

----- * Network Simulator Version 1.1 * -----

Enter number of messages to simulate: 1000

Enter packet loss probability [enter 0.0 for no loss]:0.1

Enter packet corruption probability [0.0 for no corruption]:0.1

Enter average time between messages from sender's layer5 [> 0.0]:200

Enter window size [>0]:8

Enter retransmission timeout [> 0.0]:30

Enter trace level:3

Enter random seed: [>0]:1234

GENERATE NEXT ARRIVAL: creating new arrival

INSERTEVENT: time is 0.000000

INSERTEVENT: future time will be 43.433943

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CASE 1 (Packet 0 is successfully received)

EVENT time: 43.433943, type: 1, fromlayer5 entity: 0

GENERATE NEXT ARRIVAL: creating new arrival

INSERTEVENT: time is 43.433943

INSERTEVENT: future time will be 67.360454

A: Recieve message from above...

DATA: aaaaaaaaaaaaaaaaaa

WINDOW: [0 1 2 3 4 5 6 7]

A: send data to B...

SEQ: 0, ACK: 0

CHECKSUM: 1853

PAYLOAD: aaaaaaaaaaaaaaaaaa

WINDOW: [0 1 2 3 4 5 6 7]

toLayer3: seq: 0, ack 0, check: 1853 TOLAYER3: scheduling arrival on other side

INSERTEVENT: time is 43.433943

INSERTEVENT: future time will be 45.660604

START TIMER: starting timer at 43.433943

INSERTEVENT: time is 43.433943

INSERTEVENT: future time will be 73.433943

EVENT time: 45.660604, type: 2, fromlayer3 entity: 1

B: Receiving DATA from A...

SEQ: 0, ACK: 0

CHECKSUM: 1853

PAYLOAD: aaaaaaaaaaaaaaaaaa

B: Sending new ACK to A...

SEQ: 0, ACK: 0

CHECKSUM: 1853

PAYLOAD: aaaaaaaaaaaaaaaaaa

toLayer3: seq: 0, ack 0, check: 1853 TOLAYER3: scheduling arrival on other side

INSERTEVENT: time is 45.660604

INSERTEVENT: future time will be 47.569475

EVENT time: 47.569475, type: 2, fromlayer3 entity: 0

A: Receiving ACK from B...

A gets ACK from B...

*Tx Time: 47.569475

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CASE 2 (Packet 1 is lost and next ack is sent for packet 2)

EVENT time: 67.360454, type: 1, fromlayer5 entity: 0

GENERATE NEXT ARRIVAL: creating new arrival

INSERTEVENT: time is 67.360454

INSERTEVENT: future time will be 83.315531

A: Recieve message from above...

DATA: bbbbbbbbbbbbbbbbbbbb

WINDOW: [1 2 3 4 5 6 7 8]

A: send data to B...

SEQ: 1, ACK: 0

CHECKSUM: 1873

PAYLOAD: bbbbbbbbbbbbbbbbbbbb

WINDOW: [1 2 3 4 5 6 7 8]

toLayer3: packet being lost

START TIMER: starting timer at 67.360454

INSERTEVENT: time is 67.360454

INSERTEVENT: future time will be 97.360454

EVENT time: 83.315531, type: 1, fromlayer5 entity: 0

GENERATE NEXT ARRIVAL: creating new arrival

INSERTEVENT: time is 83.315531

INSERTEVENT: future time will be 238.654744

A: Recieve message from above...

DATA: cccccccccccccccccc

WINDOW: [1 2 3 4 5 6 7 8]

A: send data to B...

SEQ: 2, ACK: 0

CHECKSUM: 1893

PAYLOAD: ccccccccccccccccc

WINDOW: [1 2 3 4 5 6 7 8]

toLayer3: seq: 2, ack 0, check: 1893 TOLAYER3: packet being corrupted

TOLAYER3: scheduling arrival on other side

INSERTEVENT: time is 83.315531

INSERTEVENT: future time will be 84.743736

EVENT time: 84.743736, type: 2, fromlayer3 entity: 1

B: Receiving DATA from A...

SEQ: 2, ACK: 0

CHECKSUM: 1893

PAYLOAD: ?cccccccccccccccc

CASE 3 (Packet 0 is lost and data is retransmitting 0, 1 and 2)

B: Resending previous ACK to A...

SEQ: 0, ACK: 0

CHECKSUM: 1855

PAYLOAD: ?cccccccccccccccc

toLayer3: seq: 0, ack 0, check: 1855 TOLAYER3: scheduling arrival on other side

INSERTEVENT: time is 84.743736

INSERTEVENT: future time will be 86.711112

EVENT time: 86.711112, type: 2, fromlayer3 entity: 0

A: Receiving ACK from B...

SEQ: 0, ACK: 0

CHECKSUM: 1855

PAYLOAD: ?cccccccccccccccc

WINDOW: [1 2 3 4 5 6 7 8]

A rejected ACK from B... (pending ACK 1)

WINDOW: [1 2 3 4 5 6 7 8]

EVENT time: 97.360454, type: 0, timerinterrupt entity: 0

A: Resending DATA to B...

SEQ: 1, ACK: 0

CHECKSUM: 1873

PAYLOAD: bbbbbbbbbbbbbbbbbbbb

WINDOW: [1 2 3 4 5 6 7 8]

toLayer3: seq: 1, ack 0, check: 1873 TOLAYER3: scheduling arrival on other side

INSETEVENT: time is 97.360454

INSETEVENT: future time will be 102.041810

A: Resending DATA to B...

SEQ: 2, ACK: 0

CHECKSUM: 1893

PAYLOAD: cccccccccccccccccc

WINDOW: [1 2 3 4 5 6 7 8]

toLayer3: packet being lost

START TIMER: starting timer at 97.360454

INSETEVENT: time is 97.360454

INSETEVENT: future time will be 127.360454

EVENT time: 102.041810, type: 2, fromlayer3 entity: 1

B: Receiving DATA from A...

SEQ: 1, ACK: 0

CHECKSUM: 1873

PAYLOAD: bbbbbbbbbbbbbbbbbbbb

B: Sending new ACK to A...

SEQ: 0, ACK: 1

CHECKSUM: 1873

PAYLOAD: bbbbbbbbbbbbbbbbbbb

toLayer3: seq: 0, ack 1, check: 1873 TOLAYER3: scheduling arrival on other side

INSETEVENT: time is 102.041810

INSETEVENT: future time will be 105.711295

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=====STATISTICS=====

Number of original packets transmitted by A: 1000

Number of retransmissions by A: 622

Number of data packets delivered to layer 5 at B: 1000

Number of ACK packets sent by B: 986

Number of corrupted packets: 156

Ratio of lost packets: 17.86%

Ratio of corrupted packets: 7.28%

Average RTT: 987.123

Average communication time: 205.556

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EXTRA:

Simulator terminated at time 256485.765328956234

Process exited after 245.2 seconds with return value 0

Press any key to continue . . .