62**

Your organization's security policy requires that all internet-bound traffic return to your on-premises data center through HA VPN tunnels before egressing to the internet, while allowing virtual machines (VMs) to leverage private Google APIs using private virtual IP addresses 199.36.153.4/30.

You need to configure the routes to enable these traffic flows. What should you do?

- A. Configure a custom route 0.0.0.0/0 with a priority of 500 whose next hop is the default internet gateway. Configure another custom route 199.36.153.4/30 with priority of 1000 whose next hop is the VPN tunnel back to the on-premises data center.
- B. Configure a custom route 0.0.0.0/0 with a priority of 1000 whose next hop is the internet gateway. Configure another custom route 199.36.153.4/30 with a priority of 500 whose next hop is the VPN tunnel back to the on-premises data center.
- C. Announce a 0.0.0.0/0 route from your on-premises router with a MED of 1000. Configure a custom route 199.36.153.4/30 with a priority of 1000 whose next hop is the default internet gateway.
- D. Announce a 0.0.0.0/0 route from your on-premises router with a MED of 500. Configure another custom route 199.36.153.4/30 with a priority of 1000 whose next hop is the VPN tunnel back to the on-premises data center.

center.

**Correct Answer: A**

**Section:**

**QUESTION 63**

Your company has defined a resource hierarchy that includes a parent folder with subfolders for each department. Each department defines their respective project and VPC in the assigned folder and has the appropriate permissions to create Google Cloud firewall rules. The VPCs should not allow traffic to flow between them. You need to block all traffic from any source, including other VPCs, and delegate only the intra-VPC firewall rules to the respective departments.

What should you do?

- A. Create a VPC firewall rule in each VPC to block traffic from any source, with priority 0.
- B. Create a VPC firewall rule in each VPC to block traffic from any source, with priority 1000.
- C. Create two hierarchical firewall policies per department's folder with two rules in each: a highpriority rule that matches traffic from the private CIDRs assigned to the respective VPC and sets the action to allow, and another lower-priority rule that blocks traffic from any other source.
- D. Create two hierarchical firewall policies per department's folder with two rules in each: a highpriority rule that matches traffic from the private CIDRs assigned to the respective VPC and sets the action to goto\_next, and another lower-priority rule that blocks traffic from any other source.

**Correct Answer: B**

**Section:**

**QUESTION 64**

You have two Google Cloud projects in a perimeter to prevent data exfiltration. You need to move a third project inside the perimeter; however, the move could negatively impact the existing environment. You need to validate the impact of the change. What should you do?

- A. Enable Firewall Rules Logging inside the third project.
- B. Modify the existing VPC Service Controls policy to include the new project in dry run mode.
- C. Monitor the Resource Manager audit logs inside the perimeter.
- D. Enable VPC Flow Logs inside the third project, and monitor the logs for negative impact.

**Correct Answer: B**

**Section:**

**QUESTION 65**

You are configuring an HA VPN connection between your Virtual Private Cloud (VPC) and onpremises network. The VPN gateway is named VPN\_GATEWAY\_1. You need to restrict VPN tunnels created in the project to only connect to your on-premises VPN public IP address: 203.0.113.1/32.

What should you do?

- A. Configure a firewall rule accepting 203.0.113.1/32, and set a target tag equal to VPN\_GATEWAY\_1.
- B. Configure the Resource Manager constraint constraints/compute.restrictVpnPeerIPs to use an allowList consisting of only the 203.0.113.1/32 address.
- C. Configure a Google Cloud Armor security policy, and create a policy rule to allow 203.0.113.1/32.
- D. Configure an access control list on the peer VPN gateway to deny all traffic except 203.0.113.1/32, and attach it to the primary external interface.

**Correct Answer: B**

**Section:**

**QUESTION 66**

Your company has recently installed a Cloud VPN tunnel between your on-premises data center and your Google Cloud Virtual Private Cloud (VPC). You need to configure access to the Cloud Functions API for your on-

premises servers.

The configuration must meet the following requirements:

Certain data must stay in the project where it is stored and not be exfiltrated to other projects.

Traffic from servers in your data center with RFC 1918 addresses do not use the internet to access Google Cloud APIs.

All DNS resolution must be done on-premises.

The solution should only provide access to APIs that are compatible with VPC Service Controls.

What should you do?

