**SCENARIOS INDEX:**

[1. Normal operation: 1](#_Toc436616032)

[2. Receiver not started: 8](#_Toc436616033)

[3. Initial ACK number wrong: 10](#_Toc436616034)

[4. Initial sequence number wrong: 11](#_Toc436616035)

[5. Secret key different on both sides: 13](#_Toc436616036)

[6. Integrity check field of data packet wrong: 15](#_Toc436616037)

[7. Integrity check field of ACK wrong: 17](#_Toc436616038)

[8. Integrity check field of 2nd data packet corrupted once: 19](#_Toc436616039)

[9. Integrity field of 1st ACK packet set wrong by RX once, next ACK correct: 27](#_Toc436616040)

[10. Sequence number field of 2nd data packet set wrong by TX once: 34](#_Toc436616041)

[11. ACK number of 1st ACK set wrong by RX; resends next correctly: 42](#_Toc436616042)

[12. Data packet type set by TX always wrong: 49](#_Toc436616043)

[13. Packet type field of 2nd data packet set wrong by TX once: 51](#_Toc436616044)

[14. Packet type of 1st ACK wrong; resent correctly 58](#_Toc436616045)

[15. Packet type of ACK always wrong 66](#_Toc436616046)

[16. Length field of all TX data packet wrong 68](#_Toc436616047)

[17. Length field of 2nd data packet is set wrong by TX once 70](#_Toc436616048)

[18. MPS and max message size of RX less than TX: 77](#_Toc436616049)

[19. 2nd Data packet corrupted by the channel & retransmitted correctly: 79](#_Toc436616050)

# [Normal operation:](#index)

**Transmitter:**

500 bytes of data to be sent:

51 bb e3 65 84 ed a4 94 15 43 74 56 5a 9a 1 e3 2d d0 10 9c b9 16 3b d5 af e0 35 97 67 28 55 6b 3 29 d3 a b7 2d 41 db 1e 63 e4 cd 72 f8 5e 69 4 9d e2 e3 23 d7 1f b7 94 6c da 76 32 6e de 73 eb 31 f9 ef 68 a4 dd a4 e2 26 61 71 d3 f2 70 31 72 b1 ea 48 23 ee 5f d7 8 18 b3 da f9 6f 33 74 7 a2 9b 11 c0 70 f4 d f 2c 7f fb 4 f7 d1 fc c0 96 a2 be 65 8f c5 bb 15 8 b2 ea 95 18 54 99 8b a 9a ef e 61 95 46 a8 fa 18 a6 51 b0 d8 6b a9 3a d8 16 f8 eb 39 99 57 1d d3 86 e4 28 5c 6f 5c b4 a5 4e 43 33 17 a9 86 7b ba 89 49 7c d0 68 de 89 62 c7 d2 fa 79 32 82 52 38 5c 47 74 7e 79 95 62 95 6c 75 65 80 90 d4 be 94 49 3e ef 1b 61 85 da de 66 4a d1 6b 50 da 6a 3 65 23 2d 7b 12 6 e5 7e 61 5f 96 9 b8 92 12 b4 d6 c8 68 73 b9 b6 26 c1 4a 9c 8b 96 91 b9 f0 46 4f 60 41 e3 63 b0 7a 80 32 e0 75 5b f7 14 69 72 f2 42 b8 b1 9e fd 16 41 f0 69 c5 7e bc c 84 a8 b8 ed c6 ba fa 4a 4 64 e 78 45 6a 41 80 f 60 5d 4c d1 e0 50 db dc ed c0 34 a2 e9 b6 d7 78 8e 85 3a 78 4c 0 bf 6 86 47 ce e8 10 e6 53 b4 1c 4d 47 90 78 4a 45 dd f2 52 e5 65 48 c2 ad c5 f2 db bc 40 40 66 ae 7d aa e1 2c 86 cd 38 dd bd da d8 dc 8e 1 32 23 2b 57 7c 4a 9d ce a3 38 42 35 73 6c d9 46 65 e9 7d a9 f5 1 b7 41 e9 c0 f0 86 89 75 8 8e 58 d2 d1 c1 6f 91 d6 f4 ec b7 35 87 fb 48 75 ec 85 f6 a7 1d c0 5e 48 58 8c 75 66 ce 1f c3 ce ba a3 a3 ef 8c a0 d0 e9 69 af 7b 35 ca 58 d1 7d 64 b 91 6a 7e eb 7a 8b 32 f c7 d3 7c ef 36 4e 2a 26 5a a0 31 5b 7e d1 b4 85 69 53 fc 4d 8c 5f 60 0 28 15 50 89 2e 36 3f f 55 1f ed e4 88 a2 ab 55 af b7 56 d6

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 51 bb e3 65 84 ed a4 94 15 43 74 56 5a 9a 1 e3 2d d0 10 9c b9 16 3b d5 af e0 35 97 67 28 d6 c1 57 6a ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e 55 6b 3 29 d3 a b7 2d 41 db 1e 63 e4 cd 72 f8 5e 69 4 9d e2 e3 23 d7 1f b7 94 6c da 76 7c 8e 8d ab ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 32 6e de 73 eb 31 f9 ef 68 a4 dd a4 e2 26 61 71 d3 f2 70 31 72 b1 ea 48 23 ee 5f d7 8 18 a8 15 a6 4e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e b3 da f9 6f 33 74 7 a2 9b 11 c0 70 f4 d f 2c 7f fb 4 f7 d1 fc c0 96 a2 be 65 8f c5 bb c8 aa 4c 9 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e 15 8 b2 ea 95 18 54 99 8b a 9a ef e 61 95 46 a8 fa 18 a6 51 b0 d8 6b a9 3a d8 16 f8 eb 54 97 47 96 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e 39 99 57 1d d3 86 e4 28 5c 6f 5c b4 a5 4e 43 33 17 a9 86 7b ba 89 49 7c d0 68 de 89 62 c7 10 c5 d4 ba ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e d2 fa 79 32 82 52 38 5c 47 74 7e 79 95 62 95 6c 75 65 80 90 d4 be 94 49 3e ef 1b 61 85 da e3 ad 4a 23 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e de 66 4a d1 6b 50 da 6a 3 65 23 2d 7b 12 6 e5 7e 61 5f 96 9 b8 92 12 b4 d6 c8 68 73 b9 5a a 74 ea ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e b6 26 c1 4a 9c 8b 96 91 b9 f0 46 4f 60 41 e3 63 b0 7a 80 32 e0 75 5b f7 14 69 72 f2 42 b8 7f fe c3 2a ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e b1 9e fd 16 41 f0 69 c5 7e bc c 84 a8 b8 ed c6 ba fa 4a 4 64 e 78 45 6a 41 80 f 60 5d d2 a0 ee 4e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e 4c d1 e0 50 db dc ed c0 34 a2 e9 b6 d7 78 8e 85 3a 78 4c 0 bf 6 86 47 ce e8 10 e6 53 b4 d1 5 2f b5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e 1c 4d 47 90 78 4a 45 dd f2 52 e5 65 48 c2 ad c5 f2 db bc 40 40 66 ae 7d aa e1 2c 86 cd 38 50 63 8f 81 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e dd bd da d8 dc 8e 1 32 23 2b 57 7c 4a 9d ce a3 38 42 35 73 6c d9 46 65 e9 7d a9 f5 1 b7 72 b8 b4 cb ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e 41 e9 c0 f0 86 89 75 8 8e 58 d2 d1 c1 6f 91 d6 f4 ec b7 35 87 fb 48 75 ec 85 f6 a7 1d c0 5b 7d b8 83 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e 5e 48 58 8c 75 66 ce 1f c3 ce ba a3 a3 ef 8c a0 d0 e9 69 af 7b 35 ca 58 d1 7d 64 b 91 6a 7d 33 96 21 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e 7e eb 7a 8b 32 f c7 d3 7c ef 36 4e 2a 26 5a a0 31 5b 7e d1 b4 85 69 53 fc 4d 8c 5f 60 0 74 dd 27 d7 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 28 15 50 89 2e 36 3f f 55 1f ed e4 88 a2 ab 55 af b7 56 d6 78 b4 7 7d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 51 bb e3 65 84 ed a4 94 15 43 74 56 5a 9a 1 e3 2d d0 10 9c b9 16 3b d5 af e0 35 97 67 28 d6 c1 57 6a ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e 55 6b 3 29 d3 a b7 2d 41 db 1e 63 e4 cd 72 f8 5e 69 4 9d e2 e3 23 d7 1f b7 94 6c da 76 7c 8e 8d ab ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 32 6e de 73 eb 31 f9 ef 68 a4 dd a4 e2 26 61 71 d3 f2 70 31 72 b1 ea 48 23 ee 5f d7 8 18 a8 15 a6 4e ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e b3 da f9 6f 33 74 7 a2 9b 11 c0 70 f4 d f 2c 7f fb 4 f7 d1 fc c0 96 a2 be 65 8f c5 bb c8 aa 4c 9 ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e 15 8 b2 ea 95 18 54 99 8b a 9a ef e 61 95 46 a8 fa 18 a6 51 b0 d8 6b a9 3a d8 16 f8 eb 54 97 47 96 ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e 39 99 57 1d d3 86 e4 28 5c 6f 5c b4 a5 4e 43 33 17 a9 86 7b ba 89 49 7c d0 68 de 89 62 c7 10 c5 d4 ba ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e d2 fa 79 32 82 52 38 5c 47 74 7e 79 95 62 95 6c 75 65 80 90 d4 be 94 49 3e ef 1b 61 85 da e3 ad 4a 23 ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e de 66 4a d1 6b 50 da 6a 3 65 23 2d 7b 12 6 e5 7e 61 5f 96 9 b8 92 12 b4 d6 c8 68 73 b9 5a a 74 ea ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e b6 26 c1 4a 9c 8b 96 91 b9 f0 46 4f 60 41 e3 63 b0 7a 80 32 e0 75 5b f7 14 69 72 f2 42 b8 7f fe c3 2a ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e b1 9e fd 16 41 f0 69 c5 7e bc c 84 a8 b8 ed c6 ba fa 4a 4 64 e 78 45 6a 41 80 f 60 5d d2 a0 ee 4e ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e 4c d1 e0 50 db dc ed c0 34 a2 e9 b6 d7 78 8e 85 3a 78 4c 0 bf 6 86 47 ce e8 10 e6 53 b4 d1 5 2f b5 ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e 1c 4d 47 90 78 4a 45 dd f2 52 e5 65 48 c2 ad c5 f2 db bc 40 40 66 ae 7d aa e1 2c 86 cd 38 50 63 8f 81 ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e dd bd da d8 dc 8e 1 32 23 2b 57 7c 4a 9d ce a3 38 42 35 73 6c d9 46 65 e9 7d a9 f5 1 b7 72 b8 b4 cb ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e 41 e9 c0 f0 86 89 75 8 8e 58 d2 d1 c1 6f 91 d6 f4 ec b7 35 87 fb 48 75 ec 85 f6 a7 1d c0 5b 7d b8 83 ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e 5e 48 58 8c 75 66 ce 1f c3 ce ba a3 a3 ef 8c a0 d0 e9 69 af 7b 35 ca 58 d1 7d 64 b 91 6a 7d 33 96 21 ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e 7e eb 7a 8b 32 f c7 d3 7c ef 36 4e 2a 26 5a a0 31 5b 7e d1 b4 85 69 53 fc 4d 8c 5f 60 0 74 dd 27 d7 ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 28 15 50 89 2e 36 3f f 55 1f ed e4 88 a2 ab 55 af b7 56 d6 78 b4 7 7d ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ 51 bb e3 65 84 ed a4 94 15 43 74 56 5a 9a 1 e3 2d d0 10 9c b9 16 3b d5 af e0 35 97 67 28 55 6b 3 29 d3 a b7 2d 41 db 1e 63 e4 cd 72 f8 5e 69 4 9d e2 e3 23 d7 1f b7 94 6c da 76 32 6e de 73 eb 31 f9 ef 68 a4 dd a4 e2 26 61 71 d3 f2 70 31 72 b1 ea 48 23 ee 5f d7 8 18 b3 da f9 6f 33 74 7 a2 9b 11 c0 70 f4 d f 2c 7f fb 4 f7 d1 fc c0 96 a2 be 65 8f c5 bb 15 8 b2 ea 95 18 54 99 8b a 9a ef e 61 95 46 a8 fa 18 a6 51 b0 d8 6b a9 3a d8 16 f8 eb 39 99 57 1d d3 86 e4 28 5c 6f 5c b4 a5 4e 43 33 17 a9 86 7b ba 89 49 7c d0 68 de 89 62 c7 d2 fa 79 32 82 52 38 5c 47 74 7e 79 95 62 95 6c 75 65 80 90 d4 be 94 49 3e ef 1b 61 85 da de 66 4a d1 6b 50 da 6a 3 65 23 2d 7b 12 6 e5 7e 61 5f 96 9 b8 92 12 b4 d6 c8 68 73 b9 b6 26 c1 4a 9c 8b 96 91 b9 f0 46 4f 60 41 e3 63 b0 7a 80 32 e0 75 5b f7 14 69 72 f2 42 b8 b1 9e fd 16 41 f0 69 c5 7e bc c 84 a8 b8 ed c6 ba fa 4a 4 64 e 78 45 6a 41 80 f 60 5d 4c d1 e0 50 db dc ed c0 34 a2 e9 b6 d7 78 8e 85 3a 78 4c 0 bf 6 86 47 ce e8 10 e6 53 b4 1c 4d 47 90 78 4a 45 dd f2 52 e5 65 48 c2 ad c5 f2 db bc 40 40 66 ae 7d aa e1 2c 86 cd 38 dd bd da d8 dc 8e 1 32 23 2b 57 7c 4a 9d ce a3 38 42 35 73 6c d9 46 65 e9 7d a9 f5 1 b7 41 e9 c0 f0 86 89 75 8 8e 58 d2 d1 c1 6f 91 d6 f4 ec b7 35 87 fb 48 75 ec 85 f6 a7 1d c0 5e 48 58 8c 75 66 ce 1f c3 ce ba a3 a3 ef 8c a0 d0 e9 69 af 7b 35 ca 58 d1 7d 64 b 91 6a 7e eb 7a 8b 32 f c7 d3 7c ef 36 4e 2a 26 5a a0 31 5b 7e d1 b4 85 69 53 fc 4d 8c 5f 60 0 28 15 50 89 2e 36 3f f 55 1f ed e4 88 a2 ab 55 af b7 56 d6 ]

