**Networking Needs of Enterprise**

**Basic Concepts**

* Network: Group of connected systems
* Subnet: Sub-Network is part a Network which acts like a network on its own
* DHCP: Dynamic Host Configuration Protocol helps in assigning the IP Addresses to the Devices connected
  + DHCP Server:
    - Device connected to network that holds IP addresses
  + DHCP Client:
    - The endpoint that receives the configuration information from DHCP Server
  + IP Address Pool: The range of IP Addresses available for DHCP Clients to be allocated.
  + Subnet
  + Lease: The time for which a DHCP Client can hold the IP Address
  + DHCP Relay:
* DNS:
  + Domain Name System as a Phonebook/Yellow Pages of the Network.
  + The DNS is used in Internet and it is also used internally inside organizations.
  + DNS Server Stores Records of different types for Different Purposes
    - CNAME: Alias Name Record
    - A Record: Record of host to ip address mapping
  + If the DNS Server is for internal purposes, we need to maintain it and if the DNS Server is for internet, then there are already DNS Servers hosted with public records and we have to Sync them
  + Examples:
    - DNS is offered as a Service in Amazon using a Service called as Route 53
    - DNS is offered as a Service in Azure using a Service called as Azure DNS
    - For enterprise you can use Windows 2016 Server as a DNS or other DNS Servers like Open DNS
* Co-Location:  
  