

# How many of you ...

- have programmed with **sockets** ?
- have taken a **networking course** ?
- have used tools like ?  
**ping, traceroute, ipconfig/ifconfig, nslookup  
netstat, netcat, nmap, wireshark**
- know what is :  
**IP address, port, a canonical hostname  
client, server, router  
switch (or hub), gateway**
- can explain with a fair amount of details :  
**Ethernet, WiFi  
IP, TCP  
ARP, BGP, DNS**

# The Internet



**1980's** - few hosts connected : government institutions and universities

➡ Trustworthy environment

**2019** - ~ 4.2 billion internet users: network of networks

➡ Untrustworthy environment

➡ Internet (and its protocols) was  
**not designed for untrustworthy environment**