* Azure Virtual Network (VNet):
  + Fundamental building block for private networks in Azure.
  + Enables many resources the capabilities to securely communicate with other, internet and with on-premise networks to filter and route network traffic and integrate with various Azure services.
* Communication:
  + Internet:
    - All resources within a VNet communicate with the internet by default.
    - Communication to inbound resources is done assigning a Public IP Address/Load Balancer.
  + Azure Resources:
    - Through Virtual Networks
    - Through Virtual Network Service Endpoint
      * Service Endpoints allow you to secure your critical service resources to only a VNet
    - Through VNet Peering
      * Connected VNets can be the same or in any Azure regions
  + On-Premise:
    - Point-to-Site VPN
      * Connection between a VNet and Single Computer host on network.
      * Every single connection wanting to make a connection must be configured
      * This work best for beginners or developers as its low maintenance requiring very changes to existing networks.
      * Session is conducted through a encrypted tunnel.
    - Site-to-Site VPN
      * Connection between On-Prem VPN device and Azure VPN Gateway deployed in the VNet
      * Enables any On-Prem resource to be access if its authorized.
      * Session conducted is also carried out through an encrypted tunnel.
    - ExpressRoute
      * Uses an ExpressRoute partner to establish the connection between network and Azure.
      * Connection is private and traffic does not go over the internet
* Filter Traffic:
  + Network Security Groups (NSGs)
    - Works like a Stateful Firewall
  + Network Virtual Appliances
    - VM performing a network function, such as firewall, WAN optimization, etc.
* Route Traffic:
  + Route Tables:
    - Creating custom route tables with route controlling where traffic is routed to each subnet
  + BGP Routes:
    - VNet establishing connection with On-Prem network using an Azure VPN Gateway or ExpressRoute propagates On-Prem BGP routes
* VNet Integration for Azure Services:
  + Dedicated Instances
  + Private Links
  + Service Endpoints
* VNet Limits and Availability Zones
  + Azure Resources deployed can be interrupted due to reaching limit
  + VNets span across all regions
* Pricing:
  + Free of cost, but standard charges apply for applicable resources such as VMs