LinuxTcpInfo

TCP_INFO

A mechanism in the Linux kernel for accessing information about a TCP socket. It has been supported since Linux 2.4.

The interface uses the `getsockopt()` system call with the `TCP_INFO` option on a TCP socket. The system will then fill in a caller-provided `struct tcp_info` . The structure is defined in `/usr/include/netinet/tcp.h` .

Application Support

ss

The `ss` program can be used with the `-i` or `--info` option to look at this information for active sockets.

This example shows a single active TCP socket, which represents the sending end of an ongoing Iperf TCP test:

```
State Recv-Q Send-Q Local Address:Port Peer Address:Port
ESTAB 0 2796088###0.0.0.247:36868 ###0.0.0.248:5001
cubic wscale:7,7 rto:204 rtt:7.5/3 mss:1448 cwnd:414 ssthresh:388 send 639.4Mbps unacked:401 retrans:0/772
reordering:127 rcv_space:29200
```

(Note: In my tests, the send rate displayed by `ss` was always about 50% lower than what `iperf` reported.)

The socket on the receiving side looks like this:

```
State Recv-Q Send-Q Local Address:Port Peer Address:Port
ESTAB 0 0 ####0.0.0.248:5001####0.0.0.247:36868
cubic wscale:7,7 rto:204 rtt:4/2 ato:40 mss:1448 cwnd:10 send 29.0Mbps rcv_rtt:7.5 rcv_space:1826680
```

iperf

Recent versions of iperf can use `TCP_INFO` to extract detailed statistics from an ongoing TCP measurement.

References

- Measuring TCP Congestion Windows, René Pfeiffer, Linux Gazette, March 2007

– Main.SimonLeinen - 2014-12-26