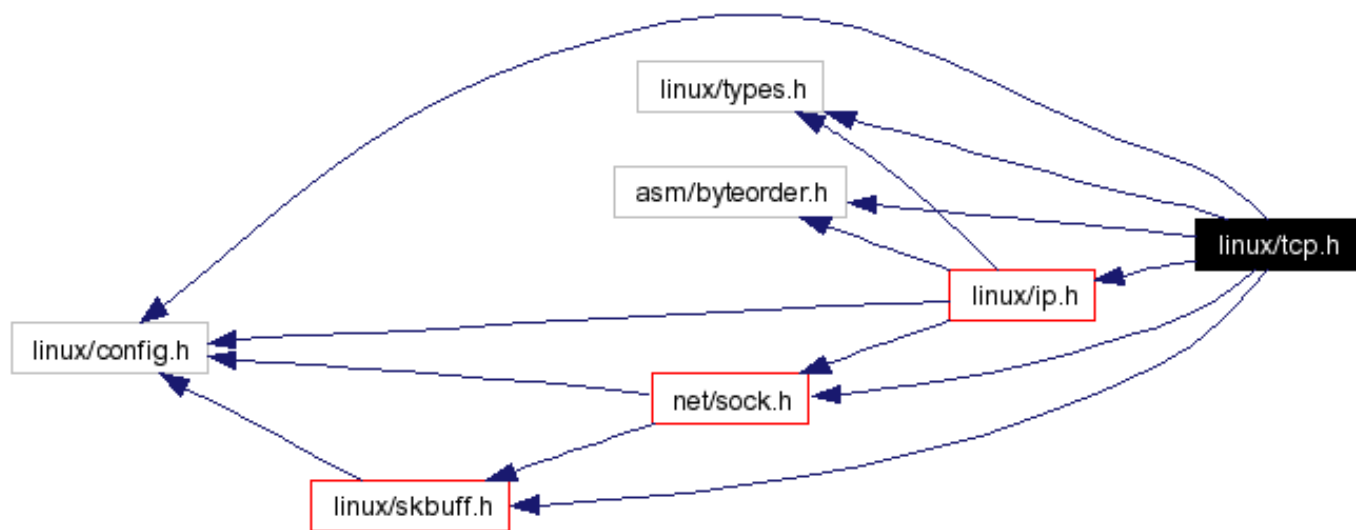


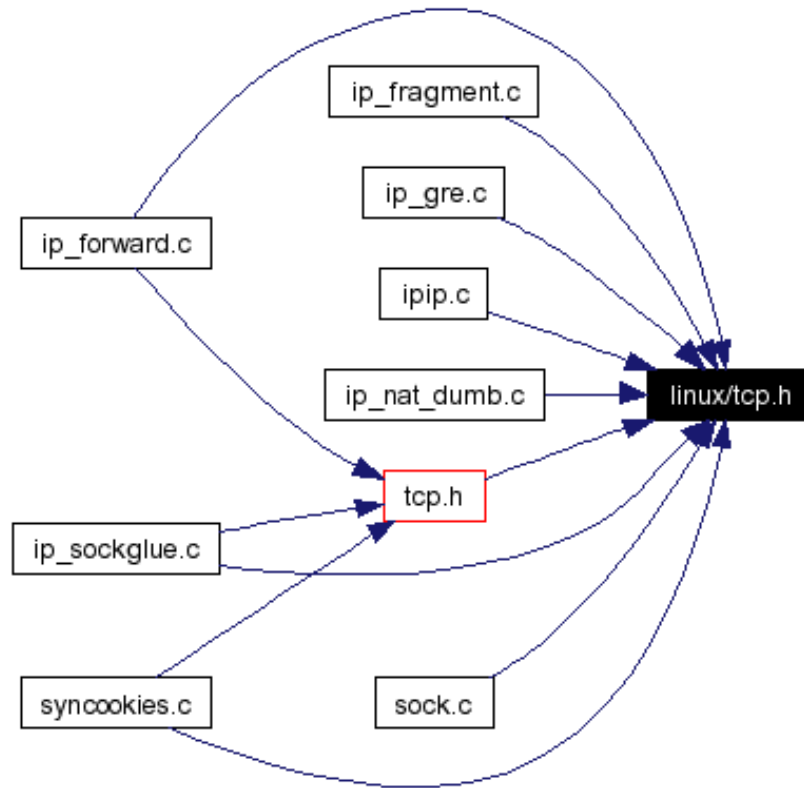
# tcp.h File Reference

```
#include <linux/types.h>
#include <asm/byteorder.h>
#include <linux/config.h>
#include <linux/skbuff.h>
#include <linux/ip.h>
#include <net/sock.h>
```

Include dependency graph for linux/tcp.h:



This graph shows which files directly or indirectly include this file:



[Go to the source code of this file.](#)

## Data Structures

```

struct tcp\_info
struct tcp\_opt
struct tcp\_sack\_block
struct tcp\_sock
union tcp\_word\_hdr
struct tcphdr