- A. Create an A record for private.googleapis.com using the 199.36.153.8/30 address range.  
Create a CNAME record for \*.googleapis.com that points to the A record.  
Configure your on-premises routers to use the Cloud VPN tunnel as the next hop for the addresses you used in the A record.  
Remove the default internet gateway from the VPC where your Cloud VPN tunnel terminates.
- B. Create an A record for restricted.googleapis.com using the 199.36.153.4/30 address range.  
Create a CNAME record for \*.googleapis.com that points to the A record.  
Configure your on-premises routers to use the Cloud VPN tunnel as the next hop for the addresses you used in the A record.  
Configure your on-premises firewalls to allow traffic to the restricted.googleapis.com addresses.
- C. Create an A record for restricted.googleapis.com using the 199.36.153.4/30 address range.  
Create a CNAME record for \*.googleapis.com that points to the A record.  
Configure your on-premises routers to use the Cloud VPN tunnel as the next hop for the addresses you used in the A record.  
Remove the default internet gateway from the VPC where your Cloud VPN tunnel terminates.
- D. Create an A record for private.googleapis.com using the 199.36.153.8/30 address range.  
Create a CNAME record for \*.googleapis.com that points to the A record.  
Configure your on-premises routers to use the Cloud VPN tunnel as the next hop for the addresses you used in the A record.  
Configure your on-premises firewalls to allow traffic to the private.googleapis.com addresses.

**Correct Answer: C**

**Section:**

#### QUESTION 67

You need to configure a Google Kubernetes Engine (GKE) cluster. The initial deployment should have 5 nodes with the potential to scale to 10 nodes. The maximum number of Pods per node is 8. The number of services could grow from 100 to up to 1024. How should you design the IP schema to optimally meet this requirement?

- A. Configure a /28 primary IP address range for the node IP addresses. Configure a /25 secondary IP range for the Pods. Configure a /22 secondary IP range for the Services.
- B. Configure a /28 primary IP address range for the node IP addresses. Configure a /25 secondary IP range for the Pods. Configure a /21 secondary IP range for the Services.
- C. Configure a /28 primary IP address range for the node IP addresses. Configure a /28 secondary IP range for the Pods. Configure a /21 secondary IP range for the Services.
- D. Configure a /28 primary IP address range for the node IP addresses. Configure a /24 secondary IP range for the Pods. Configure a /22 secondary IP range for the Services.

**Correct Answer: A**

**Section:**

#### QUESTION 68

You are migrating a three-tier application architecture from on-premises to Google Cloud. As a first step in the migration, you want to create a new Virtual Private Cloud (VPC) with an external HTTP(S) load balancer. This load balancer will forward traffic back to the on-premises compute resources that run the presentation tier. You need to stop malicious traffic from entering your VPC and consuming resources at the edge, so you must configure this policy to filter IP addresses and stop cross-site scripting (XSS) attacks. What should you do?

- A. Create a Google Cloud Armor policy, and apply it to a backend service that uses an unmanaged instance group backend.
- B. Create a hierarchical firewall ruleset, and apply it to the VPC's parent organization resource node.
- C. Create a Google Cloud Armor policy, and apply it to a backend service that uses an internet network endpoint group (NEG) backend.

D. Create a VPC firewall ruleset, and apply it to all instances in unmanaged instance groups.

**Correct Answer: C**

**Section:**

#### QUESTION 69

You just finished your company's migration to Google Cloud and configured an architecture with 3 Virtual Private Cloud (VPC) networks: one for Sales, one for Finance, and one for Engineering. Every VPC contains over 100 Compute Engine instances, and now developers using instances in the Sales VPC and the Finance VPC require private connectivity between each other. You need to allow communication between Sales and Finance without compromising performance or security. What should you do?

- A. Configure an HA VPN gateway between the Finance VPC and the Sales VPC.
- B. Configure the instances that require communication between each other with an external IP address.
- C. Create a VPC Network Peering connection between the Finance VPC and the Sales VPC.
- D. Configure Cloud NAT and a Cloud Router in the Sales and Finance VPCs.

**Correct Answer: C**

**Section:**

#### QUESTION 70

You have provisioned a Partner Interconnect connection to extend connectivity from your onpremises data center to Google Cloud. You need to configure a Cloud Router and create a VLAN attachment to connect to resources inside your VPC. You need to configure an Autonomous System number (ASN) to use with the associated Cloud Router and create the VLAN attachment. What should you do?

- A. Use a 4-byte private ASN 4200000000-4294967294.
- B. Use a 2-byte private ASN 64512-65535.
- C. Use a public Google ASN 15169.
- D. Use a public Google ASN 16550.

**Correct Answer: B**

**Section:**

#### QUESTION 71

You are configuring a new application that will be exposed behind an external load balancer with both IPv4 and IPv6 addresses and support TCP pass-through on port 443. You will have backends in two regions: us-west1 and us-east1. You want to serve the content with the lowest possible latency while ensuring high availability and autoscaling. Which configuration should you use?

