

For alternating-bit:

----- Network Simulator Version 2.3 -----

Enter the number of messages to simulate: 10

Packet loss probability [enter number between 0.0 and 1.0]: .1

Packet corruption probability [0.0 for no corruption]: .1

Packet out-of-order probability [0.0 for no out-of-order]: .1

Average time between messages from sender's layer5 [ > 0.0]: 10

Enter Level of tracing desired: 1

Do you want actions randomized: (1 = yes, 0 = no)? 1

Do you want Bidirectional: (1 = yes, 0 = no)? 0

Input parameters:

Number of Messages = 10 Lost Packet Prob. = 0.100

Corrupt Packet Prob. = 0.100 Out Of Order Prob. = 0.100

Ave. time between messages = 10.00 Trace level = 1

Randomize = 1 Bi-directional = 0

A: 19.6784, Layer 5 to 4 Message = !fEVhy->Pbs'2J3m~2DU

A: new packet has checksum: 3942

A: Queue: checksums:

3942

B: packet ACK number: 0, receiver sequence number (expected ACK number): 0

B: received packet checksum: 3942

B: 24.0760, Layer 4 to 5 Message = !fEVhy->Pbs'2J3m~2DU

A: 33.9240, Layer 5 to 4 Message = ##i.Qt9]!Eh-Ps8[~Dg,

A: new packet has checksum: 3881

A: Queue: checksums:

3942

3881

A: 50.1225, Layer 5 to 4 Message = \$X\$d:oFzQ([3h>sJ~U,a

A: new packet has checksum: 4303

A: Queue: checksums:

3942

3881

4303

A: 57.1431, Layer 5 to 4 Message = %kS%\$jR:~iQ9!hP8~gO7

A: new packet has checksum: 3605

A: Queue: checksums:

3942

3881  
4303  
3605

A: 72.1209, Layer 5 to 4 Message = &}wq&e\_XRLF?93-!~xrl

A: new packet has checksum: 3983

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983

A: 85.4762, Layer 5 to 4 Message = '2=IT'kv\$x:FQ]hs~,7C

A: new packet has checksum: 3838

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983  
3838

A: 87.4724, Layer 5 to 4 Message = (Eb~=Z(6SpxLi(Eb~=Zw

A: new packet has checksum: 3869

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983  
3838  
3869

A: 98.1315, Layer 5 to 4 Message = dW(V'U&)%S\$R2Q!P~O}N

A: new packet has checksum: 4074

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983  
3838

3869  
4074

A: 104.7707, Layer 5 to 4 Message = \*jL.nP2r\*6vX:z]>~aC%

A: new packet has checksum: 4186

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983  
3838  
3869  
4074  
4186

A: 109.8623, Layer 5 to 4 Message = +fpdWK>2&+k\_RF3-~rfY

A: new packet has checksum: 3787

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983  
3838  
3869  
4074  
4186  
3787

A: 124.6745, Layer 5 to 4 Message = ,16;AFKPUZ,ejoty~&+0

A: new packet has checksum: 4288

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983  
3838  
3869  
4074  
4186  
3787

4288

A: 133.4439, Layer 5 to 4 Message = -DZq\*AWn'=T-\$:Qh~7Ne

A: new packet has checksum: 3776

A: Queue: checksums:

3942

3881

4303

3605

3983

3838

3869

4074

4186

3787

4288

3776

A: 140.7541, Layer 5 to 4 Message = .V~lq;d.V~lq.d.V~lq;

A: new packet has checksum: 4352

A: Queue: checksums:

3942

3881

4303

3605

3983

3838

3869

4074

4186

3787

4288

3776

4352

A: 143.7849, Layer 5 to 4 Message = xiE~Z6pL(b=wSxiE~Z6p

A: new packet has checksum: 4296

A: Queue: checksums:

3942

3881

4303

3605

3983

3838  
3869  
4074  
4186  
3787  
4288  
3776  
4352  
4296

A: 161.6223, Layer 5 to 4 Message = d{iVD1|jWE2}2X03~IYG

A: new packet has checksum: 4348

A: Queue: checksums:

3942  
3881  
4303  
3605  
3983  
3838  
3869  
4074  
4186  
3787  
4288  
3776  
4352  
4296  
4348

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A: timer interrupt

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A: resending packet with checksum: 3942

B: packet ACK number: 0, receiver sequence number (expected ACK number): 1

B: received packet checksum: 3942

A: packet ACK number: 0, sender expected ACK number: 0

A: sending the next packet with checksum: 3881

B: packet ACK number: 1, receiver sequence number (expected ACK number): 1

B: received packet checksum: 3881

B: 1081.2218, Layer 4 to 5 Message = ##i.Qt9]!Eh-Ps8[~Dg,

Printing the contents of the Simulation Event Q

Event Time = 2062.098 A: Timer

A: packet ACK number: 1, sender expected ACK number: 1  
A: sending the next packet with checksum: 4303

