Stop and Wait

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Enter the number of messages to simulate: 11

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

Enter packet corruption probability [0.0 for no corruption]:0.3

Enter average time between messages from sender's layer5 [> 0.0]:1000

Enter TRACE:2

EVENT time: 1870.573975, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 0 at A at time 1870.573975

    TOLAYER3: packet being corrupted

EVENT time: 1876.039062, type: 2, fromlayer3 entity: 1   • B sends NAK as packet
                                                               is corrupt
Sending a negative acknowledgement in B

EVENT time: 1878.220703, type: 2, fromlayer3 entity: 0
                                                    • NAK in A causes
Invalid packet acknowledgement received by A   packet to be resent

Resending packet for A with sequence number 0

EVENT time: 1880.241211, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 0 in B   • correct packet received
                                                      at B
    TOLAYER3: packet being corrupted

EVENT time: 1884.708496, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A   • Corrupt ACK causes A

Resending packet for A with sequence number 0   to resend packet

    TOLAYER3: packet being lost

EVENT time: 1904.708496, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 1904.708496   • no response from B within
                                                   time period since packet lost
Resending packet for A with sequence number 0   sent so resend

EVENT time: 1914.136963, type: 2, fromlayer3 entity: 1   • B sends previous ACK
                                                               as duplicate detected
Resending previous ACK again as a duplicate packet was received by B

EVENT time: 1921.599854, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 1921.599854   • A received valid ACK

EVENT time: 3512.483887, type: 1, fromlayer5 entity: 0

EVENT time: 3512.483887, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 1 at A at time 3512.483887

sending next packet

EVENT time: 3515.214111, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 1 in B

TOLAYER3: packet being corrupted

• B received valid packet

EVENT time: 3517.580566, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 1

TOLAYER3: packet being lost

• A received corrupt ACK, thus resending packet

EVENT time: 3537.580566, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 3537.580566

Resending packet for A with sequence number 1

TOLAYER3: packet being lost

• no response from B within time period since packet lost sent so resend

EVENT time: 3557.580566, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 3557.580566

Resending packet for A with sequence number 1

• no response from B within time period since packet lost sent so resend

EVENT time: 3563.829590, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

• B received duplicate so resend previous ACK

EVENT time: 3565.310303, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 3565.310303

• A received valid ACK

EVENT time: 4630.183594, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 0 at A at time 4630.183594

• A sending next packet

EVENT time: 4636.544434, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 0 in B

TOLAYER3: packet being lost

• B sending ACK for valid packet

EVENT time: 4640.183594, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 4640.183594

Resending packet for A with sequence number 0

• no response from B within time period since packet lost sent so resend

EVENT time: 4641.242188, type: 2, fromlayer3 entity: 1

• Received duplicate

Resending packet for A with sequence number 0

EVENT time: 4641.242188, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

    TOLAYER3: packet being lost

• B received duplicate
So resend previous ACK

EVENT time: 4660.183594, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 4660.183594

Resending packet for A with sequence number 0

• no response from B within
time period since packet lost
sent so resend

EVENT time: 4665.457520, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

    TOLAYER3: packet being lost

• B received duplicate
So resend previous ACK

EVENT time: 4680.183594, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 4680.183594

Resending packet for A with sequence number 0

• no response from B within
time period since packet lost
sent so resend

EVENT time: 4688.964844, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

    TOLAYER3: packet being lost

• B received duplicate
So resend previous Ack

EVENT time: 4700.183594, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 4700.183594

Resending packet for A with sequence number 0

    TOLAYER3: packet being lost

• no response from B within
time period since packet lost
sent so resend

EVENT time: 4720.183594, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 4720.183594

Resending packet for A with sequence number 0

    TOLAYER3: packet being corrupted

• no response from B within
time period since packet lost
sent so resend

EVENT time: 4725.002930, type: 2, fromlayer3 entity: 1

Resending previous ACK again as incorrect packet was received by B

• resending last ACK as
current packet corrupt

EVENT time: 4728.664551, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 4728.664551

• A received valid ACK

EVENT time: 5705.288086, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 1 at A at time 5705.288086

• A sending next packet

Sending packet with sequence number 1 at A at time 5705.288086

• A sending next packet

EVENT time: 5706.565430, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 1 in B

    TOLAYER3: packet being corrupted

• B sending ACK for valid packet

EVENT time: 5712.183105, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 1

    TOLAYER3: packet being corrupted

• A received corrupt message, thus resend packet

EVENT time: 5714.214844, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a incorrect packet was received by B

    TOLAYER3: packet being corrupted

• B resending previous ACK as packet received is corrupt

EVENT time: 5721.958008, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 1

• A received corrupt ACK so resending packet

EVENT time: 5728.649414, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

    TOLAYER3: packet being corrupted

• duplicate received by B so resend ACK

EVENT time: 5734.122070, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 1

• A received corrupt ACK so resending packet

EVENT time: 5739.508789, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

• B received duplicate so resending previous ACK

EVENT time: 5741.212891, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 5741.212891

