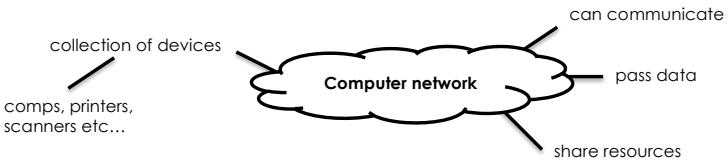
Network basics:

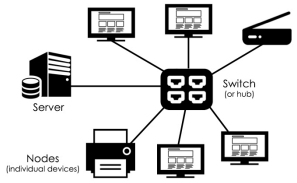


Advantages	Disadvantages
• share h/ware & s/ware • communicate – email, airdrop… • share data files on server • use any machine on n/w • back data up centrally • monitor user activity	• security: access to sensitive data • cost of installation • complexity & cost of management • if server goes down all access gone • slow n/w if many users • one virus can infect all devices

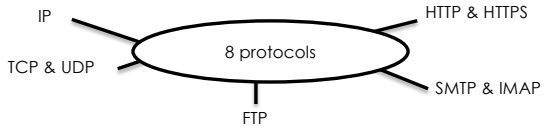
LAN	
WAN	
PAN	

Wired v Wireless:
Wired – copper (slow, cheap) v fibre-optic (quick, expensive, fragile) – more secure, less flexible
Wireless – WLAN – more flexible, less secure, slower, weak signal, b/width stealing, loss of devices

Network topology – how n/w laid out

Top	Bus	Star
Diag		
When Used		

Network protcols:
- set of rules
- allow devices to communicate across network



+2 protocol families:
- Ethernet
- Wi-Fi

TCP/IP Model – 4 layers, stack, describes how protocols work to transfer data, start at top

Layer		Does	Protocols
1	Application		
2	Transport		
3	Internet		
4	Link		

Network security
- Reasons required:
- Methods:
  - authentication
  - encryption
  - firewall
  - MAC address filtering