- A. Use global SSL Proxy Load Balancing with backends in both regions.
- B. Use global TCP Proxy Load Balancing with backends in both regions.
- C. Use global external HTTP(S) Load Balancing with backends in both regions.
- D. Use Network Load Balancing in both regions, and use DNS-based load balancing to direct traffic to the closest region.

**Correct Answer: D**

**Section:**

#### QUESTION 72

In your project my-project, you have two subnets in a Virtual Private Cloud (VPC): subnet-a with IP range 10.128.0.0/20 and subnet-b with IP range 172.16.0.0/24. You need to deploy database servers in subnet-a. You will also deploy the application servers and web servers in subnet-b. You want to configure firewall rules that only allow database traffic from the application servers to the database servers. What should you do?



- A. Create network tag app-server and service account sa-db@my-project.iam.gserviceaccount.com. Add the tag to the application servers, and associate the service account with the database servers. Run the following command:
- ```
gcloud compute firewall-rules create app-db-firewall-rule \
--action allow \
--direction ingress \
--rules top:3306 \
--source-tags app-server \
--target-service-accounts sa-db@myproject.iam.gserviceaccount.com
```
- B. Create service accounts sa-app@my-project.iam.gserviceaccount.com and sa-db@myproject.iam.gserviceaccount.com. Associate service account sa-app with the application servers, and associate the service account sa-db with the database servers. Run the following command:
- ```
gcloud compute firewall-rules create app-db-firewall-ru
--allow TCP:3306 \
--source-service-accounts sa-app@democloud-idpdemo.iam.gserviceaccount.com \
--target-service-accounts sa-db@my-
```
- C. Create service accounts sa-app@my-project.iam.gserviceaccount.com and sa-db@myproject.iam.gserviceaccount.com. Associate the service account sa-app with the application servers, and associate the service account sa-db with the database servers. Run the following command:
- ```
gcloud compute firewall-rules create app-db-firewall-ru
--allow TCP:3306 \
--source-ranges 10.128.0.0/20 \
--source-service-accounts sa-app@myproject.iam.gserviceaccount.com \
--target-service-accounts sa-db@myproject.iam.gserviceaccount.com
```
- D. Create network tags app-server and db-server. Add the app-server tag to the application servers, and add the db-server tag to the database servers. Run the following command:
- ```
gcloud compute firewall-rules create app-db-firewall-rule \
--action allow \
--direction ingress \
--rules tcp:3306 \
--source-ranges 10.128.0.0/20 \
--source-tags app-server \
--target-tags db-server
```

**Correct Answer: D**

**Section:**

### QUESTION 73

You are planning a large application deployment in Google Cloud that includes on-premises connectivity. The application requires direct connectivity between workloads in all regions and on-premises locations without address translation, but all RFC 1918 ranges are already in use in the on-premises locations. What should you do?

- A. Use multiple VPC networks with a transit network using VPC Network Peering.
- B. Use overlapping RFC 1918 ranges with multiple isolated VPC networks.
- C. Use overlapping RFC 1918 ranges with multiple isolated VPC networks and Cloud NAT.
- D. Use non-RFC 1918 ranges with a single global VPC.

**Correct Answer: D**

**Section:**

**QUESTION 74**

Your company's security team wants to limit the type of inbound traffic that can reach your web servers to protect against security threats. You need to configure the firewall rules on the web servers within your Virtual Private Cloud (VPC) to handle HTTP and HTTPS web traffic for TCP only.

What should you do?

- A. Create an allow on match ingress firewall rule with the target tag "web-server" to allow all IP addresses for TCP port 80.
- B. Create an allow on match egress firewall rule with the target tag "web-server" to allow all IP addresses for TCP port 80.
- C. Create an allow on match ingress firewall rule with the target tag "web-server" to allow all IP addresses for TCP ports 80 and 443.
- D. Create an allow on match egress firewall rule with the target tag "web-server" to allow web server IP addresses for TCP ports 60 and 443.

**Correct Answer: C**

**Section:**

**Explanation:**

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

**QUESTION 75**

You successfully provisioned a single Dedicated Interconnect. The physical connection is at a colocation facility closest to us-west2. Seventy-five percent of your workloads are in us-east4, and the remaining twenty-five percent of your workloads are in us-central1. All workloads have the same network traffic profile. You need to minimize data transfer costs when deploying VLAN attachments.

What should you do?