Waiting for a packet

# [Receiver not started:](#index)

**Transmitter:**

500 bytes of data to be sent:

8c 39 73 cd e3 8b 56 20 35 f8 ea 47 2 93 58 db 8 13 8c ec 7b 2a 2d cf d a9 9a d5 8f 77 b5 ea c6 72 97 a6 7a 36 e 12 94 6d 2c 70 f9 5b 84 82 35 fc 3c ae 2c a2 96 4f 26 32 f4 af f9 16 d5 7c f7 a8 9f 80 55 52 3e 5f d0 29 b2 fe 1f a5 15 5 b3 72 46 47 76 e5 6c 29 47 be 22 16 ae 8b e0 99 29 46 5 ec 4e 2b 7d da 1b b 89 7b c3 5 94 bd 86 93 19 f1 a3 10 2 76 2b 58 89 70 bb 5f 4c 48 f9 f f 3f 41 3 88 d3 5b 47 c fd d6 24 9e f2 85 7c 36 c6 43 12 3a 38 84 a9 3a 6c 17 3 13 b7 19 86 c1 3 90 4e 82 f9 ac 2e 2d 13 6f 89 36 cb dd 12 34 0 a8 2f 31 c0 76 65 ea 29 1a 24 2e 4e ce 90 c 97 a0 0 30 a db bd 0 4a 47 fb a9 24 8c 19 8a fb 6b 99 7e 96 1a 83 b1 20 fe 97 b2 76 72 7f 90 c5 5a e8 7c 2c ed 0 7d 98 3e 73 b1 ad e7 97 17 f9 e5 f 85 20 fc 47 2f 2e 65 d3 50 d6 f3 56 94 a3 ab 1c e3 8c 96 45 90 3 d4 9b b1 bc 14 90 9f da b7 97 83 2b 9e 22 d1 34 d2 f2 3b b0 52 70 7 37 4 79 82 52 c3 1d fc d8 b0 e1 39 71 91 5 b6 c4 42 3e 58 d0 f3 54 4b 38 2e 53 b9 9b 26 67 a8 cb da 29 fb 4b 11 32 9e 28 1d 14 25 d3 ab 53 d7 a5 30 ee 26 ae e4 6e 8c 1f 45 ba da c6 16 58 ab f2 27 49 5d c3 53 e4 10 8e 88 95 fd cb 8 d4 a3 1f e9 53 56 4e cf 98 b5 22 47 f 25 8a 62 6f 79 40 e7 8a bf c0 f c2 cd ef 3 1c 87 9 1e d5 79 34 1f d2 94 a0 3 ae e1 72 47 a3 25 28 5b c7 63 d4 9c f9 4e a3 2 c7 3b 94 c5 1 90 12 b9 e0 e7 68 43 86 d7 e1 45 27 c5 d8 bf 9 38 32 e7 96 63 97 cb c2 e9 60 98 6f 53 d0 a8 25 6c 19 79 52 b1 bd d 5d 85 ed 4d d5 70 de a 81 fe 31 fe af 41 e8 7d 13 97 ec 74 9b c2 9e aa 5b bb 61 51 3e 5f 4

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 8c 39 73 cd e3 8b 56 20 35 f8 ea 47 2 93 58 db 8 13 8c ec 7b 2a 2d cf d a9 9a d5 8f 77 56 dc 38 d5 ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 8c 39 73 cd e3 8b 56 20 35 f8 ea 47 2 93 58 db 8 13 8c ec 7b 2a 2d cf d a9 9a d5 8f 77 56 dc 38 d5 ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 8c 39 73 cd e3 8b 56 20 35 f8 ea 47 2 93 58 db 8 13 8c ec 7b 2a 2d cf d a9 9a d5 8f 77 56 dc 38 d5 ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 8c 39 73 cd e3 8b 56 20 35 f8 ea 47 2 93 58 db 8 13 8c ec 7b 2a 2d cf d a9 9a d5 8f 77 56 dc 38 d5 ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

# [Initial ACK number wrong:](#index)

**Transmitter:**

500 bytes of data to be sent:

7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 2e 29 66 4a ff 5d c3 4b ad f4 7b 2a 6d 3b a2 f7 5b 4c 10 b8 d5 3d 9c cd 2d e a f6 61 c7 aa c dd 92 76 7c eb 88 59 e9 b4 a0 6c d 2a 9f be a7 1c 2f e9 a9 32 51 5 b5 f4 2 7f 8a c3 96 64 ba f1 ab 5 6 e0 97 7c ec c0 bf b7 20 e1 81 72 65 f2 95 5a 48 53 f3 3e f5 68 d9 68 36 1e 20 7 d3 5 1f 4e 1f f2 c2 86 cb 8d de 44 ce 84 15 bf 3b e5 fc 42 1f b4 ba 9b 2c c1 ba 21 5 ca 9b 21 8b 8b 21 f2 ff 5b eb 65 92 3c f4 ff 27 ae 73 5c 57 96 98 21 cc 3c 95 42 d4 d3 b5 49 a6 39 39 33 20 92 75 74 e7 2f c0 1a 81 30 b2 5b 64 60 d9 34 9 57 30 9e e 4b 9e b0 46 a0 8 44 32 29 88 2f 83 3a 5d bd b5 33 66 3b fa 91 dd cc 6a f 44 e6 98 2d 62 3 69 df 77 34 16 82 26 b8 fe 30 fa 1 d3 26 97 98 13 67 9 71 c1 d0 23 4c 70 3b 8f 44 e7 b1 52 bf 50 8d 33 73 b3 8 68 10 83 2e ff 3 a7 6e 5a 37 2b f6 4c fb 89 bf ec d7 a3 33 a d4 e0 eb 5d e3 ee 10 a e2 63 ad 36 fc 4c 35 5b 86 29 e2 cf ac f0 9a a4 2a d5 22 a6 ee ea d1 1d 52 c0 9d 19 a6 70 ac 5a 4f 88 e1 d3 ef 4 fa b8 50 2 a6 b5 71 fa ae 40 e3 20 cd e5 18 ae 41 2 2c 21 a4 dc e1 e7 ae ad 59 33 2f 90 a0 82 e9 27 19 11 72 b1 e1 e9 6f 5c 20 66 a2 88 5d b5 23 b5 4 e2 55 a 94 bb c6 bf f3 f 66 64 89 f1 5d 29 d f8 fc 54 bc 63 38 6c 6f e7 1c a6 c9 14 a1 58 32 d7 d 94 5f a8 1 ee e5 97 e 64 6b 5 a4 2c 4d 76 5e ff a7 98 af df 71 4f 2d c9 ef 28 3f e4 40 4d 48 7e a 51 9c b4 4b 9a 9d 6d c8 3e c2 dd 6d 92 72 95 aa 5d 31 ea 5c 1f 90 60 63 a3 86 98 6c 5b fe b9 fd 5e 3 55

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064732

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

Expected sequence number: 425064732

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

Expected sequence number: 425064732

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

Expected sequence number: 425064732

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 7b be 5e 86 76 e4 ff a 7d 49 cc 22 4e 39 6e 23 14 78 df 44 3 c5 e4 ba 74 5d bf 71 c1 c3 7d 59 d e2 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

# [Initial sequence number wrong:](#index)

**Transmitter:**

500 bytes of data to be sent:

41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff 15 55 94 7e 7d 1c d6 3a 7d 25 49 62 5a 5f 9e 4b a5 81 7d c3 5e a3 b6 78 a9 4f ef 72 f 55 7a dd c f9 13 b1 63 7 94 c8 79 17 23 2e 83 b 4f c 8d d2 ba 92 20 59 63 54 59 52 9c df 3d a0 12 21 fb 5f 53 2a a1 88 c9 d d6 26 c5 65 20 6c ae 19 95 fc f5 50 78 f6 ba d2 99 18 8c 23 94 f2 4c 18 20 bf dc 6e 5c 2d 62 b8 be d0 79 bb e7 aa d5 2 e8 54 a1 fe fe 4f 48 a0 62 8e 3 e8 53 3c b4 16 9b 2f ab 8f fc 16 b0 7b fc c2 1e 5 5 81 e0 74 64 8e e5 fb a5 16 40 e1 37 29 18 1f 3b b5 19 ea 54 df b1 c4 3a f3 e5 d8 41 ba a5 9a 5b 96 71 77 59 21 1b cb 37 e7 f7 1 bc 7e 38 ca ec 2f d 5f f3 b4 51 d7 dc b9 9a 77 39 f4 93 4 25 8b 2d b9 dd d2 53 a3 3e df 68 17 7b e0 a1 10 3c 1e 69 d5 8 58 e6 5c 62 ce 4c e d7 16 83 fa 46 7c 3c ec 13 ee ce d2 3a b0 b0 cf 91 34 e8 a5 53 82 c6 e4 f1 c2 3b c1 2e e3 da da ac 5c a1 b1 fa c3 cd 32 ee f9 83 f1 52 9d 93 f2 11 d5 74 80 f3 cd 4 11 13 0 11 21 fa 62 9 ab 47 4c 2f 7b 9f 91 90 9b 42 b6 9d e3 e7 6a f6 71 46 da 0 e0 3e de c7 8e 68 78 9d f4 92 34 0 75 d3 3e 4 b3 d2 b4 3a ae 42 f3 fa ab b6 a 62 a 39 d6 1d a4 d4 d7 f5 17 9a 45 6 8a 3a 64 cc 7f 8a 80 7 fe 26 a1 4 8 a8 66 ae e 72 ba 88 73 1b b2 ad f2 2b a4 39 d0 4 4e eb 4f 26 9d dd 1b b1 e3 b9 d8 14 41 2d 8 28 fa 7e 3 fe 5d b8 20 76 10 69 2e 6f 36 83 39 6d 8d dc ef ef 64 87 eb 1f 35 a9 75 fe a7 73 8c 0 2f 66 f8 b6 19 68 91 3e 51 5d 3d 4f 8b 86 38 4b d1 dc 38 fe b9 83 bb 9e 1f fd eb 60 14 9e bd af 1a 13 e4 6e 94

Sending data packet number with sequence number: 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064233

