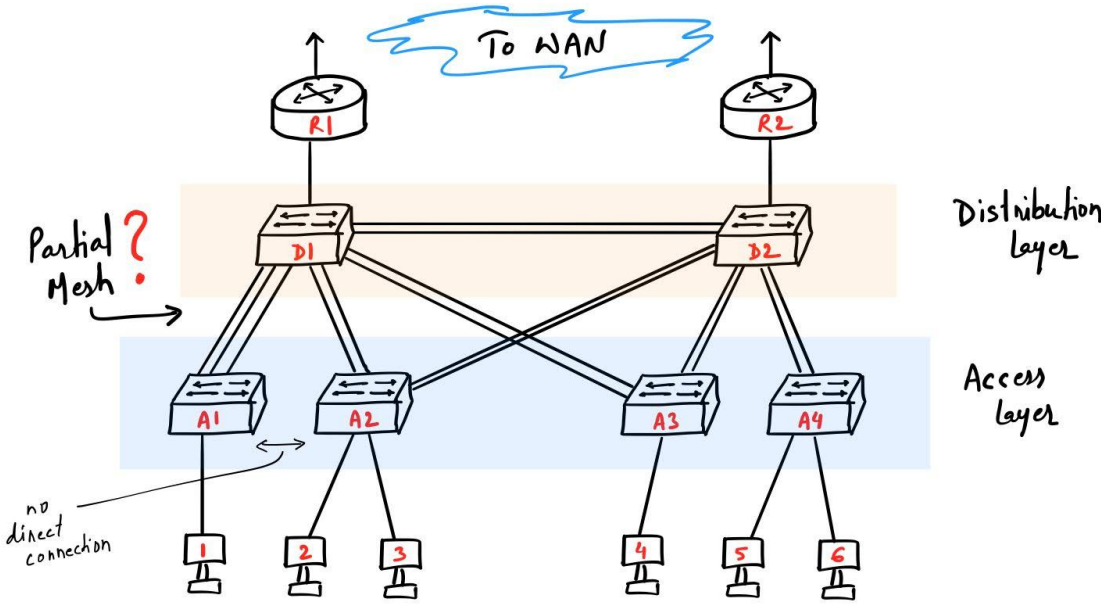
Topology

- **Star** - every device connected to central device
- **Full Mesh** - every device connected to each other
    - no of links = n(n-1) / 2
- **Partial mesh**
- **Hybrid** - combination of all designs

Tier

1. 2-Tier (collapsed core)

- Access layer - provide user devices access to LAN
- Distribution layer - distributes traffic across LAN

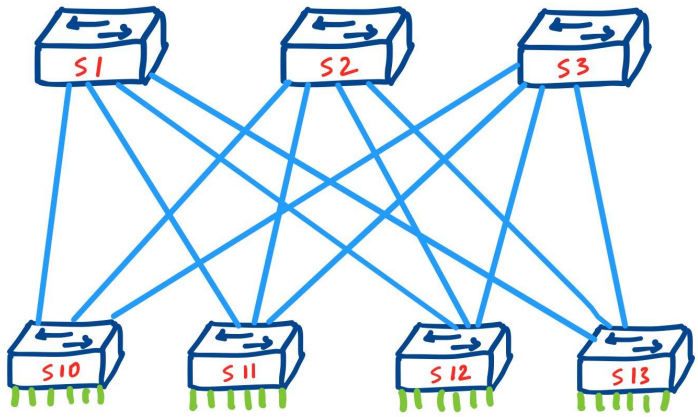


2. 3-Tier

- Access
- Distribution
- Core

Spine-Leaf

- Also called CLOS Architecture
    - Each spine connected to each leaf
    - Not connected → spine-spine / leaf-leaf
    - End devices connected to leaf switches



WAN

1. E-Line

- Point-to-point
- Connect two CPE (Customer Premise Equipments)
- Creates EVC (Ethernet Virtual Circuit) and decides which CPE connects to which.

