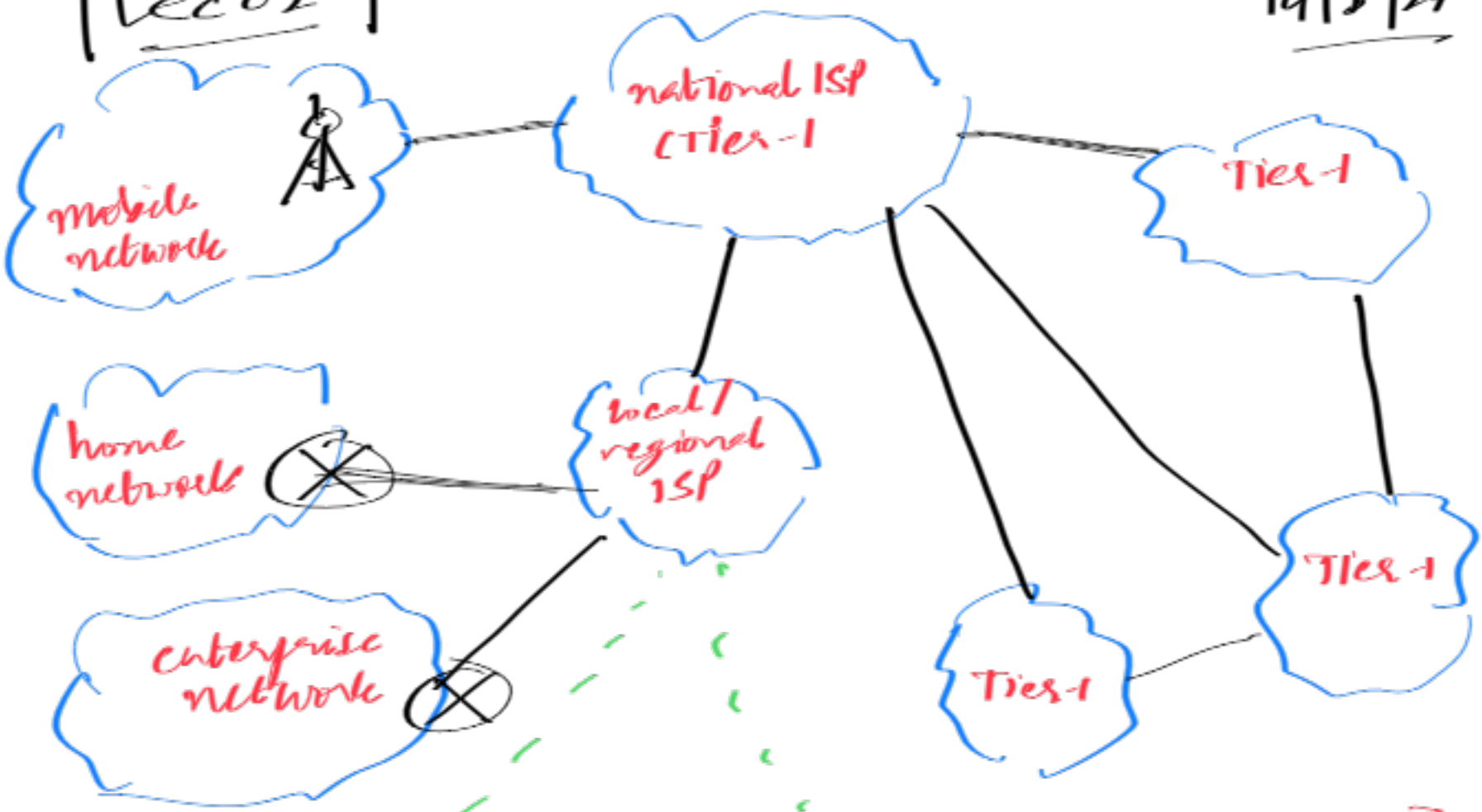
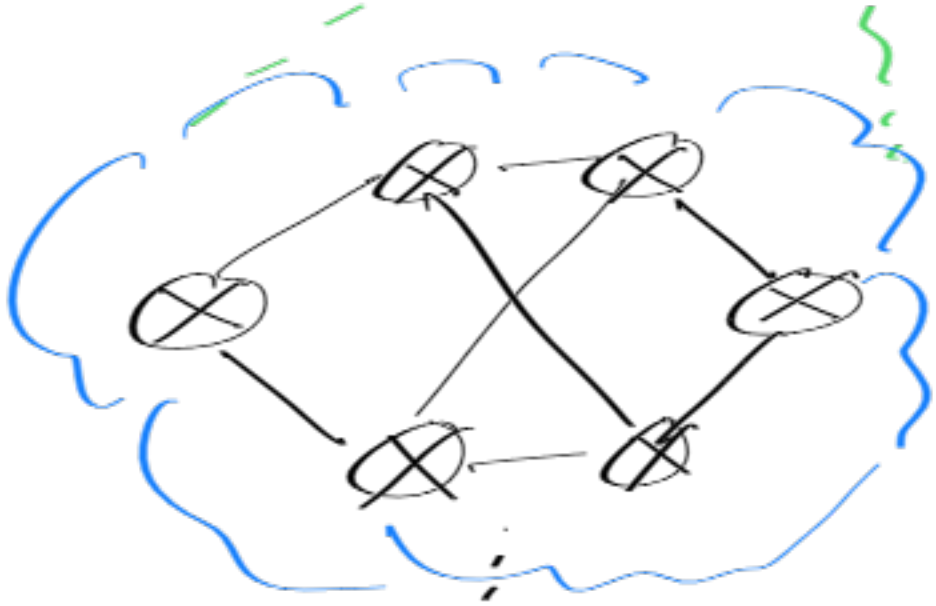
Lec 02

