Network Infrastructure

Devices and Cabling

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Outline

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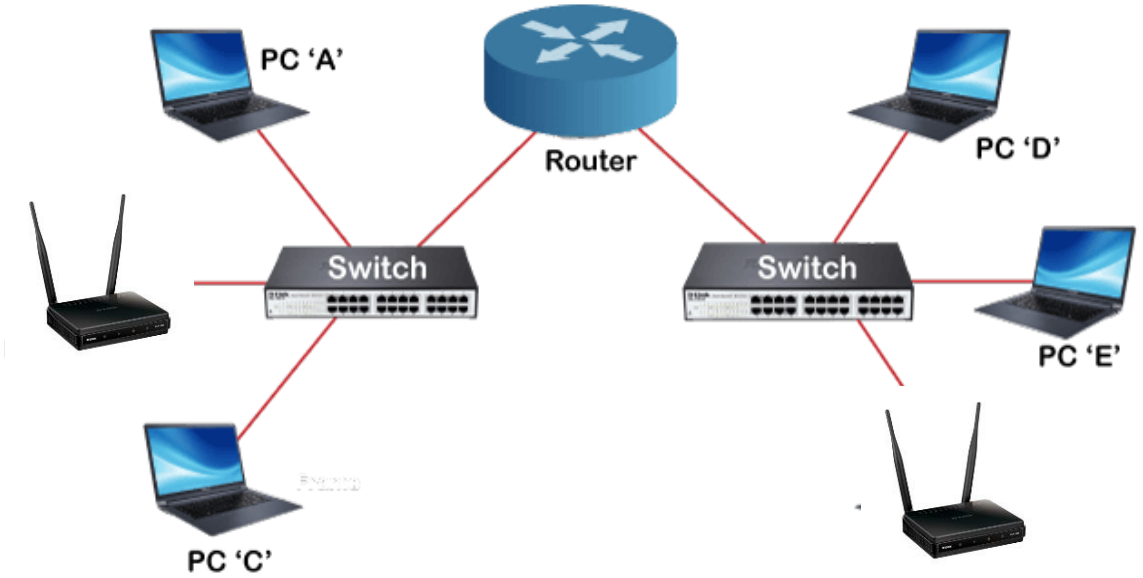
- Introduction
- Managed Vs Unmanaged switches
- Access points
- Cabling

Network Infrastructure

- Refers to everything that makes up your network – switches, routers, access points , cables etc



Connection of networks through Router

Devices

Different vendors

What devices do you have on your network ?

- Wired ?
- Wireless ?
- And why ?

Managed Vs Unmanaged switches

- Managed switches allow us a lot of control i.e we can create VLANS
  - They must be configured
- Unmanaged switches are dummy switches.
  - Simply provide access
  - No need for configuration

Cabling

Only two types of cabling:

- Unshielded/shielded twisted pair copper – provides service to individual computers and between network racks
- Fiber optic cabling – provides service to buildings


Unshielded vs Shielded
VS

UTP

Unshielded Twisted Pair Cable

- Run in star configuration from network rack location to individual outlets in offices or labs.
- Run at least 2 cables to every outlet.
- Run 4 to 6 cables between network racks if the distance is less than 100 meters

Question: What type of cable to run? Cat5, Cat5e, Cat6, Cat6A

What type of UTP

- What speed does each type support?

Cable Type	Max Speed	Max Distance
Category 5	100Mbps	100m
Category 5e	1000Mbps	100m
Category 6	1000Mbps	100m
Category 6	10,000Mbps	57m
Category 6A	10,000Mbps	100m

Fiber Optic Cabling

- Two types
  - Singe-mode fiber
  - Multimode fiber – recommended for short distances
- High speeds
- Low attenuation

Optic fiber cont’d

- You’ll need Optical interfaces!

Questions ?

THE END

Thank you for your time