TCP Connection Management

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TCP - Connection oriented -

UDP - Connectionless - keep track of Connection information.

How does TCP keep track of connection (or) state information?

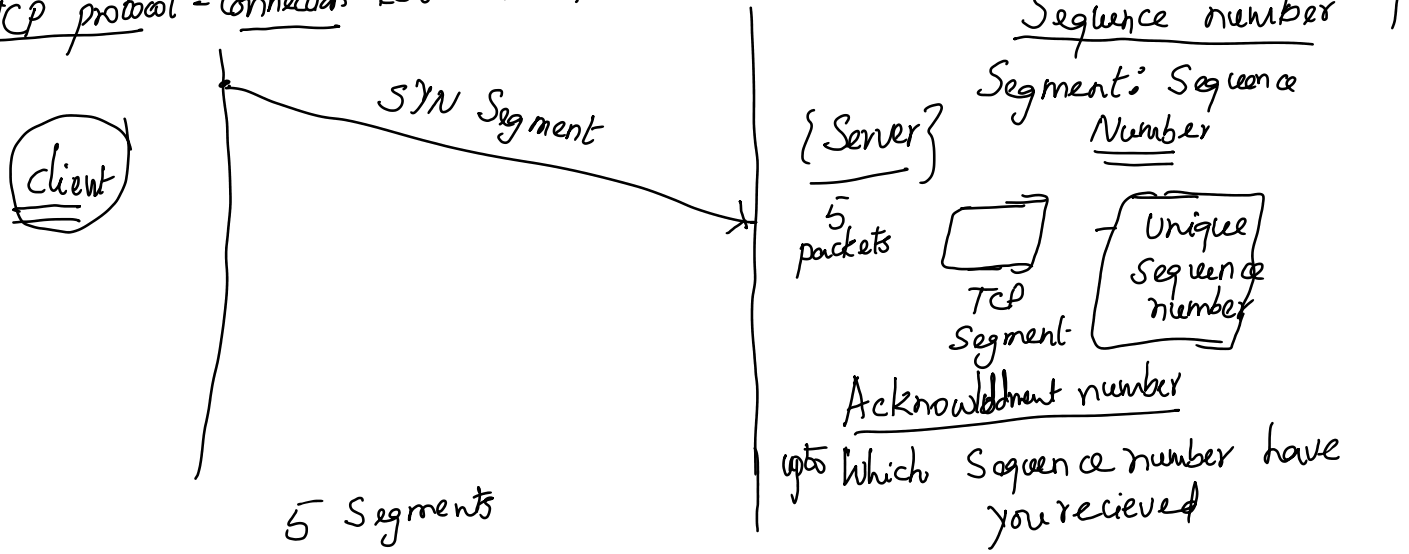
Sequence numbers and ~~Acknowledgen~~ Acknowledgements

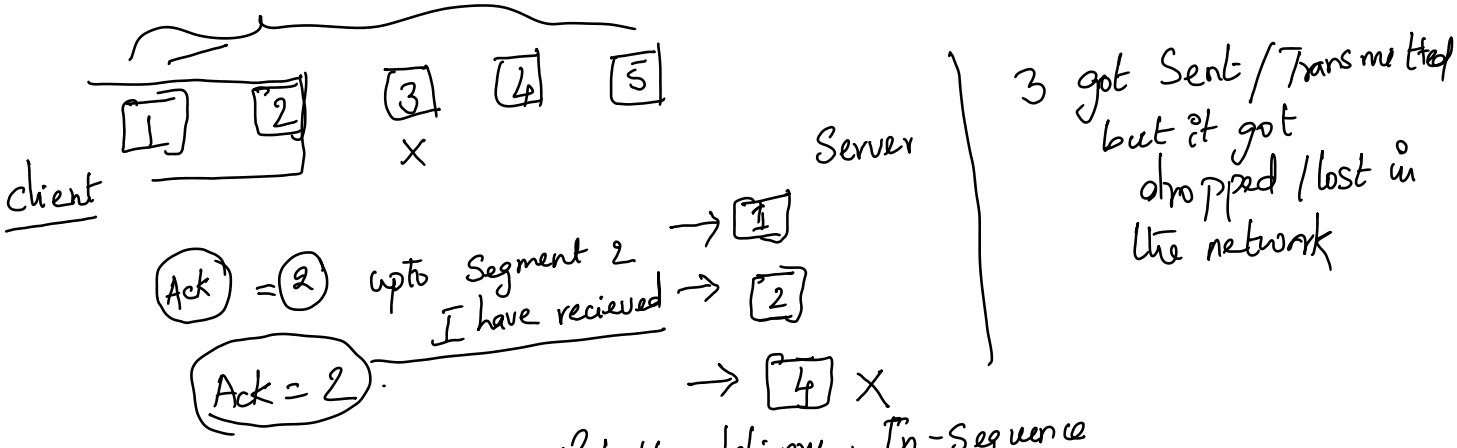
TCP Flags - { ACK, URG, SYN, PSH, RST, FIN } 6 Flags

