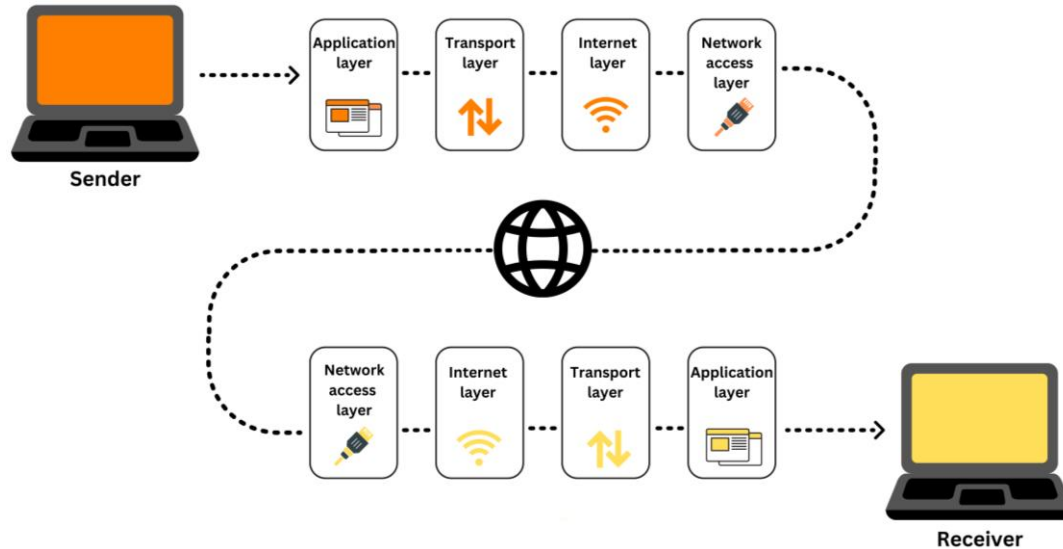




آموزش نتورک پلاس

TCP vs UDP

TCP / IP



Application

Transport

Network

Data Link

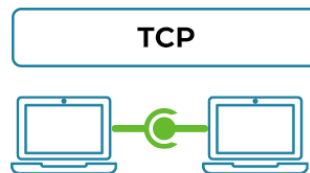
Physical

کدام بهتر است؟

Transmission Control Protocol (TCP)

VS

User Datagram Protocol (UDP)



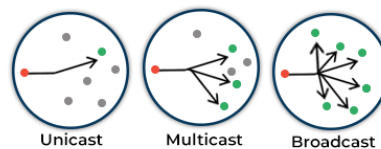
- Slower but more reliable transfers

- Typical Applications:
 - File Transfer Protocol
 - Web Browsing
 - Email



- Faster but not guaranteed transfer ("Best Effort")

- Typical Applications:
 - Live streaming
 - Online Games
 - VoIP



تفاوت بین TCP و UDP چیست؟

Factor	TCP	UDP
Connection type	Requires an established connection before transmitting data	No connection is needed to start and end a data transfer
Data sequence	Can sequence data (send in a specific order)	Cannot sequence or arrange data
Data retransmission	Can retransmit data if packets fail to arrive	No data retransmitting. Lost data can't be retrieved
Delivery	Delivery is guaranteed	Delivery is not guaranteed
Check for errors	Thorough error-checking guarantees data arrives in its intended state	Minimal error-checking covers the basics but may not prevent all errors
Broadcasting	Not supported	Supported
Speed	Slow, but complete data delivery	Fast, but at risk of incomplete data delivery

