Summary Table:						
Category	Private IP	Public IP	IPv4	IPv6	TCP	UDP
Purpose	Internal network communication	Global internet communication	Older, limited address space	Newer, larger address space	Reliable data transfer	Fast, less reliable transfer
Address Range	Defined ranges (e.g., 192.168.x.x)	Any address not in private ranges	32-bit address (4.3 billion addresses)	128-bit address (340 undecillion addresses)	Connection-oriented, reliable	Connectionless, less reliable
Example	192.168.0.1	8.8.8.8 (Google DNS)	192.168.1.1	2001:0db8::/32	HTTP, FTP, SMTP	Streaming, VoIP, online games
Address Allocation	Manual or dynamic (via DHCP)	Provided by ISP	Exhausting address pool	Virtually unlimited address pool	Slower due to error-checking	Faster due to no error-checking