[ 55 19 55 f7 29 1e 41 d0 95 15 87 83 80 3e 3 65 68 51 7 3a 34 a8 1 50 2d a5 48 ca 64 6f 96 6 3 e7 bd ff f8 a4 31 84 ]

Data packet discarded due to wrong sequence number

Waiting for a packet

# [Secret key different on both sides:](#index)

**Transmitter:**

500 bytes of data to be sent:

2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d d6 e6 84 20 16 63 e5 a2 d5 70 88 8b 86 86 f9 43 64 eb 2b d2 6e 1f d4 51 a3 df 23 7f 88 63 e fb 16 eb 33 17 4 44 4e f7 66 ea 13 90 a8 73 c7 41 80 ce c0 55 9c 1d 8 99 3f 5f 91 7f a9 49 5d ed c9 e3 bf 78 46 77 51 7c 6d 6 47 6c 14 1a c f 35 c9 4b 4a ac fe aa 7a c8 62 5b cd 7 4e c0 6c 70 c4 52 90 45 82 9c 8b 6e b8 ac 99 cc 12 10 51 11 11 78 cf 8d 32 c6 97 f0 7f 5a 1f 0 98 6b e6 b4 15 3a d8 18 65 35 e9 10 42 8b 4f 5 1e 90 91 ff 24 56 82 80 27 f8 cc 87 35 6c 82 58 18 43 ff 12 89 6a 3a e8 ea f2 39 78 42 76 f7 8c 17 3d d9 6a 1c db 45 79 4d f1 90 87 bf f2 95 6b d 63 56 9b dd f8 e0 4 40 ff c9 28 20 be b1 1e af 3b 1a 6c 6b 5e 9b 27 99 f8 a2 dc 43 51 d8 ce 25 9b 17 7d 8f 9d 96 1b 57 5c a3 2d 58 fb e9 d0 11 a2 6a 4a 46 1b 8b 1d 4 66 9 48 94 71 3 c6 cf ec 5d 3f 97 38 b7 22 b1 5d f4 7a 1a 89 fb 11 66 1 f d8 d b3 1c dc f5 29 60 f1 32 41 79 15 fc d 66 d4 70 4b b0 e5 2d 28 c6 c6 e0 5 e6 e4 f7 d6 54 76 15 a9 5f c6 77 42 77 84 a0 31 c0 5 1b e9 90 f0 bd 7c 11 50 a5 3a 3 52 5a d3 11 50 37 17 3d ca a2 e6 3 3d 94 47 41 f4 3b b6 f aa 62 1f 36 4f 1a 16 2d da 2b e3 cd 5b 1c 9b 24 30 37 ac f6 6b 3e 35 82 64 47 e1 11 3d 25 c9 ec bb 7d 81 46 cf 23 86 48 b9 e c5 26 39 4 c8 e5 e0 2e f2 28 1b 4c c8 d4 57 f6 4f 2c c0 a5 68 d6 9d 9a 95 be 91 4b de 5c b5 c6 59 e3 4a 1d 8 33 6e 9d 39 e 42 68 b1 bf c9 77 e2 a1 12 9a 14 2 57 72 17 e9 83 c0 55 67 c6 5a 69 f4 4b 2a cf 4 3f 11 47 5e d1 37 6a a9 56 57

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 2c c8 f7 37 3b 69 8 2a 64 3e 6d ef 4c 8a 88 c6 c3 e4 7e 77 19 31 f5 8 bc 3e ef b9 d5 6d 1c ce c b1 ]

Data packet discarded due to integrity fail

Waiting for a packet

# Integrity check field of data packet wrong:

**Transmitter:**

500 bytes of data to be sent:

e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 a1 3b e4 90 e9 71 ff 52 35 ae 26 18 b4 c8 6a 57 29 21 d c d2 28 df 39 58 9c 2b 71 ea 24 2a 68 8f 6d 8 86 c4 7b 7c dd fd a6 82 7b 8a 98 5f e6 ec 25 d2 ab 66 b2 5b 42 4c 8e 8d 88 11 f6 ec 49 f8 e5 1d 25 20 a aa 3 d7 89 83 d2 4f e5 db 91 d5 2a 63 82 2a 26 c9 a9 bd 21 a8 ea bd d0 84 e8 68 d1 3e 78 69 a1 b 65 7a 16 bd 56 fe 78 e8 e5 ec 16 f5 fb 3a 3a bc 30 9b b2 b8 11 d7 d5 5d 14 c0 4a 59 15 54 ab 66 a2 bb cc b8 e3 75 68 70 9b 73 e9 d2 79 b8 a0 50 e9 b5 d8 32 c5 8d 98 6 35 5f 35 b4 44 28 d2 47 c2 65 81 70 c1 a 4 c4 d0 9c 1e d7 60 40 36 a0 63 c0 38 3c c fd 62 b0 89 90 9d 65 77 3f 60 7c a5 b0 16 d8 3e 33 4e 18 d2 47 9e f5 77 2a 67 4d ea 56 e0 30 f0 6 92 b2 f9 44 7a d9 d 29 7d 99 8b 40 8d 52 1c 5e ef 4 72 fa 5f b3 96 a3 82 fe ce 22 7f 1d f 17 26 6 75 8b 2d 4e 6e 31 17 75 a7 e1 8e 38 c6 3b b5 4 f2 9d 55 aa a3 ff bb da c6 6a 3f 46 fe b4 f1 c9 e4 63 ab 58 6b 45 a5 ab c3 71 c8 57 5f 4 6b f9 7a c0 1c 8 e3 dc 8b f 57 a2 38 a1 7c 10 42 be ab cf c0 60 fa 6b b2 1a f7 a9 e4 6f 9b 84 3f a7 25 5d 6c e 95 f2 fb 4f 51 ca 76 58 75 f1 78 cc b6 41 8f 20 3a 50 51 66 69 ba bd b4 69 fb fc 35 93 6c 33 92 e4 a4 29 4e 60 b4 59 4c d2 b5 d2 7c 1d d0 f2 28 c9 95 2b 74 27 ea 67 50 6f 12 e b0 15 c0 e2 7e 25 b8 f4 45 a4 7b 9f 8d 1e 47 7e 7c 52 c9 33 5d 6c f1 dd f2 7 ad b de 51 7b aa 87 68 e9 6a 4f 63 bd 60 72 5f c4 c5 e3 f8 31 40 1e e4 8e 16 74 5 40 b7 cc 9f e1 21 f1 d1 fb 8c 10 f9 30 d 96 3f 12 a9

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e e7 f0 e aa 72 71 e6 9d 4c 16 7e 4 58 dd f9 25 71 6d c1 41 c2 4 d 3c f6 54 db 86 7a 59 0 0 0 0 ]

Data packet discarded due to integrity fail

Waiting for a packet

# Integrity check field of ACK wrong:

**Transmitter:**

500 bytes of data to be sent:

89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 41 6e 57 f1 67 f2 27 1e f7 ee a6 72 cd 3e ab e3 66 49 a6 35 bf 29 90 46 74 75 3d de 40 e4 94 8f cb 1c be 1 36 16 f8 aa e3 1e 51 28 88 80 8c 41 63 32 f9 e c7 6 17 63 de 8c 43 5c d4 a6 e0 71 75 81 ae 4f 1b 13 6a 38 43 a0 3d d4 5d 2c 9e d 49 37 da d8 6 9 fe 78 7f 6c 74 75 40 5f 8c 37 bf 77 fc 41 b8 f0 8e a3 11 2e ac ec 28 5d 5c a4 24 2b 3f 9f a3 df d0 40 82 6 1 af fa e0 1d 6 40 5f de 79 20 e7 b 7e 0 37 e3 c2 ce c2 f3 3a 17 77 c3 6a 44 b9 ed 5c 95 7f 61 95 27 6d a 33 4c 36 72 3b fa 8a 9a 8c b9 34 ab 5f 36 25 c7 c1 8d ed 25 b1 ef 4f 8 40 47 e5 d1 e0 d2 66 40 ce a7 6c 37 66 f2 99 89 95 82 0 d0 6f 8e f7 ee 96 81 57 c5 55 f6 bb a9 63 88 94 cf a9 57 33 a1 fc f 75 91 fd 86 c7 39 7f 1c d2 a5 40 b4 70 b3 8 2d 25 2a 3a e 2c ab ce cd b0 9f ad ea f6 80 22 a5 6b 49 41 6a 28 a0 be f7 96 7f cc cd a5 15 a8 dd ae 7e 5e fe 82 bf eb 8d e1 c6 a2 78 29 26 de 7f 1e b 56 0 a1 c8 15 18 39 36 d7 68 f4 45 6b ce 9d 10 92 7e c5 e8 af 11 c9 91 9d 4a 94 51 d2 fa 64 e7 7d b9 9 4e a2 41 3e a7 1a b1 a1 2c a0 33 68 d1 b3 2c 35 fd 10 d4 4c 8f 84 22 25 b0 40 7b f9 d1 e0 4a 92 e4 3b 49 e1 34 83 8f f4 e2 ae e2 46 d8 82 b9 ef 2b cc e9 d4 13 95 c1 27 68 74 c2 f8 21 e5 7 4b cf 22 a2 68 42 7c c4 38 38 ac 3f ae de fe ae eb 70 7c 2b 1d b3 f7 a e3 92 fc 11 c1 14 18 de a1 69 fe 82 6 b9 4c 4f 9 2f bc 5a 1f c3 58 72 36 21 1 1c 10 cc 64 34 4b ba b6 ac 2a 49 a6 b5 e a0 2b 3c 0 88 83 b4 f8 7f 44 67 19 7 73 63 69

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 0 0 0 0 ]

ACK number of the received ACK: 425064262

ack discarded due to integrity fail

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 0 0 0 0 ]

ACK number of the received ACK: 425064262

ack discarded due to integrity fail

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 0 0 0 0 ]

ACK number of the received ACK: 425064262

ack discarded due to integrity fail

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 0 0 0 0 ]

ACK number of the received ACK: 425064262

ack discarded due to integrity fail

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 0 0 0 0 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 0 0 0 0 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 0 0 0 0 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 89 19 f7 9a fa 3a bc 1b 80 4b 24 3a b4 5d 5 98 10 5d 9a b9 31 be 2a 6d f1 68 5 7e 96 e0 25 d2 90 b5 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 0 0 0 0 ]

Waiting for a packet

# Integrity check field of 2nd data packet corrupted once:

**Transmitter:**

500 bytes of data to be sent:

72 64 12 a b1 c0 d8 6f 1b 79 37 1 30 e0 5a cf e5 c2 8 17 69 5 1f 27 bc 6c d2 ba 13 fc ec 35 ca f1 e2 20 f7 69 3e 8 1c c0 fd 8f 6 9d ad 99 b6 18 86 c9 9f d5 50 73 f7 9 82 8c 47 be 4e ed 47 e2 26 ea 14 4a c d7 55 fc 5a 2b 9f 95 a9 11 7b 1b 39 1c 3e 32 5f 1 fd 5 b9 ac c7 89 6e 5a 3e 74 e9 2b 3d 59 bc 20 27 17 f7 12 7 ab 73 7f 44 35 1a c6 ac cd 80 5b 74 7d db 9d 20 92 df b9 19 ff 14 9a 29 35 be 58 22 b 76 45 6c c9 e8 e7 75 e6 b0 af 15 54 58 21 7b fd 5c 3c 43 24 c0 c2 d4 81 cd 2e 98 cd c 7a 8e 56 2d b7 9f a8 be ea 46 bc f8 69 e7 5f e8 9a 21 9e 4a e4 2 ef 55 24 83 81 1e e5 c9 20 1d d7 e5 3d 25 1e 96 1c cc e 42 97 7e d7 56 7e 61 5 eb ec d 63 96 db ba c2 ca 37 16 6f 1 8 38 ed 56 de f 23 ed f5 da a3 c8 41 70 d8 d9 43 fc 94 52 a7 b2 95 1c 76 1c ae 63 11 a8 c9 b 14 91 77 44 10 20 52 60 72 a5 2b 8d 56 98 67 ab 70 51 9b 42 45 39 93 13 e6 4f fe 9c 7c f0 c1 b3 79 ac 76 c5 19 ea d9 52 3d e1 d 18 77 80 9b 4b 25 e2 fd 9d 53 c0 e9 df 76 bc 72 d6 7 b4 98 4a e e6 20 24 31 b8 1 49 0 7a 35 45 d2 33 6c fc 26 c2 2c b6 9e 8e c4 49 b0 de f4 7 d0 33 f2 25 54 2b b9 60 cf fc 43 6f 83 5d 17 c3 fa 5b f3 46 34 96 15 d7 2c 48 c8 fe fe e5 e1 39 3f b1 29 1e 97 3a 19 ab d2 cc 24 13 5e 7b 8d 96 d b2 19 73 69 58 23 bb 8 d8 11 b ed 2e 4e 9 1b 3b f1 11 19 f9 54 eb 70 8b 2f 26 37 da e2 95 28 fe 49 13 b5 94 37 14 dc d8 b 67 ea 9b 4b 29 e3 9d df 60 4e b2 3c 3c fa 31 2 bf 95 e4 67 ed 30 1f cf 78 5c f ae 6 5a 86 bd 6a a5 e 9a de 7f 91 2f 70 2a 52 ac 6b 6b dd ef 97 41 4f e8 9c e9 d4 f7