- A. Keep the existing Dedicated interconnect. Deploy a VLAN attachment to a Cloud Router in uswest2, and use VPC global routing to access workloads in us-east4 and us-central1.
- B. Keep the existing Dedicated Interconnect. Deploy a VLAN attachment to a Cloud Router in useast4, and deploy another VLAN attachment to a Cloud Router in us-central1.
- C. Order a new Dedicated Interconnect for a colocation facility closest to us-east4, and use VPC global routing to access workloads in us-central1.
- D. Order a new Dedicated Interconnect for a colocation facility closest to us-central1, and use VPC global routing to access workloads in us-east4.

**Correct Answer: C**

**Section:**

**QUESTION 76**

You are designing a hybrid cloud environment. Your Google Cloud environment is interconnected with your on-premises network using HA VPN and Cloud Router in a central transit hub VPC. The Cloud Router is configured with the default settings. Your on-premises DNS server is located at 192.168.20.88. You need to ensure that your Compute Engine resources in multiple spoke VPCs can resolve on-premises private hostnames using the domain corp.altostrat.com while also resolving Google Cloud hostnames. You want to follow Google-recommended practices. What should you do?

- A. Create a private forwarding zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com that points to 192.168.20.88. Associate the zone with the hub VPC. Create a private peering zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com associated with the spoke VPCs, with the hub VPC as the target. Set a custom route advertisement on the Cloud Router for 35.199.192.0/19. Configure VPC peering in the spoke VPCs to peer with the hub VPC.
- B. Create a private forwarding zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com that points to 192.168.20.88. Associate the zone with the hub VPC. Create a private peering zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com associated with the spoke PCs, with the hub VPC as the target. Set a custom route advertisement on the Cloud Router for 35.199.192.0/19.
- C. Create a private forwarding zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com that points to 192.168.20.88. Associate the zone with the hub VPC. Create a private peering zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com associated with the spoke VPCs, with the hub VPC as the target. Set a custom route advertisement on the Cloud Router for 35.199.192.0/19. Create a hub-and-spoke VPN deployment in each spoke VPC to connect back to the on-premises network directly.
- D. Create a private forwarding zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com that points to 192.168.20.88. Associate the zone with the hub VPC. Create a private peering zone in Cloud DNS for 'corp.altostrat.com' called corp-altostrat-com associated with the spoke VPCs, with the hub VPC as the target.

Sat a custom route advertisement on the Cloud Router for 35.199.192.0/19.  
Create a hub and spoke VPN deployment in each spoke VPC to connect back to the hub VPC.

**Correct Answer: A**  
**Section:**

**QUESTION 77**

You have the following firewall ruleset applied to all instances in your Virtual Private Cloud (VPC):

Direction	Action	Address range	Port	Priority
egress	deny	192.0.2.0/24	80	100
egress	deny	198.51.100.0/24	80	200
ingress	allow	203.0.113.0/24	80	300

You need to update the firewall rule to add the following rule to the ruleset:

Direction	Action	Address range	Port	Logging
egress	deny	192.0.2.42/32	80	true

You are using a new user account. You must assign the appropriate identity and Access Management (IAM) user roles to this new user account before updating the firewall rule. The new user account must be able to apply the update and view firewall logs. What should you do?

- A. Assign the compute.securityAdmin and logging.viewer role to the new user account. Apply the new firewall rule with a priority of 50.
- B. Assign the compute.securityAdmin and logging.bucketWriter role to the new user account. Apply the new firewall rule with a priority of 150.
- C. Assign the compute.orgSecurityPolicyAdmin and logging.viewer role to the new user account. Apply the new firewall rule with a priority of 50.
- D. Assign the compute.orgSecurityPolicyAdmin and logging.bucketWriter role to the new user account. Apply the new firewall rule with a priority of 150.

**Correct Answer: A**  
**Section:**

**QUESTION 78**

Your organization has a single project that contains multiple Virtual Private Clouds (VPCs). You need to secure API access to your Cloud Storage buckets and BigQuery datasets by allowing API access only from resources in your corporate public networks. What should you do?

- A. Create an access context policy that allows your VPC and corporate public network IP ranges, and then attach the policy to Cloud Storage and BigQuery.
- B. Create a VPC Service Controls perimeter for your project with an access context policy that allows your corporate public network IP ranges.
- C. Create a firewall rule to block API access to Cloud Storage and BigQuery from unauthorized networks.
- D. Create a VPC Service Controls perimeter for each VPC with an access context policy that allows your corporate public network IP ranges.