6 flags

TCP Connection Establishment: How does a TCP connection Establish?

TCP protocol - Connection Establishment:



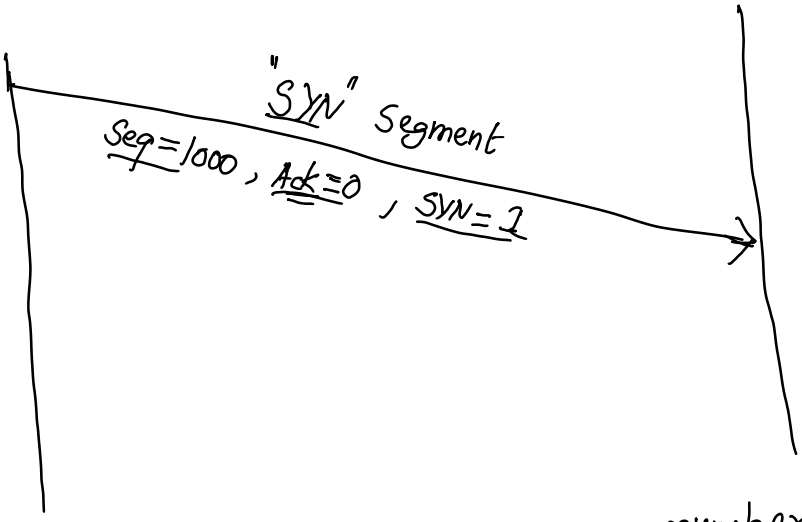


TCP - Reliable delivery - In-Sequence

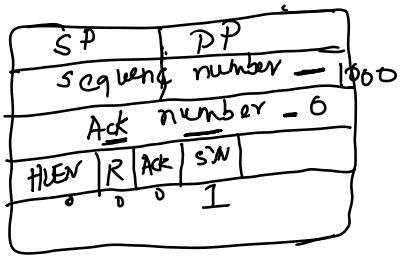
It re-transmits 3 { Cummulative } Acknowledgement