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 72 64 12 a b1 c0 d8 6f 1b 79 37 1 30 e0 5a cf e5 c2 8 17 69 5 1f 27 bc 6c d2 ba 13 fc 98 7a 5a 81 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e ec 35 ca f1 e2 20 f7 69 3e 8 1c c0 fd 8f 6 9d ad 99 b6 18 86 c9 9f d5 50 73 f7 9 82 8c ee 36 28 aa ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e ec 35 ca f1 e2 20 f7 69 3e 8 1c c0 fd 8f 6 9d ad 99 b6 18 86 c9 9f d5 50 73 f7 9 82 8c ee 36 e3 aa ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 47 be 4e ed 47 e2 26 ea 14 4a c d7 55 fc 5a 2b 9f 95 a9 11 7b 1b 39 1c 3e 32 5f 1 fd 5 7 5 19 75 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e b9 ac c7 89 6e 5a 3e 74 e9 2b 3d 59 bc 20 27 17 f7 12 7 ab 73 7f 44 35 1a c6 ac cd 80 5b 54 35 f6 b4 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e 74 7d db 9d 20 92 df b9 19 ff 14 9a 29 35 be 58 22 b 76 45 6c c9 e8 e7 75 e6 b0 af 15 54 25 7d a0 23 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e 58 21 7b fd 5c 3c 43 24 c0 c2 d4 81 cd 2e 98 cd c 7a 8e 56 2d b7 9f a8 be ea 46 bc f8 69 8e 2e b6 b4 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e e7 5f e8 9a 21 9e 4a e4 2 ef 55 24 83 81 1e e5 c9 20 1d d7 e5 3d 25 1e 96 1c cc e 42 97 5b 16 6d 4a ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e 7e d7 56 7e 61 5 eb ec d 63 96 db ba c2 ca 37 16 6f 1 8 38 ed 56 de f 23 ed f5 da a3 b1 c8 5a 6c ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e c8 41 70 d8 d9 43 fc 94 52 a7 b2 95 1c 76 1c ae 63 11 a8 c9 b 14 91 77 44 10 20 52 60 72 1f a5 25 5c ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e a5 2b 8d 56 98 67 ab 70 51 9b 42 45 39 93 13 e6 4f fe 9c 7c f0 c1 b3 79 ac 76 c5 19 ea d9 88 e6 b0 18 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e 52 3d e1 d 18 77 80 9b 4b 25 e2 fd 9d 53 c0 e9 df 76 bc 72 d6 7 b4 98 4a e e6 20 24 31 cc 4f b8 32 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e b8 1 49 0 7a 35 45 d2 33 6c fc 26 c2 2c b6 9e 8e c4 49 b0 de f4 7 d0 33 f2 25 54 2b b9 9 6b ff 7d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e 60 cf fc 43 6f 83 5d 17 c3 fa 5b f3 46 34 96 15 d7 2c 48 c8 fe fe e5 e1 39 3f b1 29 1e 97 9a dc e4 e7 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e 3a 19 ab d2 cc 24 13 5e 7b 8d 96 d b2 19 73 69 58 23 bb 8 d8 11 b ed 2e 4e 9 1b 3b f1 40 73 18 a2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e 11 19 f9 54 eb 70 8b 2f 26 37 da e2 95 28 fe 49 13 b5 94 37 14 dc d8 b 67 ea 9b 4b 29 e3 9b f8 36 f3 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e 9d df 60 4e b2 3c 3c fa 31 2 bf 95 e4 67 ed 30 1f cf 78 5c f ae 6 5a 86 bd 6a a5 e 9a 24 4 46 a9 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 de 7f 91 2f 70 2a 52 ac 6b 6b dd ef 97 41 4f e8 9c e9 d4 f7 82 26 bd c2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 72 64 12 a b1 c0 d8 6f 1b 79 37 1 30 e0 5a cf e5 c2 8 17 69 5 1f 27 bc 6c d2 ba 13 fc 98 7a 5a 81 ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e ec 35 ca f1 e2 20 f7 69 3e 8 1c c0 fd 8f 6 9d ad 99 b6 18 86 c9 9f d5 50 73 f7 9 82 8c ee 36 28 aa ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e ec 35 ca f1 e2 20 f7 69 3e 8 1c c0 fd 8f 6 9d ad 99 b6 18 86 c9 9f d5 50 73 f7 9 82 8c ee 36 e3 aa ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 47 be 4e ed 47 e2 26 ea 14 4a c d7 55 fc 5a 2b 9f 95 a9 11 7b 1b 39 1c 3e 32 5f 1 fd 5 7 5 19 75 ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e b9 ac c7 89 6e 5a 3e 74 e9 2b 3d 59 bc 20 27 17 f7 12 7 ab 73 7f 44 35 1a c6 ac cd 80 5b 54 35 f6 b4 ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e 74 7d db 9d 20 92 df b9 19 ff 14 9a 29 35 be 58 22 b 76 45 6c c9 e8 e7 75 e6 b0 af 15 54 25 7d a0 23 ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e 58 21 7b fd 5c 3c 43 24 c0 c2 d4 81 cd 2e 98 cd c 7a 8e 56 2d b7 9f a8 be ea 46 bc f8 69 8e 2e b6 b4 ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e e7 5f e8 9a 21 9e 4a e4 2 ef 55 24 83 81 1e e5 c9 20 1d d7 e5 3d 25 1e 96 1c cc e 42 97 5b 16 6d 4a ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e 7e d7 56 7e 61 5 eb ec d 63 96 db ba c2 ca 37 16 6f 1 8 38 ed 56 de f 23 ed f5 da a3 b1 c8 5a 6c ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e c8 41 70 d8 d9 43 fc 94 52 a7 b2 95 1c 76 1c ae 63 11 a8 c9 b 14 91 77 44 10 20 52 60 72 1f a5 25 5c ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e a5 2b 8d 56 98 67 ab 70 51 9b 42 45 39 93 13 e6 4f fe 9c 7c f0 c1 b3 79 ac 76 c5 19 ea d9 88 e6 b0 18 ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e 52 3d e1 d 18 77 80 9b 4b 25 e2 fd 9d 53 c0 e9 df 76 bc 72 d6 7 b4 98 4a e e6 20 24 31 cc 4f b8 32 ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e b8 1 49 0 7a 35 45 d2 33 6c fc 26 c2 2c b6 9e 8e c4 49 b0 de f4 7 d0 33 f2 25 54 2b b9 9 6b ff 7d ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e 60 cf fc 43 6f 83 5d 17 c3 fa 5b f3 46 34 96 15 d7 2c 48 c8 fe fe e5 e1 39 3f b1 29 1e 97 9a dc e4 e7 ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e 3a 19 ab d2 cc 24 13 5e 7b 8d 96 d b2 19 73 69 58 23 bb 8 d8 11 b ed 2e 4e 9 1b 3b f1 40 73 18 a2 ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e 11 19 f9 54 eb 70 8b 2f 26 37 da e2 95 28 fe 49 13 b5 94 37 14 dc d8 b 67 ea 9b 4b 29 e3 9b f8 36 f3 ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e 9d df 60 4e b2 3c 3c fa 31 2 bf 95 e4 67 ed 30 1f cf 78 5c f ae 6 5a 86 bd 6a a5 e 9a 24 4 46 a9 ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 de 7f 91 2f 70 2a 52 ac 6b 6b dd ef 97 41 4f e8 9c e9 d4 f7 82 26 bd c2 ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ 72 64 12 a b1 c0 d8 6f 1b 79 37 1 30 e0 5a cf e5 c2 8 17 69 5 1f 27 bc 6c d2 ba 13 fc ec 35 ca f1 e2 20 f7 69 3e 8 1c c0 fd 8f 6 9d ad 99 b6 18 86 c9 9f d5 50 73 f7 9 82 8c 47 be 4e ed 47 e2 26 ea 14 4a c d7 55 fc 5a 2b 9f 95 a9 11 7b 1b 39 1c 3e 32 5f 1 fd 5 b9 ac c7 89 6e 5a 3e 74 e9 2b 3d 59 bc 20 27 17 f7 12 7 ab 73 7f 44 35 1a c6 ac cd 80 5b 74 7d db 9d 20 92 df b9 19 ff 14 9a 29 35 be 58 22 b 76 45 6c c9 e8 e7 75 e6 b0 af 15 54 58 21 7b fd 5c 3c 43 24 c0 c2 d4 81 cd 2e 98 cd c 7a 8e 56 2d b7 9f a8 be ea 46 bc f8 69 e7 5f e8 9a 21 9e 4a e4 2 ef 55 24 83 81 1e e5 c9 20 1d d7 e5 3d 25 1e 96 1c cc e 42 97 7e d7 56 7e 61 5 eb ec d 63 96 db ba c2 ca 37 16 6f 1 8 38 ed 56 de f 23 ed f5 da a3 c8 41 70 d8 d9 43 fc 94 52 a7 b2 95 1c 76 1c ae 63 11 a8 c9 b 14 91 77 44 10 20 52 60 72 a5 2b 8d 56 98 67 ab 70 51 9b 42 45 39 93 13 e6 4f fe 9c 7c f0 c1 b3 79 ac 76 c5 19 ea d9 52 3d e1 d 18 77 80 9b 4b 25 e2 fd 9d 53 c0 e9 df 76 bc 72 d6 7 b4 98 4a e e6 20 24 31 b8 1 49 0 7a 35 45 d2 33 6c fc 26 c2 2c b6 9e 8e c4 49 b0 de f4 7 d0 33 f2 25 54 2b b9 60 cf fc 43 6f 83 5d 17 c3 fa 5b f3 46 34 96 15 d7 2c 48 c8 fe fe e5 e1 39 3f b1 29 1e 97 3a 19 ab d2 cc 24 13 5e 7b 8d 96 d b2 19 73 69 58 23 bb 8 d8 11 b ed 2e 4e 9 1b 3b f1 11 19 f9 54 eb 70 8b 2f 26 37 da e2 95 28 fe 49 13 b5 94 37 14 dc d8 b 67 ea 9b 4b 29 e3 9d df 60 4e b2 3c 3c fa 31 2 bf 95 e4 67 ed 30 1f cf 78 5c f ae 6 5a 86 bd 6a a5 e 9a de 7f 91 2f 70 2a 52 ac 6b 6b dd ef 97 41 4f e8 9c e9 d4 f7 ]

Waiting for a packet

# Integrity field of 1st ACK packet set wrong by RX once, next ACK correct:

**Transmitter:**

500 bytes of data to be sent:

