1. Azure **VNET** is like **VPC** in aws.
2. There are 2 types of **load balancer** in azure.

**App gateway** – used for L7 (http) traffic e.g. 2 tier application (suitable for web application)

**Azure Load balancer** – used for the L4 traffic e.g. 3 tier application (suitable for internal backend application)

1. We can perform combination of 2 VNET by using **VNET peering** & **VNET Gateway**. You must have **admin** access of those 2 VNET to perform this activity. By doing this, 2 VNET can **talk to each other**.
2. By using **VPN gateway,** you can perform network peering between on premise servers & servers hosted on azure platform.
3. **I.Q. Difference between NSG & ASG?**

ASGs are applied to vms and are used in combination with NSGs. By associating an ASG tag with a network security rule, you can define rules that apply to a group of vms sharing the same tag.

ASGs simplify the management of security rules in multi-tier application by grouping vms that belong to the same application tier. This makes it easier to apply & manage security policies for a specific application.

1. **I.Q. How can you block the access to your vm from a subnet?**

By default, traffic is allowed between subnets with in the VNET in azure. This is because of a default NSG rule ‘AllowVnetInBound’.

The priority of this rule is 65000, so we need to create a deny rule with the less than 65000 priority number.

1. **I.Q. Are Azure NSGs are stateful or stateless?**

They are stateful in nature. That means if you allow a port for inbound traffic to receive the request, you do not have to open the port in outbound rules to send response back.

e.g. if you host an app on port 80 in azure vm and allow inbound traffic for customers to access it. You don’t need to open port 80 in outbound traffic to send response back to the customer.

1. **I.Q. Difference between Azure firewall & NSG?**

Firewall:

Designed for controlling both outbound and inbound traffic to and from resources within a Virtual Network (Vnet)

NSG:

Typically associated with subnets or individual network interfaces to control traffic within a Vnet and between Vnets.

1. **I.Q. Advantages of resource groups in azure?**

Logical Organization

Lifecycle management

Resource group tagging

Role based access control (RBAC)

Cost management

Resource group templates (Azure resource manager templates)

Resource locks.

1. **I.Q. Difference between azure custom data & user data?**

User data is a new version of custom data & it offers added benefits. User data persists & lives in the cloud, accessible and updatable anytime.

Custom data vanishes after first boot, accessible only during VM creation.

1. **I.Q. Difference between azure app gateway & azure load balancer?**

**Azure application gateway:**

Operates at Layer 7 (application layer) of the OSI model.

Provides advanced application-level routing, SSL termination, and web application firewall (WAF) capabilities.

Suited for distributing traffic based on application awareness.

**Azure load balancer:**

Operates at layer 4 (transport layer) of the OSI model.

Distributes network traffic based on IP and port.

Suitable for generic TCP/UDP load balancing without application-specific features.

1. **I.Q. Describe the purpose of azure bastion and when it is used for secure remote access to virtual machines?**

Secure remote access

Elimination of public internet exposure

Reduced attack surface

Azure bastion integration

Simplified connectivity

Azure portal-based access

Role based access control (RBAC)

Multi-factor authentication (MFA)

Audit & monitoring