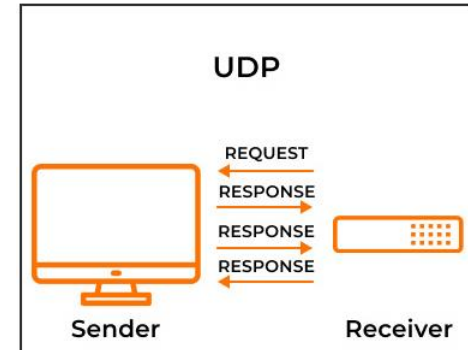
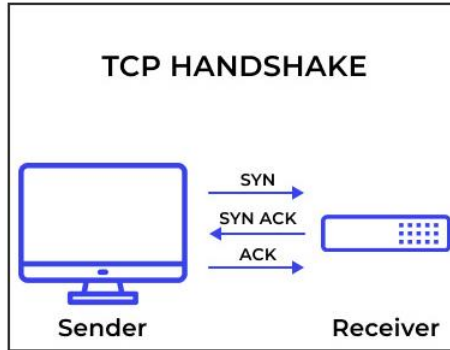
قابلیت اطمینان یا سرعت؟

TCP is best for:

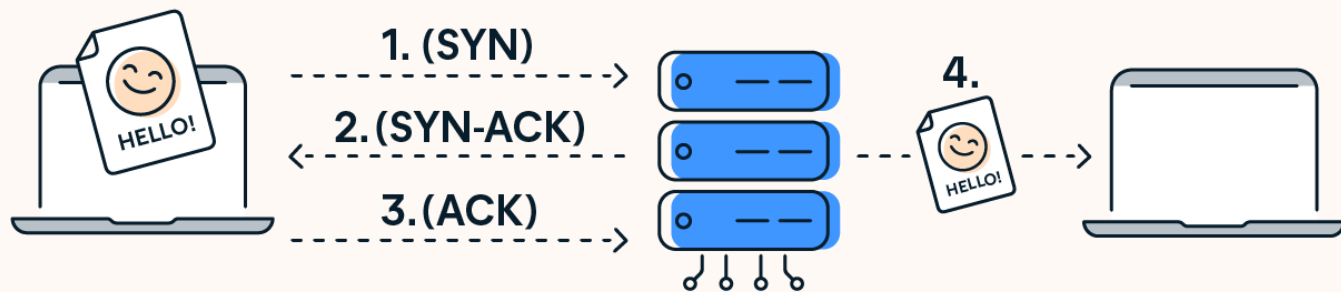
- Email or texting
- File transfers
- Web browsing

UDP is best for:

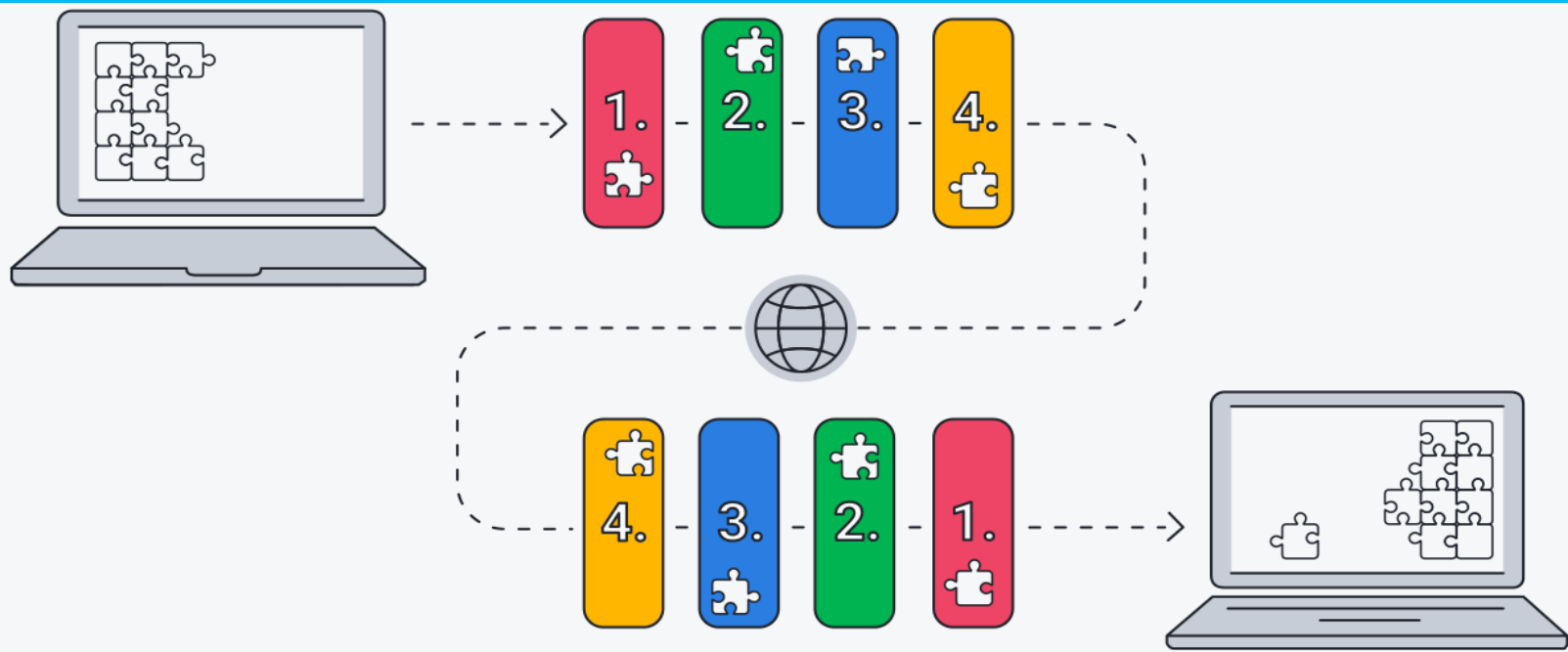
- Live streaming
- Online gaming
- Video chat



