Communication Resources

Overview

Functions

- Transfer Data/Numbers between components
- สิ่งต่างๆที่ใช้ในการเคลื่อนย้ายข้อมูลหรือตัวเลข

Normal View

- All transfer channels in computer systems
- Internal/Inside - Buses Interconnection
- External/Outside - Computer Networks

Infrastructure View

- External or Computer Networks
- ช่องทางการติดต่อสื่อสารระหว่างคอมพิวเตอร์ (Computer Network)
- both in physical or virtual device

Computer Network

Link - Between Nodes

- Cables, Connection
  Nodes
- Function Forward
    - Intermediate Node (การส่งผ่านข้อมูล)
- Function: Control
    - Security and Features (Management) (การควบคุมจัดการ)
- Interfaces (ไว้ใส่กับ Link เพื่อติดต่อ Node อื่น)

OSI Model: Repeater (Layer 1), Bridge (Layer 2), Router (Layer 3), Gateway (Layer 4+)
Other: Switch, Firewall, NAT, IPS, etc.

Physical Communication Resources

Basic Resources

Link

- Cable - Electric or Optics
- Wireless - Radio Wave
  Nodes
- Physical Hardware
- Switch, Router, Firewall (Physical), Hub

Virtual Communication Resources

- **Must use Physical Resource** *
  - Communication Resource
  - Computing / Storage Physical Resource
  - VM => Network Appliances
  - NFV => Network Function Virtualization
  Link
- VLAN
- Link Aggregation
  Nodes
- Virtual Switch
- Virtual Router
- Virtual Firewall

Conclusion

- Communication Resource ในมุม Infra = Network Connections Between Computer
- Links and Nodes
- Communication Nodes may forward/control
- Virtual Communication Resources must use Physical Resources
- Links and Nodes may be physical or virtual
  - to Forward and Control