**Correct Answer: B**  
**Section:**

**QUESTION 79**

Your company's Google Cloud-deployed, streaming application supports multiple languages. The application development team has asked you how they should support splitting audio and video traffic to different backend Google Cloud storage buckets. They want to use URL maps and minimize operational overhead. They are currently using the following directory structure:

/fr/video  
/en/video  
/es/video

- A. ./video  
/fr/audio  
/en/audio  
/es/audio
- B. ./audio  
Which solution should you recommend?
- C. Rearrange the directory structure, create a URL map and leverage a path rule such as /video/\* and /audio/\*.
- D. Rearrange the directory structure, create DNS hostname entries for video and audio and leverage a path rule such as /video/\* and /audio/\*.
- E. Leave the directory structure as-is, create a URL map and leverage a path rule such as \[az]{2}\video and \[a-z]{2}\audio.
- F. Leave the directory structure as-is, create a URL map and leverage a path rule such as \*/video and \*/audio.

**Correct Answer: A**

**Section:**

**Explanation:**

[https://cloud.google.com/load-balancing/docs/url-map#configuring\\_url\\_maps](https://cloud.google.com/load-balancing/docs/url-map#configuring_url_maps) Path matcher constraints Path matchers and path rules have the following constraints: A path rule can only include a wildcard character (\*) after a forward slash character (/). For example, /videos/\* and /videos/hd/\* are valid for path rules, but /videos\* and /videos/hd\* are not. Path rules do not use regular expression or substring matching. For example, path rules for either /videos/hd or /videos/hd/\* do not apply to a URL with the path /video/hd-abcd. However, a path rule for /video/\* does apply to that path. <https://cloud.google.com/load-balancing/docs/url-map-concepts#pmconstraints>

#### QUESTION 80

You want to establish a dedicated connection to Google that can access Cloud SQL via a public IP address and that does not require a third-party service provider. Which connection type should you choose?

- A. Carrier Peering
- B. Direct Peering
- C. Dedicated Interconnect
- D. Partner Interconnect

**Correct Answer: B**

**Section:**

**Explanation:**

When established, Direct Peering provides a direct path from your on-premises network to Google services, including Google Cloud products that can be exposed through one or more public IP addresses. Traffic from Google's network to your on-premises network also takes that direct path, including traffic from VPC networks in your projects. Google Cloud customers must request that direct egress pricing be enabled for each of their projects after they have established Direct Peering with Google. For more information, see Pricing.

Reference: <https://cloud.google.com/interconnect/docs/how-to/direct-peering>

#### QUESTION 81

You are configuring a new instance of Cloud Router in your Organization's Google Cloud environment to allow connection across a new Dedicated Interconnect to your data center. Sales, Marketing, and IT each have a service project attached to the Organization's host project.

Where should you create the Cloud Router instance?

- A. VPC network in all projects
- B. VPC network in the IT Project
- C. VPC network in the Host Project
- D. VPC network in the Sales, Marketing, and IT Projects

**Correct Answer: C**

**Section:**

**Explanation:**

Reference: <https://cloud.google.com/interconnect/docs/how-to/dedicated/using-interconnectsother-projects>

#### QUESTION 82

Your company has provisioned 2000 virtual machines (VMs) in the private subnet of your Virtual Private Cloud (VPC) in the us-east1 region. You need to configure each VM to have a minimum of 128 TCP connections to a public repository so that users can download software updates and packages over the internet. You need to implement a Cloud NAT gateway so that the VMs are able to perform outbound NAT to the internet. You must ensure that all VMs can simultaneously connect to the public repository and download software updates and packages. Which two methods can you use to accomplish this? (Choose two.)

- A. Configure the NAT gateway in manual allocation mode, allocate 2 NAT IP addresses, and update the minimum number of ports per VM to 256.
- B. Create a second Cloud NAT gateway with the default minimum number of ports configured per VM to 64.
- C. Use the default Cloud NAT gateway's NAT proxy to dynamically scale using a single NAT IP address.
- D. Use the default Cloud NAT gateway to automatically scale to the required number of NAT IP addresses, and update the minimum number of ports per VM to 128.
- E. Configure the NAT gateway in manual allocation mode, allocate 4 NAT IP addresses, and update the minimum number of ports per VM to 128.

**Correct Answer: A, B**

**Section:**

#### QUESTION 83

You work for a university that is migrating to Google Cloud.

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 Dedicated 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' Dedicated Interconnects.
- D. Use standalone projects and deploy the VLAN attachments and Dedicated Interconnects in each of the individual projects.

**Correct Answer: A**

**Section:**

#### QUESTION 84

You have several microservices running in a private subnet in an existing Virtual Private Cloud (VPC).

You need to create additional serverless services that use Cloud Run and Cloud Functions to access the microservices. The network traffic volume between your serverless services and private microservices is low. However, each serverless service must be able to communicate with any of your microservices. You want to implement a solution that minimizes cost. What should you do?

