

NAME

ttcp – test TCP and UDP performance

SYNOPSIS

ttcp -t [-u] [-s] [-p *port*] [-l *buflen*] [-b *size*] [-n *numbufs*] [-A *align*] [-O *offset*] [-f *format*] [-D] [-v] host [<in]

ttcp -r [-u] [-s] [-p *port*] [-l *buflen*] [-b *size*] [-A *align*] [-O *offset*] [-f *format*] [-B] [-T] [-v] [>out]

DESCRIPTION

Ttcp times the transmission and reception of data between two systems using the UDP or TCP protocols. It differs from common “blast” tests, which tend to measure the remote *inetd* as much as the network performance, and which usually do not allow measurements at the remote end of a UDP transmission.

For testing, the transmitter should be started with **-t** and **-s** after the receiver has been started with **-r** and **-s**. Tests lasting at least tens of seconds should be used to obtain accurate measurements. Graphical presentations of throughput versus buffer size for buffers ranging from tens of bytes to several “pages” can illuminate bottlenecks.

Ttcp can also be used as a “network pipe” for moving directory hierarchies between systems when routing problems exist or when the use of other mechanisms is undesirable. For example, on the destination machine, use: `ttcp -r -B | tar xvpf -`

and on the source machine: `tar cf - directory | ttcp -t dest_machine`

Additional intermediate machines can be included by: `ttcp -r | ttcp -t next_machine`

OPTIONS

- t** Transmit mode.
- r** Receive mode.
- u** Use UDP instead of TCP.
- s** If transmitting, source a data pattern to network; if receiving, sink (discard) the data. Without the **-s** option, the default is to transmit data from *stdin* or print the received data to *stdout*.
- l *length*** Length of buffers in bytes (default 8192). For UDP, this value is the number of data bytes in each packet. The system limits the maximum UDP packet length. This limit can be changed with the **-b** option.
- b *size*** Set size of socket buffer. The default varies from system to system. This parameter affects the maximum UDP packet length. It may not be possible to set this parameter on some systems (for example, 4.2BSD).
- n *numbufs*** Number of source buffers transmitted (default 2048).
- p *port*** Port number to send to or listen on (default 2000). On some systems, this port may be allocated to another network daemon.
- D** If transmitting using TCP, do not buffer data when sending (sets the TCP_NODELAY socket option). It may not be possible to set this parameter on some systems (for example, 4.2BSD).
- B** When receiving data, output only full blocks, using the block size specified by **-l**. This option is useful for programs, such as *tar*(1), that require complete blocks.
- A *align*** Align the start of buffers to this modulus (default 16384).
- O *offset*** Align the start of buffers to this offset (default 0). For example, “**-A8192 -O1**” causes buffers to start at the second byte of an 8192-byte page.
- f *format*** Specify, using one of the following characters, the format of the throughput rates as

kilobits/sec ('k'), kilobytes/sec ('K'), megabits/sec ('m'), megabytes/sec ('M'), gigabits/sec ('g'), or gigabytes/sec ('G'). The default is 'K'.

- T "Touch" the data as they are read in order to measure cache effects.
- v Verbose: print more statistics.
- d Debug: set the SO_DEBUG socket option.

SEE ALSO

ping(1M), traceroute(1M), netsnoop(1M)