31 73 48 8b a 7a 5d 2a 99 e6 c9 ce 28 90 b d7 de 24 ed 34 19 c0 83 36 e2 f5 53 11 8c ab 59 6c fd 5a 71 8c 68 e1 b4 49 3a fd 62 e6 72 5 e3 1c 7f dc 99 1a 69 57 92 56 9a 8e ed aa 16 70 36 e9 8b c8 e3 5b e3 34 38 b5 82 69 30 2 f2 d6 0 8f 6d 1e 54 20 d1 40 af 4f 9 c6 9c c8 3d 2e 67 9e ce 50 a3 b5 8a 5b ab 88 35 bd f7 d6 b4 56 91 cb 25 58 b2 58 21 92 e8 53 8c 62 97 99 9b f9 18 25 6d f8 19 48 e 84 bb 2f eb 62 5f f9 6 a1 bb 81 18 2e 7c d1 d ff 8f 1 95 3c e8 6b 54 90 df a7 43 f6 4a 91 46 f5 5a 7d 8e 64 59 83 fc 20 6f cc 2a e6 36 8 ad 31 b3 58 2a ed 2f e6 8b a7 86 74 dd 45 ab 85 ab 6e 96 57 e0 81 b0 e8 ed 24 ad 32 33 a2 e4 a fe b2 16 69 63 cc 5c de ea 47 10 55 ff 9 8a 41 dc 18 86 d7 f3 96 b1 be f3 82 c0 5a 81 6a 80 6a 5e 63 75 b0 ef 3f f4 96 1f 3a 72 e2 1f bf 32 79 1c 6 3c 4f af 52 2b 0 6f 4d 15 fa 54 8 1 8c 14 83 6 97 90 59 c7 5 59 83 e4 3 e8 3d 33 f7 cf 42 d2 41 4f 3d 3e 84 84 97 a2 4f 61 b0 ec f3 c6 4a 8c 76 9a c5 2c 88 cf f1 d2 95 b9 8d 6f 3b 1 76 fa fb e4 e b7 f3 97 49 18 83 50 7d c7 df 0 14 6d 1e 78 9 1a 12 39 b9 c3 c3 24 87 ed 38 df 11 b1 25 d0 55 ed 85 d5 5 43 97 3e ba e6 df b4 11 99 d5 27 12 b6 76 55 1f c5 f8 6f 46 82 43 3b 14 f6 57 4d 6d 60 33 ad 1c 58 3a 3c fd 72 2b b5 98 3e 71 b9 12 3f e2 63 38 34 6a 16 6e cb 79 c 57 ad 7b e4 c3 8c d9 52 91 1b a3 ce 11 a3 17 3a f8 8e 35 d4 b2 5d fe aa b3 ee 28 47 39 1e 5b ec 70 8 79 f6 71 b3 0 3a 2e 12 d6 6c b3 79 72 62 e2 15 dc 31 8d 3f 83 f1 b7 41 55 64 5e 56 c4 98 25 1c 89 37 20 8e 91 a1 a9 31 22 4 18 90 80

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 31 73 48 8b a 7a 5d 2a 99 e6 c9 ce 28 90 b d7 de 24 ed 34 19 c0 83 36 e2 f5 53 11 8c ab 10 f0 b2 2e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 0 0 0 0 ]

ACK number of the received ACK: 425064262

ack discarded due to integrity fail

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 31 73 48 8b a 7a 5d 2a 99 e6 c9 ce 28 90 b d7 de 24 ed 34 19 c0 83 36 e2 f5 53 11 8c ab 10 f0 b2 2e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e 59 6c fd 5a 71 8c 68 e1 b4 49 3a fd 62 e6 72 5 e3 1c 7f dc 99 1a 69 57 92 56 9a 8e ed aa 46 71 2c 22 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 16 70 36 e9 8b c8 e3 5b e3 34 38 b5 82 69 30 2 f2 d6 0 8f 6d 1e 54 20 d1 40 af 4f 9 c6 d0 17 c4 8d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e 9c c8 3d 2e 67 9e ce 50 a3 b5 8a 5b ab 88 35 bd f7 d6 b4 56 91 cb 25 58 b2 58 21 92 e8 53 a4 d1 a5 c4 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e 8c 62 97 99 9b f9 18 25 6d f8 19 48 e 84 bb 2f eb 62 5f f9 6 a1 bb 81 18 2e 7c d1 d ff 10 e4 66 83 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e 8f 1 95 3c e8 6b 54 90 df a7 43 f6 4a 91 46 f5 5a 7d 8e 64 59 83 fc 20 6f cc 2a e6 36 8 31 f4 70 6d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e ad 31 b3 58 2a ed 2f e6 8b a7 86 74 dd 45 ab 85 ab 6e 96 57 e0 81 b0 e8 ed 24 ad 32 33 a2 7c ac 96 24 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e e4 a fe b2 16 69 63 cc 5c de ea 47 10 55 ff 9 8a 41 dc 18 86 d7 f3 96 b1 be f3 82 c0 5a be a9 ca 87 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e 81 6a 80 6a 5e 63 75 b0 ef 3f f4 96 1f 3a 72 e2 1f bf 32 79 1c 6 3c 4f af 52 2b 0 6f 4d 72 a6 da 42 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e 15 fa 54 8 1 8c 14 83 6 97 90 59 c7 5 59 83 e4 3 e8 3d 33 f7 cf 42 d2 41 4f 3d 3e 84 f4 6c f2 19 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e 84 97 a2 4f 61 b0 ec f3 c6 4a 8c 76 9a c5 2c 88 cf f1 d2 95 b9 8d 6f 3b 1 76 fa fb e4 e c8 10 69 ec ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e b7 f3 97 49 18 83 50 7d c7 df 0 14 6d 1e 78 9 1a 12 39 b9 c3 c3 24 87 ed 38 df 11 b1 25 59 33 4 f ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e d0 55 ed 85 d5 5 43 97 3e ba e6 df b4 11 99 d5 27 12 b6 76 55 1f c5 f8 6f 46 82 43 3b 14 ca bb c9 bb ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e f6 57 4d 6d 60 33 ad 1c 58 3a 3c fd 72 2b b5 98 3e 71 b9 12 3f e2 63 38 34 6a 16 6e cb 79 1 35 f0 73 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e c 57 ad 7b e4 c3 8c d9 52 91 1b a3 ce 11 a3 17 3a f8 8e 35 d4 b2 5d fe aa b3 ee 28 47 39 be aa 41 31 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e 1e 5b ec 70 8 79 f6 71 b3 0 3a 2e 12 d6 6c b3 79 72 62 e2 15 dc 31 8d 3f 83 f1 b7 41 55 d0 f2 81 e5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 64 5e 56 c4 98 25 1c 89 37 20 8e 91 a1 a9 31 22 4 18 90 80 62 2b 1d be ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 31 73 48 8b a 7a 5d 2a 99 e6 c9 ce 28 90 b d7 de 24 ed 34 19 c0 83 36 e2 f5 53 11 8c ab 10 f0 b2 2e ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 0 0 0 0 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 31 73 48 8b a 7a 5d 2a 99 e6 c9 ce 28 90 b d7 de 24 ed 34 19 c0 83 36 e2 f5 53 11 8c ab 10 f0 b2 2e ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e 59 6c fd 5a 71 8c 68 e1 b4 49 3a fd 62 e6 72 5 e3 1c 7f dc 99 1a 69 57 92 56 9a 8e ed aa 46 71 2c 22 ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 16 70 36 e9 8b c8 e3 5b e3 34 38 b5 82 69 30 2 f2 d6 0 8f 6d 1e 54 20 d1 40 af 4f 9 c6 d0 17 c4 8d ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e 9c c8 3d 2e 67 9e ce 50 a3 b5 8a 5b ab 88 35 bd f7 d6 b4 56 91 cb 25 58 b2 58 21 92 e8 53 a4 d1 a5 c4 ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e 8c 62 97 99 9b f9 18 25 6d f8 19 48 e 84 bb 2f eb 62 5f f9 6 a1 bb 81 18 2e 7c d1 d ff 10 e4 66 83 ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e 8f 1 95 3c e8 6b 54 90 df a7 43 f6 4a 91 46 f5 5a 7d 8e 64 59 83 fc 20 6f cc 2a e6 36 8 31 f4 70 6d ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e ad 31 b3 58 2a ed 2f e6 8b a7 86 74 dd 45 ab 85 ab 6e 96 57 e0 81 b0 e8 ed 24 ad 32 33 a2 7c ac 96 24 ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e e4 a fe b2 16 69 63 cc 5c de ea 47 10 55 ff 9 8a 41 dc 18 86 d7 f3 96 b1 be f3 82 c0 5a be a9 ca 87 ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e 81 6a 80 6a 5e 63 75 b0 ef 3f f4 96 1f 3a 72 e2 1f bf 32 79 1c 6 3c 4f af 52 2b 0 6f 4d 72 a6 da 42 ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e 15 fa 54 8 1 8c 14 83 6 97 90 59 c7 5 59 83 e4 3 e8 3d 33 f7 cf 42 d2 41 4f 3d 3e 84 f4 6c f2 19 ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e 84 97 a2 4f 61 b0 ec f3 c6 4a 8c 76 9a c5 2c 88 cf f1 d2 95 b9 8d 6f 3b 1 76 fa fb e4 e c8 10 69 ec ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e b7 f3 97 49 18 83 50 7d c7 df 0 14 6d 1e 78 9 1a 12 39 b9 c3 c3 24 87 ed 38 df 11 b1 25 59 33 4 f ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e d0 55 ed 85 d5 5 43 97 3e ba e6 df b4 11 99 d5 27 12 b6 76 55 1f c5 f8 6f 46 82 43 3b 14 ca bb c9 bb ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e f6 57 4d 6d 60 33 ad 1c 58 3a 3c fd 72 2b b5 98 3e 71 b9 12 3f e2 63 38 34 6a 16 6e cb 79 1 35 f0 73 ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e c 57 ad 7b e4 c3 8c d9 52 91 1b a3 ce 11 a3 17 3a f8 8e 35 d4 b2 5d fe aa b3 ee 28 47 39 be aa 41 31 ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e 1e 5b ec 70 8 79 f6 71 b3 0 3a 2e 12 d6 6c b3 79 72 62 e2 15 dc 31 8d 3f 83 f1 b7 41 55 d0 f2 81 e5 ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 64 5e 56 c4 98 25 1c 89 37 20 8e 91 a1 a9 31 22 4 18 90 80 62 2b 1d be ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ 31 73 48 8b a 7a 5d 2a 99 e6 c9 ce 28 90 b d7 de 24 ed 34 19 c0 83 36 e2 f5 53 11 8c ab 59 6c fd 5a 71 8c 68 e1 b4 49 3a fd 62 e6 72 5 e3 1c 7f dc 99 1a 69 57 92 56 9a 8e ed aa 16 70 36 e9 8b c8 e3 5b e3 34 38 b5 82 69 30 2 f2 d6 0 8f 6d 1e 54 20 d1 40 af 4f 9 c6 9c c8 3d 2e 67 9e ce 50 a3 b5 8a 5b ab 88 35 bd f7 d6 b4 56 91 cb 25 58 b2 58 21 92 e8 53 8c 62 97 99 9b f9 18 25 6d f8 19 48 e 84 bb 2f eb 62 5f f9 6 a1 bb 81 18 2e 7c d1 d ff 8f 1 95 3c e8 6b 54 90 df a7 43 f6 4a 91 46 f5 5a 7d 8e 64 59 83 fc 20 6f cc 2a e6 36 8 ad 31 b3 58 2a ed 2f e6 8b a7 86 74 dd 45 ab 85 ab 6e 96 57 e0 81 b0 e8 ed 24 ad 32 33 a2 e4 a fe b2 16 69 63 cc 5c de ea 47 10 55 ff 9 8a 41 dc 18 86 d7 f3 96 b1 be f3 82 c0 5a 81 6a 80 6a 5e 63 75 b0 ef 3f f4 96 1f 3a 72 e2 1f bf 32 79 1c 6 3c 4f af 52 2b 0 6f 4d 15 fa 54 8 1 8c 14 83 6 97 90 59 c7 5 59 83 e4 3 e8 3d 33 f7 cf 42 d2 41 4f 3d 3e 84 84 97 a2 4f 61 b0 ec f3 c6 4a 8c 76 9a c5 2c 88 cf f1 d2 95 b9 8d 6f 3b 1 76 fa fb e4 e b7 f3 97 49 18 83 50 7d c7 df 0 14 6d 1e 78 9 1a 12 39 b9 c3 c3 24 87 ed 38 df 11 b1 25 d0 55 ed 85 d5 5 43 97 3e ba e6 df b4 11 99 d5 27 12 b6 76 55 1f c5 f8 6f 46 82 43 3b 14 f6 57 4d 6d 60 33 ad 1c 58 3a 3c fd 72 2b b5 98 3e 71 b9 12 3f e2 63 38 34 6a 16 6e cb 79 c 57 ad 7b e4 c3 8c d9 52 91 1b a3 ce 11 a3 17 3a f8 8e 35 d4 b2 5d fe aa b3 ee 28 47 39 1e 5b ec 70 8 79 f6 71 b3 0 3a 2e 12 d6 6c b3 79 72 62 e2 15 dc 31 8d 3f 83 f1 b7 41 55 64 5e 56 c4 98 25 1c 89 37 20 8e 91 a1 a9 31 22 4 18 90 80 ]