- A. Deploy your serverless services to the serverless VPC. Peer the serverless service VPC to the existing VPC. Configure firewall rules to allow traffic between the serverless services and your existing microservices.
- B. Create a serverless VPC access connector for each serverless service. Configure the connectors to allow traffic between the serverless services and your existing microservices.
- C. Deploy your serverless services to the existing VPC. Configure firewall rules to allow traffic between the serverless services and your existing microservices.
- D. Create a serverless VPC access connector. Configure the serverless service to use the connector for communication to the microservices.

**Correct Answer: D**

**Section:**

#### QUESTION 85

You have provisioned a Dedicated Interconnect connection of 20 Gbps with a VLAN attachment of 10 Gbps. You recently noticed a steady increase in ingress traffic on the Interconnect connection from the on-premises data

center. You need to ensure that your end users can achieve the full 20 Gbps throughput as quickly as possible. Which two methods can you use to accomplish this? (Choose two.)

- A. Configure an additional VLAN attachment of 10 Gbps in another region. Configure the on-premises router to advertise routes with the same multi-exit discriminator (MED).
- B. Configure an additional VLAN attachment of 10 Gbps in the same region. Configure the on-premises router to advertise routes with the same multi-exit discriminator (MED).
- C. From the Google Cloud Console, modify the bandwidth of the VLAN attachment to 20 Gbps.
- D. From the Google Cloud Console, request a new Dedicated Interconnect connection of 20 Gbps, and configure a VLAN attachment of 10 Gbps.
- E. Configure Link Aggregation Control Protocol (LACP) on the on-premises router to use the 20-Gbps Dedicated Interconnect connection.

**Correct Answer: C, E**

**Section:**

#### QUESTION 86

In your company, two departments with separate GCP projects (code-dev and data-dev) in the same organization need to allow full cross-communication between all of their virtual machines in GCP. Each department has one VPC in its project and wants full control over their network. Neither department intends to recreate its existing computing resources. You want to implement a solution that minimizes cost. Which two steps should you take? (Choose two.)

- A. Connect both projects using Cloud VPN.
- B. Connect the VPCs in project code-dev and data-dev using VPC Network Peering.
- C. Enable Shared VPC in one project (e. g., code-dev), and make the second project (e. g., data-dev) a service project.
- D. Enable firewall rules to allow all ingress traffic from all subnets of project code-dev to all instances in project data-dev, and vice versa.
- E. Create a route in the code-dev project to the destination prefixes in project data-dev and use nexthop as the default gateway, and vice versa.

**Correct Answer: B, D**

**Section:**

#### QUESTION 87

You created a new VPC for your development team. You want to allow access to the resources in this VPC via SSH only. How should you configure your firewall rules?

- A. Create two firewall rules: one to block all traffic with priority 0, and another to allow port 22 with priority 1000.
- B. Create two firewall rules: one to block all traffic with priority 65536, and another to allow port 3389 with priority 1000.
- C. Create a single firewall rule to allow port 22 with priority 1000.
- D. Create a single firewall rule to allow port 3389 with priority 1000.

**Correct Answer: C**

**Section:**

**Explanation:**

Reference: <https://geekflare.com/gcp-firewall-configuration/>

#### QUESTION 88

Your on-premises data center has 2 routers connected to your GCP 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 the same 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.
- The VPN logs have no-proposal-chosen lines when the VPNs are connecting.

- BGP session is not established between one on-premises router and the Cloud Router.

What is the most likely cause of this problem?

- A. One of the VPN sessions is configured incorrectly.
- 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. BGP sessions are not established between both on-premises routers and the Cloud Router.

**Correct Answer: A**

**Section:**

**Explanation:**

If the VPN logs show a no-proposal-chosen error, this error indicates that Cloud VPN and your peer VPN gateway were unable to agree on a set of ciphers. For IKEv1, the set of ciphers must match exactly. For IKEv2, there must be at least one common cipher proposed by each gateway. Make sure that you use supported ciphers to configure your peer VPN gateway.

<https://cloud.google.com/networkconnectivity/docs/vpn/support/troubleshooting#:~:text=If%20the%20VPN%20logs%20show,of%20ciphers%20must%20match%20exactly.&text=Make%20sure%20that%20you%20use,confi%20your%20peer%20VPN%20gateway>.

#### QUESTION 89

You need to define an address plan for a future new GKE cluster in your VPC. This will be a VPC native cluster, and the default Pod IP range allocation will be used. You must pre-provision all the needed VPC subnets and their respective IP address ranges before cluster creation. The cluster will initially have a single node, but it will be scaled to a maximum of three nodes if necessary. You want to allocate the minimum number of Pod IP addresses.

Which subnet mask should you use for the Pod IP address range?