• A received valid ACK

EVENT time: 7534.791016, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 0 at A at time 7534.791016

• A sending next packet

EVENT time: 7542.749023, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 0 in B

• B sending ACK for valid ACK

EVENT time: 7544.791016, type: 0, timerinterrupt   entity: 0

• no response from B within

EVENT time: 7544.791016, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 7544.791016

Resending packet for A with sequence number 0

no response from B within time period since packet last sent so resend

EVENT time: 7547.141602, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 7547.141602

A received valid ACK

EVENT time: 7550.456055, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

    TOLAYER3: packet being corrupted

duplicate packet detected by b so resending ACK

EVENT time: 7557.152832, type: 2, fromlayer3 entity: 0

Received acknowledgement in A but not waiting on any at time 7557.152832

A received a ACK but does not currently have unacknowledged messages

EVENT time: 7651.169922, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 1 at A at time 7651.169922

A sending next packet

EVENT time: 7657.785645, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 1 in B

B sending ACK for valid packet

EVENT time: 7661.092773, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 7661.092773

A received valid ACK

EVENT time: 9159.420898, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 0 at A at time 9159.420898

    TOLAYER3: packet being corrupted

A sending next packet

EVENT time: 9160.934570, type: 2, fromlayer3 entity: 1

Sending a negative acknowledgement in B

    TOLAYER3: packet being corrupted

B received corrupt packet, send NAK

EVENT time: 9162.032227, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 0

corrupt packet at A, resend packet

EVENT time: 9164.181641, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 0 in B

    TOLAYER3: packet being corrupted

B sending ACK for valid packet

EVENT time: 9165.765625, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 0

A received, corrupt ACK, resend packet

EVENT time: 9171.012695, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

    TOLAYER3: packet being corrupted

B detected duplicate, resend ACK

EVENT time: 9179.956055, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 0

    TOLAYER3: packet being corrupted

corrupt ACK received by A, resend packet

EVENT time: 9189.278320, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a incorrect packet was received by B

    TOLAYER3: packet being corrupted

corrupt packet received by B, sending previous ACK

EVENT time: 9192.274414, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 0

    TOLAYER3: packet being corrupted

corrupt ACK at A, resend packet

EVENT time: 9193.423828, type: 2, fromlayer3 entity: 1

Sending a negative acknowledgement in B

corrupt packet detected at B, send NAK

EVENT time: 9200.992188, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 0

NAK received at A, resend packet

EVENT time: 9205.166016, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

B resending previous ACK

EVENT time: 9212.767578, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 9212.767578

A received ACK

EVENT time: 10328.148438, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 1 at A at time 10328.148438

A sending next packet

EVENT time: 10333.048828, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 1 in B

EVENT time: 10338.215820, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 10338.215820

Resending packet for A with sequence number 1

EVENT time: 10340.490234, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

EVENT time: 10342.787109, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 10342.787109

EVENT time: 10344.383789, type: 2, fromlayer3 entity: 0

Received acknowledgement in A but not waiting on any at time 10344.383789

EVENT time: 11499.634766, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 0 at A at time 11499.634766

EVENT time: 11508.064453, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 0 in B

EVENT time: 11509.702148, type: 0, timerinterrupt   entity: 0

Timer interrupt in A at 11509.702148

Resending packet for A with sequence number 0

    TOLAYER3: packet being corrupted

EVENT time: 11514.750000, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 11514.750000

EVENT time: 11515.412109, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

EVENT time: 11522.212891, type: 2, fromlayer3 entity: 0

Received acknowledgement in A but not waiting on any at time 11522.212891

EVENT time: 12795.375000, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 1 at A at time 12795.375000

• continues handling corrupt/
lost packets in the same ways

EVENT time: 12800.258789, type: 2, fromlayer3 entity: 1

Sending acknowledgement for packet 1 in B

     TOLAYER3: packet being corrupted

EVENT time: 12804.273438, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 1

EVENT time: 12805.417969, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a duplicate packet was received by B

     TOLAYER3: packet being corrupted

EVENT time: 12807.835938, type: 2, fromlayer3 entity: 0

Invalid packet acknowledgement received by A

Resending packet for A with sequence number 1

     TOLAYER3: packet being corrupted

EVENT time: 12816.591797, type: 2, fromlayer3 entity: 1

Resending previous ACK again as a incorrect packet was received by B

EVENT time: 12819.105469, type: 2, fromlayer3 entity: 0

The valid packet acknowledgement was received by A at 12819.105469

EVENT time: 13190.615234, type: 1, fromlayer5 entity: 0

Sending packet with sequence number 0 at A at time 13190.615234

     TOLAYER3: packet being lost

EVENT time: 13200.682617, type: 0, timerinterrupt   entity: 0

 Simulator terminated at time 13200.682617

 after sending 11 msgs from layer5