```

## Defines

```

#define TCP\_STATE\_MASK 0xF
#define TCP\_ACTION\_FIN (1 << 7)
#define tcp\_flag\_word(tp) (((union tcp\_word\_hdr *)(tp))->words[3])
#define TCP\_NODELAY 1
#define TCP\_MAXSEG 2
#define TCP\_CORK 3
#define TCP\_KEEPIIDLE 4
#define TCP\_KEEPIIDLE 5
#define TCP\_KEEPCNT 6
#define TCP\_SYNCNT 7
#define TCP\_LINGER2 8
#define TCP\_DEFER\_ACCEPT 9
#define TCP\_WINDOW\_CLAMP 10
#define TCP\_INFO 11

```

```

#define TCP_QUICKACK 12
#define TCPI_OPT_TIMESTAMPS 1
#define TCPI_OPT_SACK 2
#define TCPI_OPT_WSCALE 4
#define TCPI_OPT_ECN 8
#define TCPF_CA_Open (1<<TCP_CA_Open)
#define TCPF_CA_Disorder (1<<TCP_CA_Disorder)
#define TCPF_CA_CWR (1<<TCP_CA_CWR)
#define TCPF_CA_Recovery (1<<TCP_CA_Recovery)
#define TCPF_CA_Loss (1<<TCP_CA_Loss)

```

## Enumerations

```

enum {
    TCP_ESTABLISHED = 1, TCP_SYN_SENT, TCP_SYN_RECV,
    TCP_FIN_WAIT1,
    TCP_FIN_WAIT2, TCP_TIME_WAIT, TCP_CLOSE, TCP_CLOSE_WAIT,
    TCP_LAST_ACK, TCP_LISTEN, TCP_CLOSING, TCP_MAX_STATES
}

enum {
    TCPF_ESTABLISHED = (1 << 1), TCPF_SYN_SENT = (1 << 2),
    TCPF_SYN_RECV = (1 << 3), TCPF_FIN_WAIT1 = (1 << 4),
    TCPF_FIN_WAIT2 = (1 << 5), TCPF_TIME_WAIT = (1 << 6), TCPF_CLOSE
= (1 << 7), TCPF_CLOSE_WAIT = (1 << 8),
    TCPF_LAST_ACK = (1 << 9), TCPF_LISTEN = (1 << 10), TCPF_CLOSING =
(1 << 11)
}

enum {
    TCP_FLAG_CWR = __constant_htonl(0x00800000), TCP_FLAG_ECE =
__constant_htonl(0x00400000), TCP_FLAG_URG = __constant_htonl(0x00200000),
    TCP_FLAG_ACK = __constant_htonl(0x00100000),
    TCP_FLAG_PSH = __constant_htonl(0x00080000), TCP_FLAG_RST =
__constant_htonl(0x00040000), TCP_FLAG_SYN = __constant_htonl(0x00020000),
    TCP_FLAG_FIN = __constant_htonl(0x00010000),
    TCP_RESERVED_BITS = __constant_htonl(0x0F000000), TCP_DATA_OFFSET
= __constant_htonl(0xF0000000)
}

enum tcp_ca_state {
    TCP_CA_Open = 0, TCP_CA_Disorder = 1, TCP_CA_CWR = 2,
    TCP_CA_Recovery = 3,
    TCP_CA_Loss = 4#define TCPF_CA_Loss
}

```

## Functions

struct **tcp\_opt**\* **tcp\_sk** (const struct **sock** \* \_\_sk)

---

## Define Documentation

**#define TCPF\_CA\_CWR** (1<<TCP\_CA\_CWR)

**#define TCPF\_CA\_Disorder** (1<<TCP\_CA\_Disorder)

**#define TCPF\_CA\_Loss** (1<<TCP\_CA\_Loss)

**#define TCPF\_CA\_Open** (1<<TCP\_CA\_Open)

**#define TCPF\_CA\_Recovery** (1<<TCP\_CA\_Recovery)

**#define TCPI\_OPT\_ECN** 8

Definition at line 134 of file [linux/tcp.h](#).

**#define TCPI\_OPT\_SACK** 2

Definition at line 132 of file [linux/tcp.h](#).

**#define TCPI\_OPT\_TIMESTAMPS** 1

Definition at line 131 of file [linux/tcp.h](#).

**#define TCPI\_OPT\_WSCALE** 4

Definition at line 133 of file [linux/tcp.h](#).

**#define TCP\_ACTION\_FIN** (1 << 7)

Definition at line 76 of file [linux/tcp.h](#).

**#define TCP\_CORK** 3

Definition at line 120 of file [linux/tcp.h](#).

**#define TCP\_DEFER\_ACCEPT** 9

Definition at line 126 of file [linux/tcp.h](#).

**#define TCP\_INFO** 11

Definition at line 128 of file [linux/tcp.h](#).

**#define TCP\_KEEPCNT** 6

Definition at line 123 of file [linux/tcp.h](#).