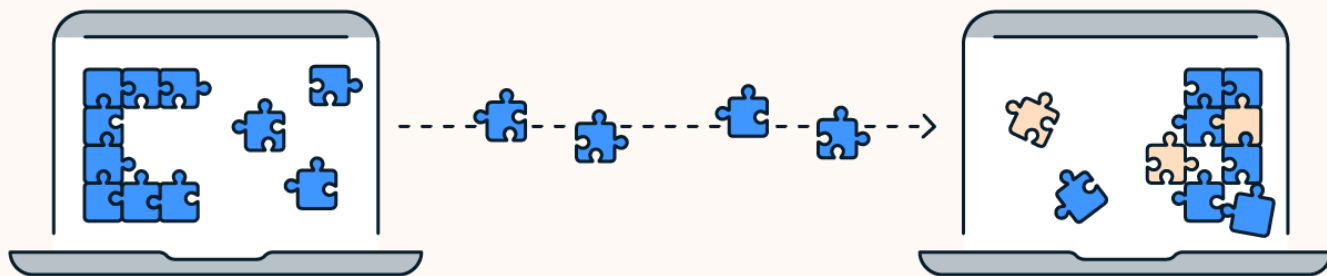
TCP چگونه کار می کند؟



TCP چگونه کار می کند؟



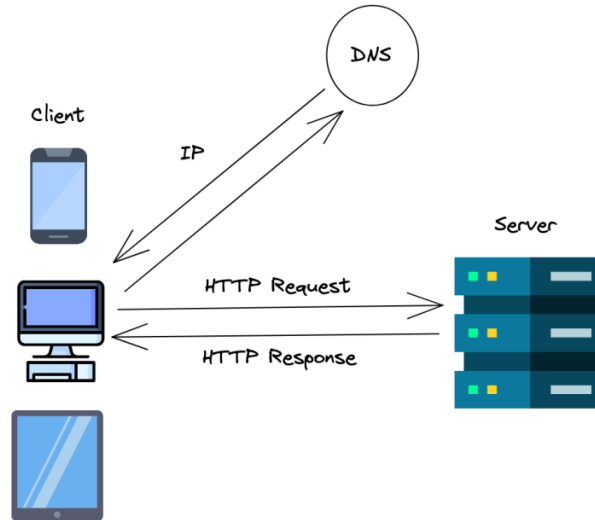
UDP چگونه کار می کند؟



Service Name and Transport Protocol Port Number Registry

- » For TCP and UDP, a port number is a 16-bit unsigned integer, thus ranging from 0 to 65535.
- » System Ports (0-1023), User Ports (1024-49151), and the Dynamic and/or Private Ports (49152-65535)

Service Name and Transport Protocol Port Number Registry





عباس ولی زاده

مدرس دوره های شبکه و امنیت