- A. /21
- B. /22
- C. /23
- D. /25

**Correct Answer: B**

**Section:**

**Explanation:**

[https://cloud.google.com/kubernetes-engine/docs/how-to/aliasips#cluster\\_sizing\\_secondary\\_range\\_pods](https://cloud.google.com/kubernetes-engine/docs/how-to/aliasips#cluster_sizing_secondary_range_pods)

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

<https://cloud.google.com/kubernetes-engine/docs/how-to/flexible-pod-cidr>

[https://cloud.google.com/kubernetes-engine/docs/concepts/alias-ips#defaults\\_limits](https://cloud.google.com/kubernetes-engine/docs/concepts/alias-ips#defaults_limits)

#### QUESTION 90

You have created a firewall with rules that only allow traffic over HTTP, HTTPS, and SSH ports. While testing, you specifically try to reach the server over multiple ports and protocols; however, you do not see any denied connections in the firewall logs. You want to resolve the issue.

What should you do?

- A. Enable logging on the default Deny Any Firewall Rule.
- B. Enable logging on the VM Instances that receive traffic.
- C. Create a logging sink forwarding all firewall logs with no filters.
- D. Create an explicit Deny Any rule and enable logging on the new rule.

**Correct Answer: D**

**Section:**

**Explanation:**

[https://cloud.google.com/vpc/docs/firewall-rules-logging#egress\\_deny\\_example](https://cloud.google.com/vpc/docs/firewall-rules-logging#egress_deny_example)

You can only enable Firewall Rules Logging for rules in a Virtual Private Cloud (VPC) network. Legacy networks are not supported. Firewall Rules Logging only records TCP and UDP connections. Although you can create a firewall rule applicable to other protocols, you cannot log their connections. You cannot enable Firewall Rules Logging for the implied deny ingress and implied allow egress rules. Log entries are written from the perspective of virtual machine (VM) instances. Log entries are only created if a firewall rule has logging enabled and if the rule applies to traffic sent to or from the VM.

Entries are created according to the connection logging limits on a best effort basis. The number of connections that can be logged in a given interval is based on the machine type. Changes to firewall rules can be viewed in VPC audit logs.

<https://cloud.google.com/vpc/docs/firewall-ruleslogging#specifications>

#### QUESTION 91

You need to create a GKE cluster in an existing VPC that is accessible from on-premises. You must meet the following requirements:

IP ranges for pods and services must be as small as possible.

The nodes and the master must not be reachable from the internet.

You must be able to use kubectl commands from on-premises subnets to manage the cluster.

How should you create the GKE cluster?

- A.
  - Create a private cluster that uses VPC advanced routes.
  - Set the pod and service ranges as /24.
  - Set up a network proxy to access the master.
- B.
  - Create a VPC-native GKE cluster using GKE-managed IP ranges.
  - Set the pod IP range as /21 and service IP range as /24.
  - Set up a network proxy to access the master.
- C.
  - Create a VPC-native GKE cluster using user-managed IP ranges.
  - Enable a GKE cluster network policy, set the pod and service ranges as /24.
  - Set up a network proxy to access the master.
  - Enable master authorized networks.
- D.
  - Create a VPC-native GKE cluster using user-managed IP ranges.
  - Enable privateEndpoint on the cluster master.
  - Set the pod and service ranges as /24.
  - Set up a network proxy to access the master.
  - Enable master authorized networks.

**Correct Answer: D**

**Section:**

**Explanation:**

Creating GKE private clusters with network proxies for controller access When you create a GKE private cluster with a private cluster controller endpoint, the cluster's controller node is inaccessible from the public internet, but it needs to be accessible for administration. By default, clusters can access the controller through its private endpoint, and authorized networks can be defined within the VPC network. To access the controller from on-premises or another VPC network, however, requires additional steps. This is because the VPC network that hosts the controller is owned by Google and cannot be accessed from resources connected through another VPC network peering connection, Cloud VPN or Cloud Interconnect. <https://cloud.google.com/solutions/creatingkubernetes-engine-private-clusters-with-net-proxies>

#### QUESTION 92

Your company has a Virtual Private Cloud (VPC) with two Dedicated Interconnect connections in two different regions: us-west1 and us-east1. Each Dedicated Interconnect connection is attached to a Cloud Router in its respective region by a VLAN attachment. You need to configure a high availability failover path. By default, all ingress traffic from the on-premises environment should flow to the VPC using the us-west1 connection. If us-west1 is unavailable, you want traffic to be rerouted to us-east1.

How should you configure the multi-exit discriminator (MED) values to enable this failover path?