Waiting for a packet

# Sequence number field of 2nd data packet set wrong by TX once:

**Transmitter:**

500 bytes of data to be sent:

e6 be 51 54 4b c7 20 e5 56 1f d1 72 b6 24 5f ba 90 b5 5a 76 d8 bb 8b 20 34 33 12 aa af 46 f6 9d b0 eb 16 89 b7 76 f9 e2 8 11 7b 59 24 d6 df b6 6d 92 b7 2 ff 87 cc 29 90 6 70 56 8e 3c 4f 4 1e 6f 61 ed ad 71 9b 21 c7 d7 3e a2 fc 42 11 56 b7 2a 91 dc 10 b4 38 98 76 dd dd 56 12 f d5 57 7f a4 30 6 67 bc 4 29 10 f9 65 59 54 6c 99 bf 6 3c a2 b9 c8 99 1d d6 bf 71 17 ea a4 e5 ce 24 56 46 e2 99 42 9c da fb ba e 27 4e 9 73 c3 af 68 22 2e 35 46 42 40 72 d9 2 92 c5 b1 bf f4 ae d9 a0 a3 87 42 18 fb 13 6a 7d c cc 38 4c 32 ee dd b2 42 4e 8e 6e 36 7a 45 f4 7 61 2a f1 48 aa 73 94 e6 a7 8b 9 8e 62 1d 7b b 2d c6 85 85 2f da e5 6a a9 9 30 a8 26 19 bc 69 d3 5 af f4 a1 43 68 84 44 e9 bb f7 cd a2 65 5 6c da 1a 22 68 c7 51 1c 25 3 11 fc 57 7e 21 8e ea ba ab 79 4 9b 6c 78 22 49 1e 4f d2 1d 69 ad 5c 5e 58 91 6a 81 75 69 2f 2c cd 2f f0 33 cb 3b 38 c6 c3 ca a4 81 6d 5c aa 3e 83 39 1b 86 76 c 13 81 d1 27 c8 d8 d2 c2 d2 18 9a df 2c 8 1e 66 c8 2b ba 1d 20 31 f5 10 78 7d f1 4d 28 28 8a 1d 52 37 64 e6 4e 12 d9 d0 9e bf ff bd c2 64 6b b7 15 ee 4 88 0 98 5e 3b 7d 61 4 62 4f 22 42 3c 8e b7 4d c7 2b 67 9f b0 69 fd 40 fe a1 c0 6f c2 9a 98 a9 b8 a4 db b7 83 ed 68 5c 62 ba e9 c4 5f 2d fc 4e e9 ac 83 6f 1d 65 13 54 73 f9 2a 21 75 f b6 29 61 ed ce 74 bc 5e b3 9f 98 50 c4 f7 5b 34 46 e1 4a db 6 20 51 2a 24 6b 65 44 c3 cd a6 fb 59 7f 1f 71 7e f1 5d e2 8a a 81 d5 4f 5 a3 7d 96 7a 7 a8 7 3f a5 2e b9 c 60 ed 41 8a db c8 97 29 fb 7f a8 c4 ff 60 d6 8f 91 e9 f9 33 41 eb 35 e2 48 35 8d c 3f 8a

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e e6 be 51 54 4b c7 20 e5 56 1f d1 72 b6 24 5f ba 90 b5 5a 76 d8 bb 8b 20 34 33 12 aa af 46 c6 de f d2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 28 1e f6 9d b0 eb 16 89 b7 76 f9 e2 8 11 7b 59 24 d6 df b6 6d 92 b7 2 ff 87 cc 29 90 6 70 56 3e 7e 61 f3 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

ack discarded due to wrong ack num

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e f6 9d b0 eb 16 89 b7 76 f9 e2 8 11 7b 59 24 d6 df b6 6d 92 b7 2 ff 87 cc 29 90 6 70 56 3e 7e 61 f3 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 8e 3c 4f 4 1e 6f 61 ed ad 71 9b 21 c7 d7 3e a2 fc 42 11 56 b7 2a 91 dc 10 b4 38 98 76 dd c5 8a a8 d2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e dd 56 12 f d5 57 7f a4 30 6 67 bc 4 29 10 f9 65 59 54 6c 99 bf 6 3c a2 b9 c8 99 1d d6 d8 f2 15 1e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e bf 71 17 ea a4 e5 ce 24 56 46 e2 99 42 9c da fb ba e 27 4e 9 73 c3 af 68 22 2e 35 46 42 8e ee 78 25 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e 40 72 d9 2 92 c5 b1 bf f4 ae d9 a0 a3 87 42 18 fb 13 6a 7d c cc 38 4c 32 ee dd b2 42 4e d1 7f da ea ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e 8e 6e 36 7a 45 f4 7 61 2a f1 48 aa 73 94 e6 a7 8b 9 8e 62 1d 7b b 2d c6 85 85 2f da e5 d9 18 ca 9e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e 6a a9 9 30 a8 26 19 bc 69 d3 5 af f4 a1 43 68 84 44 e9 bb f7 cd a2 65 5 6c da 1a 22 68 2d 1a 2 6d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e c7 51 1c 25 3 11 fc 57 7e 21 8e ea ba ab 79 4 9b 6c 78 22 49 1e 4f d2 1d 69 ad 5c 5e 58 a9 e a7 61 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e 91 6a 81 75 69 2f 2c cd 2f f0 33 cb 3b 38 c6 c3 ca a4 81 6d 5c aa 3e 83 39 1b 86 76 c 13 74 57 53 47 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e 81 d1 27 c8 d8 d2 c2 d2 18 9a df 2c 8 1e 66 c8 2b ba 1d 20 31 f5 10 78 7d f1 4d 28 28 8a 7d 89 45 f3 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e 1d 52 37 64 e6 4e 12 d9 d0 9e bf ff bd c2 64 6b b7 15 ee 4 88 0 98 5e 3b 7d 61 4 62 4f cd 42 74 15 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e 22 42 3c 8e b7 4d c7 2b 67 9f b0 69 fd 40 fe a1 c0 6f c2 9a 98 a9 b8 a4 db b7 83 ed 68 5c a6 d0 84 e2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e 62 ba e9 c4 5f 2d fc 4e e9 ac 83 6f 1d 65 13 54 73 f9 2a 21 75 f b6 29 61 ed ce 74 bc 5e 73 a8 a0 9d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e b3 9f 98 50 c4 f7 5b 34 46 e1 4a db 6 20 51 2a 24 6b 65 44 c3 cd a6 fb 59 7f 1f 71 7e f1 1e 4 c1 64 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e 5d e2 8a a 81 d5 4f 5 a3 7d 96 7a 7 a8 7 3f a5 2e b9 c 60 ed 41 8a db c8 97 29 fb 7f 5 53 b9 ff ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 a8 c4 ff 60 d6 8f 91 e9 f9 33 41 eb 35 e2 48 35 8d c 3f 8a 5f 88 4c c2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e e6 be 51 54 4b c7 20 e5 56 1f d1 72 b6 24 5f ba 90 b5 5a 76 d8 bb 8b 20 34 33 12 aa af 46 c6 de f d2 ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e f6 9d b0 eb 16 89 b7 76 f9 e2 8 11 7b 59 24 d6 df b6 6d 92 b7 2 ff 87 cc 29 90 6 70 56 3e 7e 61 f3 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e f6 9d b0 eb 16 89 b7 76 f9 e2 8 11 7b 59 24 d6 df b6 6d 92 b7 2 ff 87 cc 29 90 6 70 56 3e 7e 61 f3 ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 8e 3c 4f 4 1e 6f 61 ed ad 71 9b 21 c7 d7 3e a2 fc 42 11 56 b7 2a 91 dc 10 b4 38 98 76 dd c5 8a a8 d2 ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e dd 56 12 f d5 57 7f a4 30 6 67 bc 4 29 10 f9 65 59 54 6c 99 bf 6 3c a2 b9 c8 99 1d d6 d8 f2 15 1e ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e bf 71 17 ea a4 e5 ce 24 56 46 e2 99 42 9c da fb ba e 27 4e 9 73 c3 af 68 22 2e 35 46 42 8e ee 78 25 ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e 40 72 d9 2 92 c5 b1 bf f4 ae d9 a0 a3 87 42 18 fb 13 6a 7d c cc 38 4c 32 ee dd b2 42 4e d1 7f da ea ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e 8e 6e 36 7a 45 f4 7 61 2a f1 48 aa 73 94 e6 a7 8b 9 8e 62 1d 7b b 2d c6 85 85 2f da e5 d9 18 ca 9e ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e 6a a9 9 30 a8 26 19 bc 69 d3 5 af f4 a1 43 68 84 44 e9 bb f7 cd a2 65 5 6c da 1a 22 68 2d 1a 2 6d ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e c7 51 1c 25 3 11 fc 57 7e 21 8e ea ba ab 79 4 9b 6c 78 22 49 1e 4f d2 1d 69 ad 5c 5e 58 a9 e a7 61 ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e 91 6a 81 75 69 2f 2c cd 2f f0 33 cb 3b 38 c6 c3 ca a4 81 6d 5c aa 3e 83 39 1b 86 76 c 13 74 57 53 47 ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e 81 d1 27 c8 d8 d2 c2 d2 18 9a df 2c 8 1e 66 c8 2b ba 1d 20 31 f5 10 78 7d f1 4d 28 28 8a 7d 89 45 f3 ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e 1d 52 37 64 e6 4e 12 d9 d0 9e bf ff bd c2 64 6b b7 15 ee 4 88 0 98 5e 3b 7d 61 4 62 4f cd 42 74 15 ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e 22 42 3c 8e b7 4d c7 2b 67 9f b0 69 fd 40 fe a1 c0 6f c2 9a 98 a9 b8 a4 db b7 83 ed 68 5c a6 d0 84 e2 ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e 62 ba e9 c4 5f 2d fc 4e e9 ac 83 6f 1d 65 13 54 73 f9 2a 21 75 f b6 29 61 ed ce 74 bc 5e 73 a8 a0 9d ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e b3 9f 98 50 c4 f7 5b 34 46 e1 4a db 6 20 51 2a 24 6b 65 44 c3 cd a6 fb 59 7f 1f 71 7e f1 1e 4 c1 64 ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e 5d e2 8a a 81 d5 4f 5 a3 7d 96 7a 7 a8 7 3f a5 2e b9 c 60 ed 41 8a db c8 97 29 fb 7f 5 53 b9 ff ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 a8 c4 ff 60 d6 8f 91 e9 f9 33 41 eb 35 e2 48 35 8d c 3f 8a 5f 88 4c c2 ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ e6 be 51 54 4b c7 20 e5 56 1f d1 72 b6 24 5f ba 90 b5 5a 76 d8 bb 8b 20 34 33 12 aa af 46 f6 9d b0 eb 16 89 b7 76 f9 e2 8 11 7b 59 24 d6 df b6 6d 92 b7 2 ff 87 cc 29 90 6 70 56 8e 3c 4f 4 1e 6f 61 ed ad 71 9b 21 c7 d7 3e a2 fc 42 11 56 b7 2a 91 dc 10 b4 38 98 76 dd dd 56 12 f d5 57 7f a4 30 6 67 bc 4 29 10 f9 65 59 54 6c 99 bf 6 3c a2 b9 c8 99 1d d6 bf 71 17 ea a4 e5 ce 24 56 46 e2 99 42 9c da fb ba e 27 4e 9 73 c3 af 68 22 2e 35 46 42 40 72 d9 2 92 c5 b1 bf f4 ae d9 a0 a3 87 42 18 fb 13 6a 7d c cc 38 4c 32 ee dd b2 42 4e 8e 6e 36 7a 45 f4 7 61 2a f1 48 aa 73 94 e6 a7 8b 9 8e 62 1d 7b b 2d c6 85 85 2f da e5 6a a9 9 30 a8 26 19 bc 69 d3 5 af f4 a1 43 68 84 44 e9 bb f7 cd a2 65 5 6c da 1a 22 68 c7 51 1c 25 3 11 fc 57 7e 21 8e ea ba ab 79 4 9b 6c 78 22 49 1e 4f d2 1d 69 ad 5c 5e 58 91 6a 81 75 69 2f 2c cd 2f f0 33 cb 3b 38 c6 c3 ca a4 81 6d 5c aa 3e 83 39 1b 86 76 c 13 81 d1 27 c8 d8 d2 c2 d2 18 9a df 2c 8 1e 66 c8 2b ba 1d 20 31 f5 10 78 7d f1 4d 28 28 8a 1d 52 37 64 e6 4e 12 d9 d0 9e bf ff bd c2 64 6b b7 15 ee 4 88 0 98 5e 3b 7d 61 4 62 4f 22 42 3c 8e b7 4d c7 2b 67 9f b0 69 fd 40 fe a1 c0 6f c2 9a 98 a9 b8 a4 db b7 83 ed 68 5c 62 ba e9 c4 5f 2d fc 4e e9 ac 83 6f 1d 65 13 54 73 f9 2a 21 75 f b6 29 61 ed ce 74 bc 5e b3 9f 98 50 c4 f7 5b 34 46 e1 4a db 6 20 51 2a 24 6b 65 44 c3 cd a6 fb 59 7f 1f 71 7e f1 5d e2 8a a 81 d5 4f 5 a3 7d 96 7a 7 a8 7 3f a5 2e b9 c 60 ed 41 8a db c8 97 29 fb 7f a8 c4 ff 60 d6 8f 91 e9 f9 33 41 eb 35 e2 48 35 8d c 3f 8a ]