14/8/24



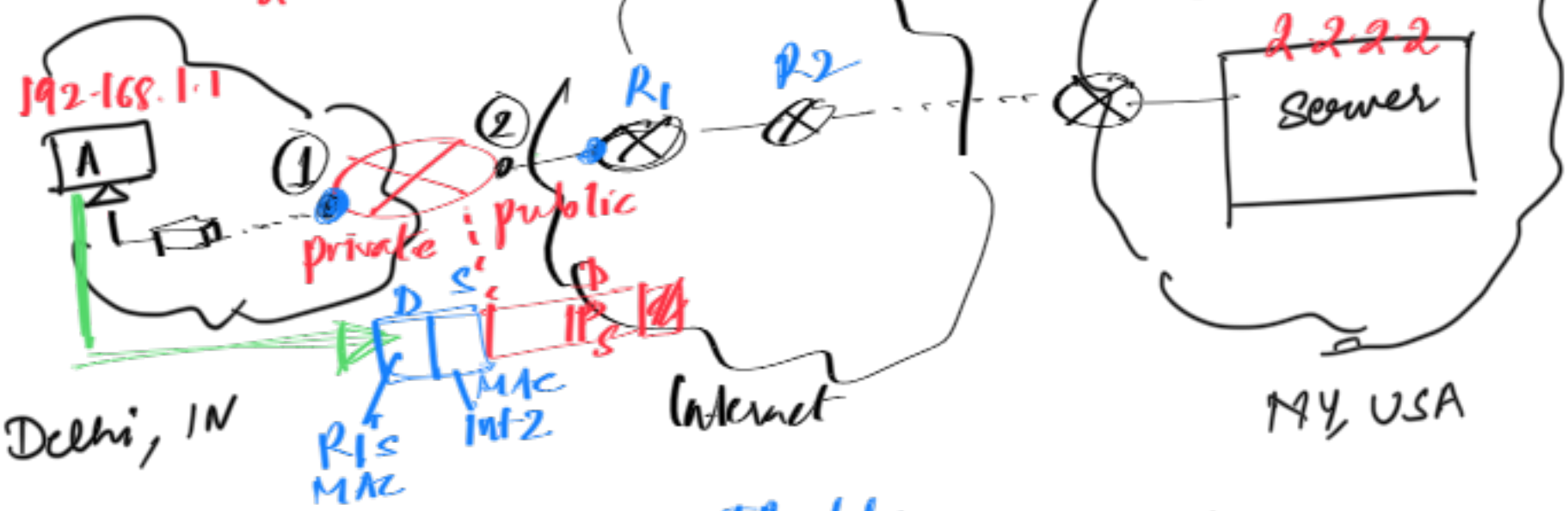
we will understand the exact difference bet^n Tier-x ISPs later in the course



ISPs are interconnection of networks (via routers)

https://www.columbia.edu

2.2.2.2



default gateway : IP addr

* ifconfig
* ipconfig

Routing table

Dest n/w addr	Next hop	Cost
	hmm	

* Addressing

- Physical address | MAC address → Network card (NIC)
  - unique identification for every device over a local NW
  - 48-bit addr ⇒ hexadecimal notation
    eg. 1A:00:12:EF:CD:15
- logical address (eg. IP address)
  - unique identification for every device over the Internet (global)

