Miscellaneous

MAC Addresses - Switches : Layer 2 - Data Link

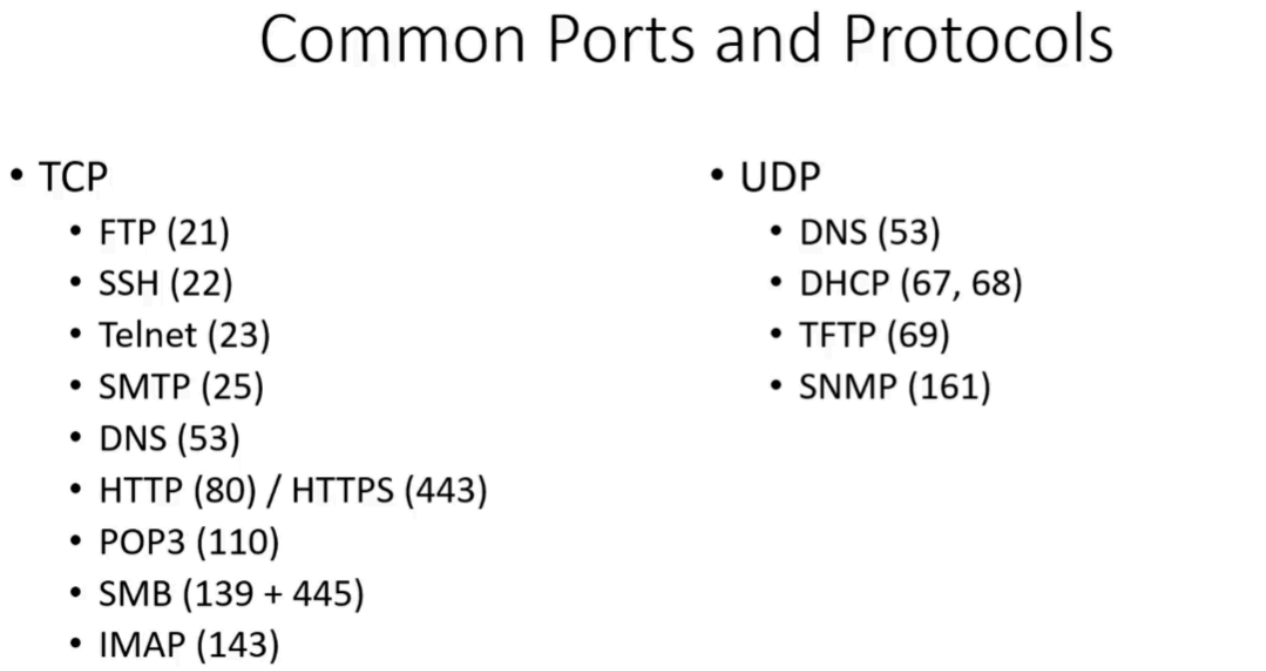
IP Addresses - Routers : Layer 3 - Network

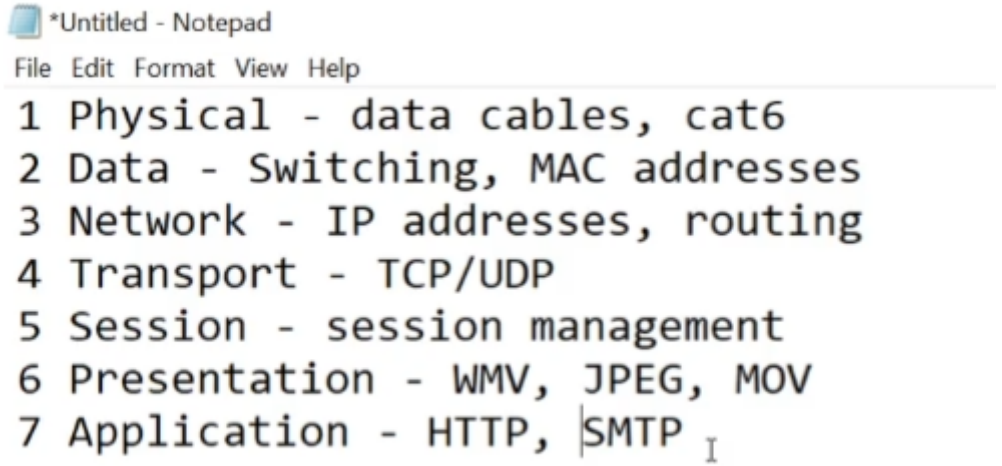
TCP / UDP : Layer 4 - Transport

TCP - Transmission Control Protocol - Think of it like Connection Oriented Protocol.

UDP - User Datagram Protocol - Think of it like a Connectionless Protocol.

Note:Using the command: #Wireshark& allows us to open Wireshark and keep the shell usable in the background.





IP address classes

Name	First octet	Description
Class A	1 to 126	Many hosts per network.
Class B	128 to 191	Many hosts per network.
Class C	192 to 223	Many networks with fewer hosts per network.
Class D	224 to 239	Multicasting.

The Cyber Mentor's Subnetting Sheet								
	Subnet x.0.0.0							
CIDR	/1	/2	/3	/4	/5	/6	/7	/8
Hosts	2,147,483,648	1,073,741,824	536,870,912	268,435,456	134,217,728	67,108,864	33,554,432	16,777,216
Class A	Subnet 255.x.0.0							
CIDR	/9	/10	/11	/12	/13	/14	/15	/16
Hosts	8,388,608	4,194,304	2,097,152	1,048,576	524,288	262,144	131,072	65,536
Class B	Subnet 255.255.x.0							
CIDR	/17	/18	/19	/20	/21	/22	/23	/24
Hosts	32,768	16,384	8,192	4,096	2,048	1,024	512	256
Class C	Subnet 255.255.255.x							
CIDR	/25	/26	/27	/28	/29	/30	/31	/32
Hosts	128	64	32	16	8	4	2	1
Subnet Mask (Replace x)	128	192	224	240	248	252	254	255

Notes:	*Hosts double each increment of a CIDR *Always subtract 2 from host total: Network ID - First Address Broadcast - Last Address