Waiting for a packet

# ACK number of 1st ACK set wrong by RX; resends next correctly:

**Transmitter:**

500 bytes of data to be sent:

f3 51 ab 6b 63 23 fe f7 97 fa 5a c2 a7 44 8f db 22 f 38 4a d5 1 78 b0 22 42 ed 14 74 f2 98 8d bf 53 c2 32 5e bb 83 7c a1 7 c3 c0 f8 28 21 ed 5 22 71 b8 df 2b c4 a1 9f ee 23 13 94 49 9e 70 38 78 57 a9 ed 81 94 bb 2c 76 92 dd 51 cb 13 c8 2f 9d 97 13 9 6b 7e a3 5 83 c3 73 34 64 c4 f6 13 31 d0 38 14 4f 6a 80 f1 e7 81 df d5 f3 cc 4b 65 6 43 2f 1 4f d3 d2 6d 90 97 af 32 3 eb 7e 45 7 a2 28 cc fa af 2 8b 31 4c cc c0 ed 8a c7 f0 aa 6e 32 aa f2 5b d9 16 a5 a3 fa c3 7 67 1 8a bf 9c f7 81 e7 dd 2d fa 52 84 1d de 55 c2 cc 1d 8c f1 ce 99 ae a8 4f e2 4c 90 63 ed a9 de d5 e1 8e a4 b1 94 5c ad d2 23 0 2 e0 12 39 f7 e8 bd 5b 57 92 9b 9b 7f e2 d8 a1 87 26 e ff 5 5b d 5f ce b9 da b0 ac 40 4d b9 26 64 d1 82 2b 5d a5 88 2c 15 2d e5 78 4f a0 6c e3 bb 53 d0 f5 9d 16 23 10 cd 1b 45 3e bd a5 73 7d eb a4 bb 3c d2 2f 5b f 9e 2 ec e2 78 a d5 4e 15 42 c1 16 5c c6 3b f7 95 94 4e 8c ec bb d1 76 e aa 17 cb da b8 21 18 66 81 38 18 24 87 a2 3d 6e 31 c6 da 5f 2d ec 16 6 75 71 3b 88 3 ec 43 6b 13 d5 83 cc 20 6d 6a c 45 3d b1 70 ae c db e cc ea be 45 1e de 20 ce 64 2b e6 ae 55 a9 11 8d a6 ea e8 1b 4d 5d 1 ef 9b e9 3b ba b9 1b d2 62 93 68 4f 2c af b6 d9 b9 f9 d ab ae 6e a7 26 e1 3c 6 f0 ee a8 fd 8 f 7 c 63 61 5 99 91 cf 59 d 28 af bd ba 5b 69 40 c9 57 6c 6d b3 a5 fd 42 db 12 c 9e b1 56 df bf 84 af ec 96 8f ed c7 c6 f1 2a d2 66 83 59 dd 3a 6 fb 6f 56 d2 f6 73 3b c1 aa a4 20 b1 d2 db 2e 48 4d c 90 5c 40 b5 d6 7f 67 2f 8c c2 52 90 5b 11 e7 2e 92 d9 18 e7 3c a2 b1 ba 23 95 e4 10

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e f3 51 ab 6b 63 23 fe f7 97 fa 5a c2 a7 44 8f db 22 f 38 4a d5 1 78 b0 22 42 ed 14 74 f2 d7 30 90 99 ]

Waiting for ACK

ACK packet received

[ ff 0 0 0 0 c3 51 92 c4 ]

ACK number of the received ACK: 0

ack discarded due to wrong ack num

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e f3 51 ab 6b 63 23 fe f7 97 fa 5a c2 a7 44 8f db 22 f 38 4a d5 1 78 b0 22 42 ed 14 74 f2 d7 30 90 99 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e 98 8d bf 53 c2 32 5e bb 83 7c a1 7 c3 c0 f8 28 21 ed 5 22 71 b8 df 2b c4 a1 9f ee 23 13 ea 17 7a 73 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 94 49 9e 70 38 78 57 a9 ed 81 94 bb 2c 76 92 dd 51 cb 13 c8 2f 9d 97 13 9 6b 7e a3 5 83 c3 35 60 5e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e c3 73 34 64 c4 f6 13 31 d0 38 14 4f 6a 80 f1 e7 81 df d5 f3 cc 4b 65 6 43 2f 1 4f d3 d2 2b 92 a ed ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e 6d 90 97 af 32 3 eb 7e 45 7 a2 28 cc fa af 2 8b 31 4c cc c0 ed 8a c7 f0 aa 6e 32 aa f2 7c 54 2d 9c ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e 5b d9 16 a5 a3 fa c3 7 67 1 8a bf 9c f7 81 e7 dd 2d fa 52 84 1d de 55 c2 cc 1d 8c f1 ce 4a 88 b1 ec ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e 99 ae a8 4f e2 4c 90 63 ed a9 de d5 e1 8e a4 b1 94 5c ad d2 23 0 2 e0 12 39 f7 e8 bd 5b 5c fc bd 88 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e 57 92 9b 9b 7f e2 d8 a1 87 26 e ff 5 5b d 5f ce b9 da b0 ac 40 4d b9 26 64 d1 82 2b 5d ec 84 cc d0 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e a5 88 2c 15 2d e5 78 4f a0 6c e3 bb 53 d0 f5 9d 16 23 10 cd 1b 45 3e bd a5 73 7d eb a4 bb 35 d9 41 97 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e 3c d2 2f 5b f 9e 2 ec e2 78 a d5 4e 15 42 c1 16 5c c6 3b f7 95 94 4e 8c ec bb d1 76 e 99 78 98 c6 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e aa 17 cb da b8 21 18 66 81 38 18 24 87 a2 3d 6e 31 c6 da 5f 2d ec 16 6 75 71 3b 88 3 ec 60 20 3d 5b ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e 43 6b 13 d5 83 cc 20 6d 6a c 45 3d b1 70 ae c db e cc ea be 45 1e de 20 ce 64 2b e6 ae 4a a3 3c 82 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e 55 a9 11 8d a6 ea e8 1b 4d 5d 1 ef 9b e9 3b ba b9 1b d2 62 93 68 4f 2c af b6 d9 b9 f9 d 6d 5a 39 20 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e ab ae 6e a7 26 e1 3c 6 f0 ee a8 fd 8 f 7 c 63 61 5 99 91 cf 59 d 28 af bd ba 5b 69 b8 1b 46 40 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e 40 c9 57 6c 6d b3 a5 fd 42 db 12 c 9e b1 56 df bf 84 af ec 96 8f ed c7 c6 f1 2a d2 66 83 c4 e4 4e 8c ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e 59 dd 3a 6 fb 6f 56 d2 f6 73 3b c1 aa a4 20 b1 d2 db 2e 48 4d c 90 5c 40 b5 d6 7f 67 2f 21 79 62 41 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 8c c2 52 90 5b 11 e7 2e 92 d9 18 e7 3c a2 b1 ba 23 95 e4 10 ff a6 29 69 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e f3 51 ab 6b 63 23 fe f7 97 fa 5a c2 a7 44 8f db 22 f 38 4a d5 1 78 b0 22 42 ed 14 74 f2 d7 30 90 99 ]

ACK packet with ACK number 425064262 is sent

[ ff 0 0 0 0 c3 51 92 c4 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e f3 51 ab 6b 63 23 fe f7 97 fa 5a c2 a7 44 8f db 22 f 38 4a d5 1 78 b0 22 42 ed 14 74 f2 d7 30 90 99 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e 98 8d bf 53 c2 32 5e bb 83 7c a1 7 c3 c0 f8 28 21 ed 5 22 71 b8 df 2b c4 a1 9f ee 23 13 ea 17 7a 73 ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 94 49 9e 70 38 78 57 a9 ed 81 94 bb 2c 76 92 dd 51 cb 13 c8 2f 9d 97 13 9 6b 7e a3 5 83 c3 35 60 5e ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e c3 73 34 64 c4 f6 13 31 d0 38 14 4f 6a 80 f1 e7 81 df d5 f3 cc 4b 65 6 43 2f 1 4f d3 d2 2b 92 a ed ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e 6d 90 97 af 32 3 eb 7e 45 7 a2 28 cc fa af 2 8b 31 4c cc c0 ed 8a c7 f0 aa 6e 32 aa f2 7c 54 2d 9c ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e 5b d9 16 a5 a3 fa c3 7 67 1 8a bf 9c f7 81 e7 dd 2d fa 52 84 1d de 55 c2 cc 1d 8c f1 ce 4a 88 b1 ec ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e 99 ae a8 4f e2 4c 90 63 ed a9 de d5 e1 8e a4 b1 94 5c ad d2 23 0 2 e0 12 39 f7 e8 bd 5b 5c fc bd 88 ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e 57 92 9b 9b 7f e2 d8 a1 87 26 e ff 5 5b d 5f ce b9 da b0 ac 40 4d b9 26 64 d1 82 2b 5d ec 84 cc d0 ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e a5 88 2c 15 2d e5 78 4f a0 6c e3 bb 53 d0 f5 9d 16 23 10 cd 1b 45 3e bd a5 73 7d eb a4 bb 35 d9 41 97 ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e 3c d2 2f 5b f 9e 2 ec e2 78 a d5 4e 15 42 c1 16 5c c6 3b f7 95 94 4e 8c ec bb d1 76 e 99 78 98 c6 ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e aa 17 cb da b8 21 18 66 81 38 18 24 87 a2 3d 6e 31 c6 da 5f 2d ec 16 6 75 71 3b 88 3 ec 60 20 3d 5b ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e 43 6b 13 d5 83 cc 20 6d 6a c 45 3d b1 70 ae c db e cc ea be 45 1e de 20 ce 64 2b e6 ae 4a a3 3c 82 ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e 55 a9 11 8d a6 ea e8 1b 4d 5d 1 ef 9b e9 3b ba b9 1b d2 62 93 68 4f 2c af b6 d9 b9 f9 d 6d 5a 39 20 ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e ab ae 6e a7 26 e1 3c 6 f0 ee a8 fd 8 f 7 c 63 61 5 99 91 cf 59 d 28 af bd ba 5b 69 b8 1b 46 40 ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e 40 c9 57 6c 6d b3 a5 fd 42 db 12 c 9e b1 56 df bf 84 af ec 96 8f ed c7 c6 f1 2a d2 66 83 c4 e4 4e 8c ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e 59 dd 3a 6 fb 6f 56 d2 f6 73 3b c1 aa a4 20 b1 d2 db 2e 48 4d c 90 5c 40 b5 d6 7f 67 2f 21 79 62 41 ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 8c c2 52 90 5b 11 e7 2e 92 d9 18 e7 3c a2 b1 ba 23 95 e4 10 ff a6 29 69 ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ f3 51 ab 6b 63 23 fe f7 97 fa 5a c2 a7 44 8f db 22 f 38 4a d5 1 78 b0 22 42 ed 14 74 f2 98 8d bf 53 c2 32 5e bb 83 7c a1 7 c3 c0 f8 28 21 ed 5 22 71 b8 df 2b c4 a1 9f ee 23 13 94 49 9e 70 38 78 57 a9 ed 81 94 bb 2c 76 92 dd 51 cb 13 c8 2f 9d 97 13 9 6b 7e a3 5 83 c3 73 34 64 c4 f6 13 31 d0 38 14 4f 6a 80 f1 e7 81 df d5 f3 cc 4b 65 6 43 2f 1 4f d3 d2 6d 90 97 af 32 3 eb 7e 45 7 a2 28 cc fa af 2 8b 31 4c cc c0 ed 8a c7 f0 aa 6e 32 aa f2 5b d9 16 a5 a3 fa c3 7 67 1 8a bf 9c f7 81 e7 dd 2d fa 52 84 1d de 55 c2 cc 1d 8c f1 ce 99 ae a8 4f e2 4c 90 63 ed a9 de d5 e1 8e a4 b1 94 5c ad d2 23 0 2 e0 12 39 f7 e8 bd 5b 57 92 9b 9b 7f e2 d8 a1 87 26 e ff 5 5b d 5f ce b9 da b0 ac 40 4d b9 26 64 d1 82 2b 5d a5 88 2c 15 2d e5 78 4f a0 6c e3 bb 53 d0 f5 9d 16 23 10 cd 1b 45 3e bd a5 73 7d eb a4 bb 3c d2 2f 5b f 9e 2 ec e2 78 a d5 4e 15 42 c1 16 5c c6 3b f7 95 94 4e 8c ec bb d1 76 e aa 17 cb da b8 21 18 66 81 38 18 24 87 a2 3d 6e 31 c6 da 5f 2d ec 16 6 75 71 3b 88 3 ec 43 6b 13 d5 83 cc 20 6d 6a c 45 3d b1 70 ae c db e cc ea be 45 1e de 20 ce 64 2b e6 ae 55 a9 11 8d a6 ea e8 1b 4d 5d 1 ef 9b e9 3b ba b9 1b d2 62 93 68 4f 2c af b6 d9 b9 f9 d ab ae 6e a7 26 e1 3c 6 f0 ee a8 fd 8 f 7 c 63 61 5 99 91 cf 59 d 28 af bd ba 5b 69 40 c9 57 6c 6d b3 a5 fd 42 db 12 c 9e b1 56 df bf 84 af ec 96 8f ed c7 c6 f1 2a d2 66 83 59 dd 3a 6 fb 6f 56 d2 f6 73 3b c1 aa a4 20 b1 d2 db 2e 48 4d c 90 5c 40 b5 d6 7f 67 2f 8c c2 52 90 5b 11 e7 2e 92 d9 18 e7 3c a2 b1 ba 23 95 e4 10 ]