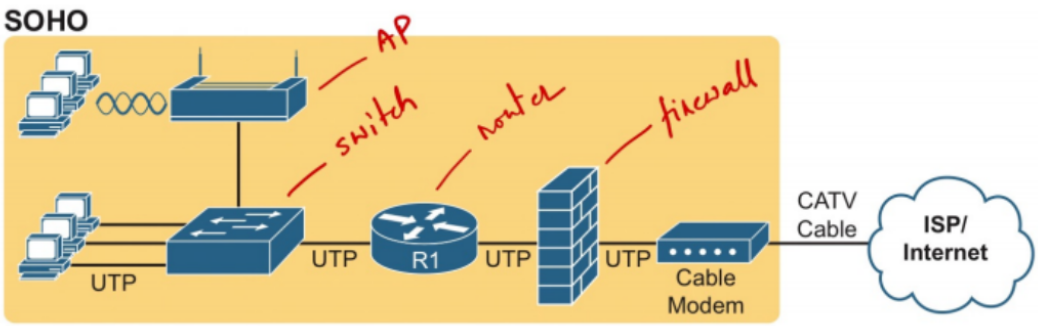
2. E-LAN

- Full Mesh
- No. of links = n (n-1) /2

3. E-Tree

- Point-to-multipoint
- Hub and spoke
- One to many
- Partial Mesh

SOHO



Cloud-computing

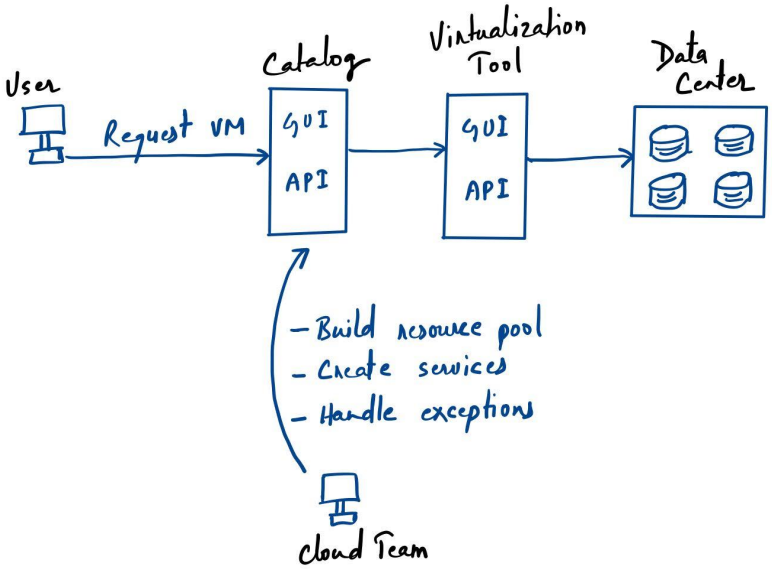
- A way to offer IT services

Criteria

- B - Broad n/w
- O - On-demand
- M - Measured service
- R - Resource pooling
- R - Rapid elasticity

Types

- Private cloud (On-premise)
    - Provide service inside the enterprise

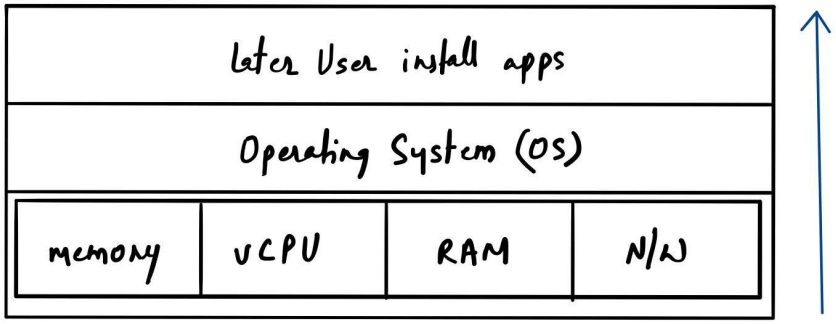


- Public cloud (Cloud)
    - Cloud service is remote
    - Accessed via internet, VPN or private WAN

Cloud-as-a-service Model

IAAS (Infrastructure-as-a-Service)

- AWS, Azure, Google Cloud
- User request h/w (vCPU, RAM, memory, n/w) and OS
- Later install app inside VM



SAAS (Software-as-a-Service)

- Google Drive, Dropbox, Apple iCloud
- Use app by simply signing in

- Selection of h/w and OS are hidden

PAAS (Platform-as-a-Service)

- Eclipse, Jenkins
- Set of tools for developers to write and test codes