TCP - Reliable delivery

It re-transmits 3 } [Cummulative } Acknowledgement

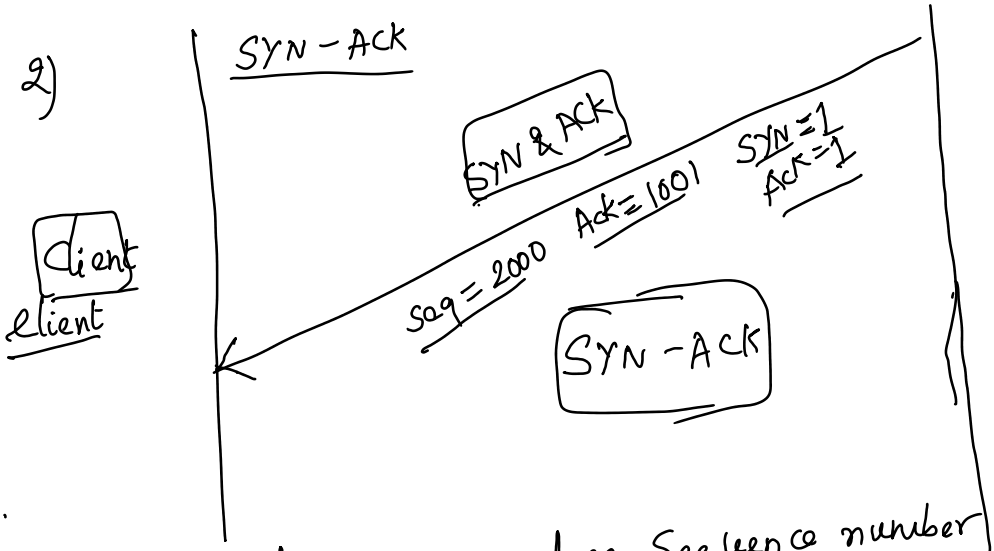


TCP header



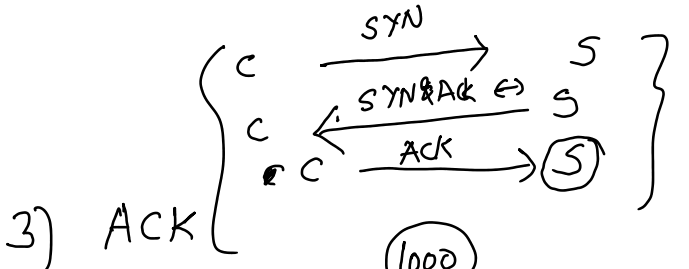
1) client chooses a random sequence number (SYN - Segment)

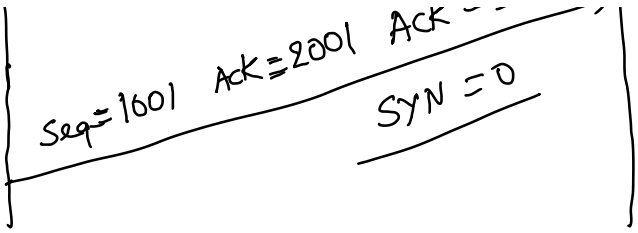
Server recieves the SYN Segments - Ack SYN-Ack



Segment = 1000 - Seq
upto segments
1000 seq number
Server 1001 (Expectation)

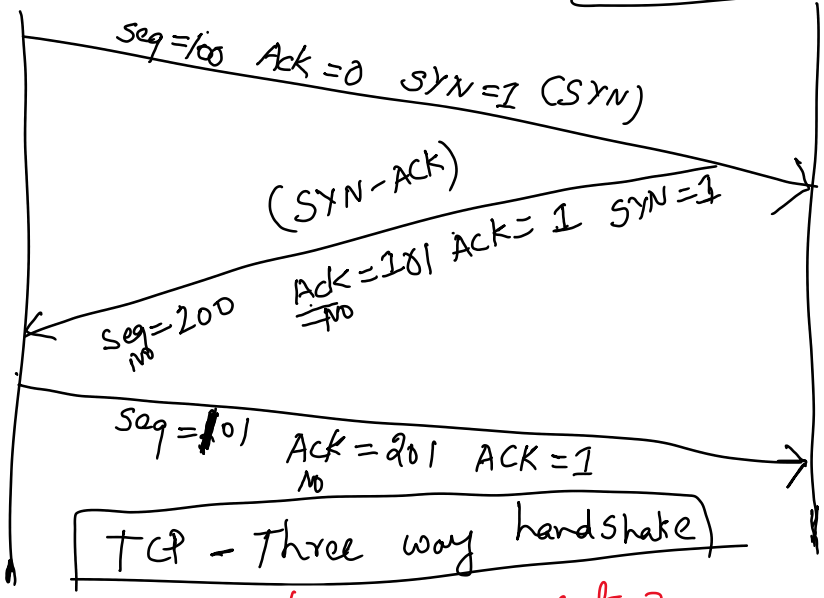
- Server chooses a random Sequence number (client chose a random number)

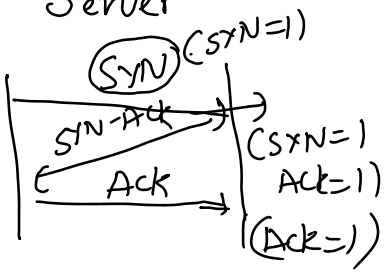




The whole process

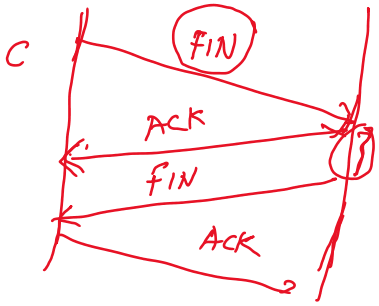
SYN-Flags - 1
ACK-Flags - 1
} SYN ACK





{ Connection management of TCP } -

Ending a TCP connection - { Termination of a TCP Connection }



FIN flag ↔ Segment
TCP Segment ↔ FIN = 1

- Termination of a TCP connection

End