- A. Use regional routing. Set the us-east1 Cloud Router to a base priority of 100, and set the us-west1 Cloud Router to a base priority of 1
- B. Use global routing. Set the us-east1 Cloud Router to a base priority of 100, and set the us-west1 Cloud Router to a base priority of 1
- C. Use regional routing. Set the us-east1 Cloud Router to a base priority of 1000, and set the uswest1 Cloud Router to a base priority of 1
- D. Use global routing. Set the us-east1 Cloud Router to a base priority of 1000, and set the us-west1 Cloud Router to a base priority of 1

**Correct Answer: A**



**Section:**

**QUESTION 93**

You have the following private Google Kubernetes Engine (GKE) cluster deployment:

```
gcloud container clusters describe customer-1-cluster --zone us-central1-c
...
clusterIpv4Cidr: 192.168.36.0/24
endpoint: 192.168.38.2
ipAllocationPolicy:
  clusterIpv4Cidr: 192.168.36.0/24
  clusterIpv4CidrBlock: 192.168.36.0/24
  clusterSecondaryRangeName: customer-1-pods
  servicesIpv4Cidr: 192.168.37.0/24
  servicesIp4CidrBlock: 192.168.37.0/24
  servicesSecondaryRangeName: customer-1-svc
  useIpAliases: true
...
masterAuthorizedNetworksConfig:
...
privateClusterConfig:
  enablePrivateEndpoint: true
  enablePrivateNodes: true
  masterIpv4CidrBlock: 192.168.38.0/28
  privateEndpoint: 192.168.38.2
  publicEndpoint: 35.224.37.17
...
servicesIpv4Cidr: 192.162.37.0/24
...
subnetwork: customer-1-nodes
zone: us-central1-c
```

You have a virtual machine (VM) deployed in the same VPC in the subnetwork kubernetesmanagement with internal IP address 192.168.40 2/24 and no external IP address assigned. You need to communicate with the cluster master using kubectl. What should you do?

- A. Add the network 192.168.40.0/24 to the masterAuthorizedNetworksConfig. Configure kubectl to communicate with the endpoint 192.168.38.2.
- B. Add the network 192.168.38.0/28 to the masterAuthorizedNetworksConfig. Configure kubectl to communicate with the endpoint 192.168.38.2
- C. Add the network 192.168.36.0/24 to the masterAuthorizedNetworksConfig. Configure kubectl to communicate with the endpoint 192.168.38.2
- D. Add an external IP address to the VM, and add this IP address in the masterAuthorizedNetworksConfig. Configure kubectl to communicate with the endpoint 35.224.37.17.

**Correct Answer: A**

**Section:**

**Explanation:**

**QUESTION 94**

You have the networking configuration shown in the diagram. Two VLAN attachments associated with two Dedicated Interconnect connections terminate on the same Cloud Router (myclouddrouter). The Interconnect connections terminate on two separate on-premises routers. You advertise the same prefixes from the Border Gateway Protocol (BGP) sessions associated with each of the VLAN attachments. You notice an asymmetric traffic flow between the two Interconnect connections. Which of the following actions should you take to troubleshoot the asymmetric traffic flow?



- A. From the Google Cloud console, navigate to the Hybrid Connectivity select the Cloud Router, and view BGP sessions.
- B. From the Cloud CLI, run `gcloud compute --protect_id router get---status mycloudrouter ----region REGION` and review the results.
- C. From the Google Cloud console, navigate to Cloud Logging to view VPC Flow Logs and review the results
- D. From the Cloud CLI. run `gcloud compute routers describe mycloudrouter --region REGION` and review the results

**Correct Answer: A**

**Section:**

**Explanation:**

#### QUESTION 95

You are in the process of deploying an internal HTTP(S) load balancer for your web server virtual machine (VM) Instances What two prerequisite tasks must be completed before creating the load balancer?  
Choose 2 answers

- A. Choose a region.
- B. Create firewall rules for health checks
- C. Reserve a static IP address for the load balancer
- D. Determine the subnet mask for a proxy-only subnet.
- E. Determine the subnet mask for Serverless VPC Access.

**Correct Answer: B, C**

**Section:**

**Explanation:**

The correct answer is B and C. You must create firewall rules for health checks and reserve a static IP address for the load balancer before creating the internal HTTP(S) load balancer.

The other options are not correct because:

Option A is not a prerequisite task. You can choose a region when you create the load balancer, but you do not need to do it beforehand.

Option D is not a prerequisite task. You can determine the subnet mask for a proxy-only subnet when you create the subnet, but you do not need to do it beforehand.

Option E is not related to the internal HTTP(S) load balancer. Serverless VPC Access is a feature that allows you to connect your serverless applications to your VPC network, but it is not required for the load balancer.