



### TCP Flags

C E U A P R S F

#### Congestion Window

C 0x80 Reduced (CWR)  
 E 0x40 ECN Echo (ECE)  
 U 0x20 Urgent  
 A 0x10 Ack  
 P 0x08 Push  
 R 0x04 Reset  
 S 0x02 Syn  
 F 0x01 Fin

### Congestion Notification

ECN (Explicit Congestion Notification). See RFC 3168 for full details, valid states below.

Packet State	DSB	ECN bits
Syn	0 0	1 1
Syn-Ack	0 0	0 1
Ack	0 1	0 0
No Congestion	0 1	0 0
No Congestion	1 0	0 0
Congestion	1 1	0 0
Receiver Response	1 1	0 1
Sender Response	1 1	1 1

### TCP Options

0 End of Options List  
 1 No Operation (NOP, Pad)  
 2 Maximum Segment size  
 3 Window Scale  
 4 Selective ACK ok  
 8 Timestamp

### Checksum

Checksum of entire TCP segment and pseudo header (parts of IP header)

### Offset

Number of 32-bit words in TCP header, minimum value of 5. Multiply by 4 to get byte count.

### RFC 793

Please refer to RFC 793 for the complete Transmission Control Protocol (TCP) Specification.