- Port address <32bits> 2^{32} addresses
  - unique identification for each process within a single machine/node

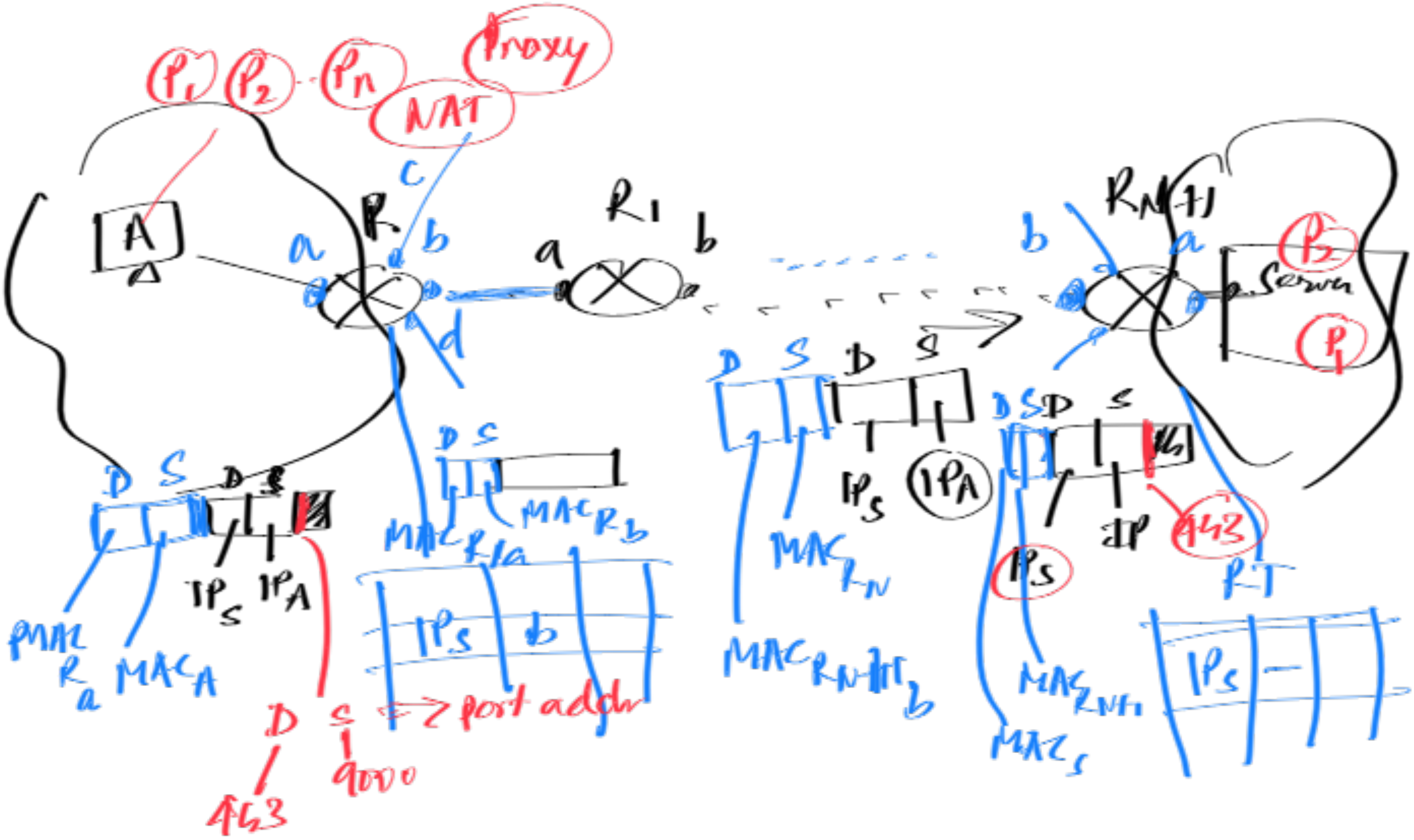
upto 1024 ⇒ standard port addr ⇒ std services
HTTP = 80 HTTPS = 443 FTP = 20, 21 SMTP = 25 DNS = 63
above 1024 ⇒ user defined apps

- S - address

endpoint client
<IP addr, port addr>

endpoint server

* Connection Identifier < src IP, port
Dst IP, port > ⇒ 4-tuple



Proxy
NAT
A
R1
Server
MAC
IPS
IPA
port addr
9000
443