

Assignment 2

Datagram Contents

All packets contain a few pieces of data. As a UDP datagram it contains the typical header containing a source port, a destination port, a length, a checksum, and the IP address of where they started and where they are going. The first piece of the DatagramPacket is the file stream data of file contents containing 3 sequential bytes. The second piece of the DatagramPacket from the sender is a sequence number, 1 byte in length. A termination datagram, or end of transmission (EOT) datagram, is simply a datagram with no sequence number, the word 'end' and is used to shut down the server. The receiver will shut down when receiving no sequence number after sending an ACK to the client with no sequence number as well. On the receiver side acknowledgement datagrams only contain the sequence number of what the datagram is being acknowledged.

Timing

File Size Table

File Name	File Size
small_test	1.09 KB
large_test	205 KB

Test Run Timings

File Name	Reliable/Unreliable	Timeout Value (in microseconds)	Time (in seconds)
small_test	Reliable	5000	0
small_test	Reliable	3000	0
small_test	Reliable	2000	0
small_test	Unreliable	5000	2
small_test	Unreliable	3000	1
small_test	Unreliable	2000	1
large_test	Reliable	5000	8
large_test	Reliable	3000	8
large_test	Reliable	2000	8
large_test	Unreliable	5000	121
large_test	Unreliable	3000	121
large_test	Unreliable	2000	121