Printing the contents of the Simulation Event Q  
Event Time = 2095.196 A: Timer

B: packet ACK number: 0, receiver sequence number (expected ACK number): 0  
B: received packet checksum: 4303  
B: 1097.6075, Layer 4 to 5 Message = \$X\$d:oFzQ(j3h>sJ~U,a  
A: packet ACK number: 0, sender expected ACK number: 0  
A: sending the next packet with checksum: 3605

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A: timer interrupt

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A: resending packet with checksum: 3605  
B: packet ACK number: 1, receiver sequence number (expected ACK number): 1  
B: received packet checksum: 3546

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B: recieved packet's checksum differs from expected checksum

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\*\*\*\* packet observed checksum: 3605

\*\*\*\* packet expected checksum: 3546

A: packet ACK number: 0, sender expected ACK number: 1

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A: timer interrupt

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A: resending packet with checksum: 3605  
A: sending the next packet with checksum: 3605  
B: packet ACK number: 1, receiver sequence number (expected ACK number): 1  
B: received packet checksum: 3605  
B: 2185.8615, Layer 4 to 5 Message = %kS%\$jR:#iQ9!hP8~gO7  
A: packet ACK number: 1, sender expected ACK number: 1  
A: sending the next packet with checksum: 3983  
B: packet ACK number: 0, receiver sequence number (expected ACK number): 0  
B: received packet checksum: 3983  
B: 2223.1586, Layer 4 to 5 Message = &}wq&e\_XRLF?93-'~xrl

Printing the contents of the Simulation Event Q  
Event Time = 3204.753 A: Timer

A: packet ACK number: 0, sender expected ACK number: 0  
A: sending the next packet with checksum: 3838

Printing the contents of the Simulation Event Q

Event Time = 3227.612 A: Timer

B: packet ACK number: 1, receiver sequence number (expected ACK number): 1

B: received packet checksum: 3838

B: 2239.1006, Layer 4 to 5 Message = '2=IT'kv\$х:FQ]hs~,7C

A: packet ACK number: 1, sender expected ACK number: 1

A: sending the next packet with checksum: 3869

B: packet ACK number: 0, receiver sequence number (expected ACK number): 0

B: received packet checksum: 3869

B: 2272.4161, Layer 4 to 5 Message = (Eb~=Z(6SpxLi(Eb~=Zw

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A: timer interrupt

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A: resending packet with checksum: 3869

B: packet ACK number: 0, receiver sequence number (expected ACK number): 1

B: received packet checksum: 4474

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B: recieved packet's checksum differs from expected checksum

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\*\*\*\*\* packet observed checksum: 3869

\*\*\*\*\* packet expected checksum: 4474

A: packet ACK number: 1, sender expected ACK number: 0

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A: timer interrupt

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A: resending packet with checksum: 3869

A: sending the next packet with checksum: 3869

B: packet ACK number: 0, receiver sequence number (expected ACK number): 1

B: received packet checksum: 3869

A: packet ACK number: 0, sender expected ACK number: 0

A: sending the next packet with checksum: 4074

B: packet ACK number: 1, receiver sequence number (expected ACK number): 1

B: received packet checksum: 4074

B: 3336.1091, Layer 4 to 5 Message = dW(V'U&)%S\$R2Q!P~O}N

Printing the contents of the Simulation Event Q

Event Time = 4320.988 A: Timer

A: packet ACK number: 1, sender expected ACK number: 1

A: sending the next packet with checksum: 4186

Printing the contents of the Simulation Event Q

Event Time = 4357.666 A: Timer

B: packet ACK number: 0, receiver sequence number (expected ACK number): 0

B: received packet checksum: 4186

B: 3366.7188, Layer 4 to 5 Message = \*jL.nP2r\*6vX:z]>~aC%

A: packet ACK number: 0, sender expected ACK number: 0

A: sending the next packet with checksum: 3787

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A: timer interrupt

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A: resending packet with checksum: 3787

B: packet ACK number: 1, receiver sequence number (expected ACK number): 1

B: received packet checksum: 3787

B: 4389.4689, Layer 4 to 5 Message = +fpdWK>2&+k\_RF3-~rfY

Simulator terminated at time 4391.317107

after receiving 10 msgs at layer5

Simulator Analysis:

Number of messages sent from 5 to 4: 14

Number of messages received at Layer 5, side A: 0

Number of messages received at Layer 5, side B: 10

Number of messages incorrectly received at layer 5: 0

Number of packets entering the network: 30

Average number of packets already in network: 0.000

Number of packets that the network lost: 4

Number of packets that the network corrupted: 3

Number of packets that the network put out of order: 3