**#define TCP\_KEEPIDLE** 4

Definition at line 121 of file [linux/tcp.h](#).

**#define TCP\_KEEPINTVL 5**

Definition at line 122 of file [linux/tcp.h](#).

**#define TCP\_LINGER2 8**

Definition at line 125 of file [linux/tcp.h](#).

**#define TCP\_MAXSEG 2**

Definition at line 119 of file [linux/tcp.h](#).

**#define TCP\_NODELAY 1**

Definition at line 118 of file [linux/tcp.h](#).

**#define TCP\_QUICKACK 12**

Definition at line 129 of file [linux/tcp.h](#).

**#define TCP\_STATE\_MASK 0xF**

Definition at line 75 of file [linux/tcp.h](#).

**#define TCP\_SYNCNT 7**

Definition at line 124 of file [linux/tcp.h](#).

**#define TCP\_WINDOW\_CLAMP 10**

Definition at line 127 of file [linux/tcp.h](#).

**#define tcp\_flag\_word(tp) ((union tcp\_word\_hdr\*)(tp))->words[3])**

Definition at line 102 of file [linux/tcp.h](#).

Referenced by [tcp\\_check\\_req\(\)](#), and [tcp\\_rcv\\_established\(\)](#).

---

## Enumeration Type Documentation

anonymous enum

**Enumeration values:**

*TCP\_ESTABLISHED*

*TCP\_SYN\_SENT*

*TCP\_SYN\_RECV*

*TCP\_FIN\_WAIT1*

*TCP\_FIN\_WAIT2*

*TCP\_TIME\_WAIT*

*TCP\_CLOSE*

*TCP\_CLOSE\_WAIT*

*TCP\_LAST\_ACK*

*TCP\_LISTEN*

*TCP\_CLOSING*

*TCP\_MAX\_STATES*

Definition at line [59](#) of file [linux/tcp.h](#).

#### anonymous enum

##### Enumeration values:

*TCPF\_ESTABLISHED*  
*TCPF\_SYN\_SENT*  
*TCPF\_SYN\_RECV*  
*TCPF\_FIN\_WAIT1*  
*TCPF\_FIN\_WAIT2*  
*TCPF\_TIME\_WAIT*  
*TCPF\_CLOSE*  
*TCPF\_CLOSE\_WAIT*  
*TCPF\_LAST\_ACK*  
*TCPF\_LISTEN*  
*TCPF\_CLOSING*

Definition at line [78](#) of file [linux/tcp.h](#).

#### anonymous enum

##### Enumeration values:

*TCP\_FLAG\_CWR*  
*TCP\_FLAG\_ECE*  
*TCP\_FLAG\_URG*  
*TCP\_FLAG\_ACK*  
*TCP\_FLAG\_PSH*  
*TCP\_FLAG\_RST*  
*TCP\_FLAG\_SYN*  
*TCP\_FLAG\_FIN*  
*TCP\_RESERVED\_BITS*  
*TCP\_DATA\_OFFSET*

Definition at line [104](#) of file [linux/tcp.h](#).

#### enum tcp\_ca\_state

##### Enumeration values:

*TCP\_CA\_Open*  
*TCP\_CA\_Disorder*  
*TCP\_CA\_CWR*  
*TCP\_CA\_Recovery*  
*TCP\_CA\_Loss*

Definition at line [136](#) of file [linux/tcp.h](#).

---


## Function Documentation

**struct tcp\_opt \* tcp\_sk (const struct sock \* \_\_sk )** [*inline, static*]

Definition at line [415](#) of file [linux/tcp.h](#).

Referenced by [\\_\\_tcp\\_inherit\\_port\(\)](#), [\\_\\_tcp\\_put\\_port\(\)](#), [\\_\\_tcp\\_tw\\_hashdance\(\)](#), [tcp\\_bind\\_hash\(\)](#), [tcp\\_create\\_openreq\\_child\(\)](#), [tcp\\_destroy\\_sock\(\)](#), [tcp\\_fixup\\_sndbuf\(\)](#), [tcp\\_free\\_skb\(\)](#), [tcp\\_listen\\_poll\(\)](#), [tcp\\_send\\_synack\(\)](#), [tcp\\_set\\_keepalive\(\)](#), [tcp\\_set\\_state\(\)](#), [tcp\\_synq\\_drop\(\)](#), [tcp\\_synq\\_is\\_full\(\)](#), [tcp\\_synq\\_young\(\)](#), [tcp\\_v4\\_conn\\_request\(\)](#), [tcp\\_v4\\_err\(\)](#), [tcp\\_v4\\_get\\_port\(\)](#), [tcp\\_v4\\_hash\\_connect\(\)](#), [tcp\\_v4\\_rebuild\\_header\(\)](#), [tcp\\_v4\\_reselect\\_saddr\(\)](#), and [tcp\\_v4\\_syn\\_recv\\_sock\(\)](#).

---

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