Waiting for a packet

# Data packet type set by TX always wrong:

**Transmitter:**

500 bytes of data to be sent:

b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 a8 c 11 f 98 49 5 c2 87 bc 44 eb 7a 8d 2b a0 15 81 64 af b8 d1 9e ff 6d 14 c9 55 5b 70 1f 7a 9b b7 7a 7a 94 bd 12 58 b2 cf 7e 42 5 5e 21 64 e1 be a8 a0 41 22 fb d e9 ef b6 57 b3 57 f5 21 80 9b f2 1f 87 90 a0 84 db f1 be 66 85 a8 8e cc 99 d1 ae 48 f0 85 d2 11 33 fb 1d 3b 30 17 b 2a 9c 8b 66 68 81 35 f9 98 1e e3 1d 9a 44 ac e4 10 bc d5 2 bf 51 42 69 43 4e 2d 8a 36 68 7c 60 4a e7 93 26 22 ed 23 f9 e9 81 d8 b9 9c 43 3a 4a a8 cd 71 d9 f2 a1 9d d6 3 9c e0 cb 5a 94 9e e3 41 79 99 66 49 6 d 94 2e f4 80 33 e9 2 96 1a c f9 37 86 7b 49 93 85 a3 c1 eb 74 17 50 0 fa 40 20 f0 be 60 95 de 4e 2e 27 30 2f 1 66 b 63 4a 90 34 6 f9 14 df b7 78 ef 1e 5c cf 14 83 fc 23 6a f3 ab 59 6c 24 c1 bf a1 ef d7 c9 3 fc 68 68 5f 12 75 4 c8 46 fd 45 84 51 1e 7d e3 81 b7 7d aa 70 c d 68 48 1b 17 a3 27 59 f8 75 5e 1e 95 f8 b0 97 b0 ed 9b c1 f0 46 f1 9a 67 ce e4 ea 71 c7 16 a5 43 f8 a6 9d 64 b1 6a 64 8e 79 aa b2 2b 64 a4 50 9a 8 8a bd 87 b0 31 71 e6 54 c3 cc 5f d7 2f 9f 4e 70 6c 1d c3 ed af af 66 f2 f4 1 86 de d8 2c 89 84 e7 81 99 0 8f 8c 36 c3 37 84 5c d9 9f 6 30 a2 b5 85 76 87 f1 73 d1 23 8f 1f 9f 8d 80 d8 9f b ea f1 da 15 56 95 5e 8 5a ae 7d 12 83 4a 53 86 7c 52 7a e8 b5 ec 40 b0 d4 d1 85 58 84 a6 1c 21 51 c5 1d 45 47 7c 23 b4 f4 dc f3 d9 cd bf d5 f1 6f 15 60 75 83 db 5 32 f4 12 9f 4a ec e aa 23 54 8 97 a8 37 f3 c f 6b 13 f5 dd fe 1d 5f 9d f3 f5 7d fa 9f 7 1c 7f 66 92 b8 2c 17 27 3f 19 e3

Sending data packet number with sequence number: 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Data packet discarded due to wrong packet type

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Data packet discarded due to wrong packet type

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Data packet discarded due to wrong packet type

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 0 19 55 f7 28 1e b0 a1 5d 32 44 66 f1 d6 7c 70 95 b 6d 96 60 33 77 f4 50 94 cd 60 e2 51 90 64 ff 6b 2 e7 bb 29 5c dd ]

Data packet discarded due to wrong packet type

Waiting for a packet

# Packet type field of 2nd data packet set wrong by TX once:

**Transmitter:**

500 bytes of data to be sent:

ca 97 5e 77 fc d3 dc 90 bb 3d 38 1a 8e 33 cc d 1 a2 9b 62 10 73 7c de ad 39 14 19 fe 0 d5 69 d1 a2 8a 9d 49 41 93 dd 7c e1 48 54 5e 49 c0 36 5b 22 35 e9 27 5b 3f 41 ad e9 1 84 81 44 d8 c7 6f d9 a2 f9 2 58 df 10 ec b7 2b 56 1 f5 5d ed e a8 27 29 3d d8 6e c5 2d a7 8e 46 98 83 8d 80 2a f0 bb 9 bc 42 61 32 13 ea 17 89 ae 7b 3c c af 58 39 8b 92 65 66 a4 95 af e3 9 32 bd 46 ed c6 3c 72 72 ff ed b 2f de 6d b2 b9 ac 37 f8 3 57 4b ba af 99 eb e9 c9 75 77 ad 3 93 c2 ee 2b d0 1a db 97 c8 d2 37 7e 9e 3e fd f0 db a6 d0 3b 25 b5 d7 f0 76 b2 8a 11 ff ea f5 59 d2 ad e9 2e 17 60 8e 48 7 91 54 d9 85 25 c5 a9 2c c9 89 49 b7 25 78 c6 87 24 c8 6f 88 3e d6 62 5c a8 1d d3 2d e1 b9 ff 22 5a 43 d 2c 12 d0 5d 24 cf aa 47 b5 d3 b2 ad d8 60 96 34 b 4f 62 ed 6f 1 de 5a ea 5 71 2f 70 2b a4 3 10 3 4e cc 5e 18 74 9a 47 f9 33 a6 ad 9d 34 e0 a5 92 6f 4b a0 94 b2 9 e9 6d aa 38 bf d8 9f e1 10 7e 4e 49 6 82 26 65 99 40 20 90 fc 5a 7d 76 1a 99 19 66 55 80 35 62 a a5 9d 32 cf e6 f8 80 f1 98 3c dc 5e 5 76 ca 5e 40 49 b5 f0 64 1a d8 4f 1c 26 c1 4c 2c 81 b4 ee e7 72 67 d5 35 6d 97 da 91 a3 f1 3c a6 41 d4 4a 8 c5 90 67 a6 46 6c ce a0 aa f3 12 a0 e8 40 7e f8 76 78 f9 7b b2 97 d8 f7 bd ea 8a b1 ea 87 97 bd 3a 78 75 cb 7 51 45 a6 95 c6 8d 29 f4 2f 65 2 45 70 d8 8f 97 b6 5b 63 91 e3 c5 4b e5 3d 81 47 76 22 df b3 9 5b 7 68 fd db 73 53 dc 5 91 8f 98 a5 2 83 14 86 b7 be 98 9e 7f 4f 5c cc ca b 15 27 a1 b5 85 69 89 2d 56 7c d0 2b fd 4 b6 8c b9 35 7d 8c 53 47 a5 1e 3f a3 de 7b 2 76 37 bb 5d 7b

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e ca 97 5e 77 fc d3 dc 90 bb 3d 38 1a 8e 33 cc d 1 a2 9b 62 10 73 7c de ad 39 14 19 fe 0 7f e d0 49 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 0 19 55 f7 46 1e d5 69 d1 a2 8a 9d 49 41 93 dd 7c e1 48 54 5e 49 c0 36 5b 22 35 e9 27 5b 3f 41 ad e9 1 84 29 ec 98 f0 ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e d5 69 d1 a2 8a 9d 49 41 93 dd 7c e1 48 54 5e 49 c0 36 5b 22 35 e9 27 5b 3f 41 ad e9 1 84 7c ec 98 f0 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 81 44 d8 c7 6f d9 a2 f9 2 58 df 10 ec b7 2b 56 1 f5 5d ed e a8 27 29 3d d8 6e c5 2d a7 6c 8b 60 76 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e 8e 46 98 83 8d 80 2a f0 bb 9 bc 42 61 32 13 ea 17 89 ae 7b 3c c af 58 39 8b 92 65 66 a4 d6 48 c7 ee ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e 95 af e3 9 32 bd 46 ed c6 3c 72 72 ff ed b 2f de 6d b2 b9 ac 37 f8 3 57 4b ba af 99 eb 89 3a c8 4f ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e e9 c9 75 77 ad 3 93 c2 ee 2b d0 1a db 97 c8 d2 37 7e 9e 3e fd f0 db a6 d0 3b 25 b5 d7 f0 33 a9 64 38 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e 76 b2 8a 11 ff ea f5 59 d2 ad e9 2e 17 60 8e 48 7 91 54 d9 85 25 c5 a9 2c c9 89 49 b7 25 46 79 87 be ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e 78 c6 87 24 c8 6f 88 3e d6 62 5c a8 1d d3 2d e1 b9 ff 22 5a 43 d 2c 12 d0 5d 24 cf aa 47 be 41 f2 ed ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e b5 d3 b2 ad d8 60 96 34 b 4f 62 ed 6f 1 de 5a ea 5 71 2f 70 2b a4 3 10 3 4e cc 5e 18 27 f0 eb 20 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e 74 9a 47 f9 33 a6 ad 9d 34 e0 a5 92 6f 4b a0 94 b2 9 e9 6d aa 38 bf d8 9f e1 10 7e 4e 49 bc d6 c9 c2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e 6 82 26 65 99 40 20 90 fc 5a 7d 76 1a 99 19 66 55 80 35 62 a a5 9d 32 cf e6 f8 80 f1 98 53 32 5b 1a ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e 3c dc 5e 5 76 ca 5e 40 49 b5 f0 64 1a d8 4f 1c 26 c1 4c 2c 81 b4 ee e7 72 67 d5 35 6d 97 ec f6 25 8c ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e da 91 a3 f1 3c a6 41 d4 4a 8 c5 90 67 a6 46 6c ce a0 aa f3 12 a0 e8 40 7e f8 76 78 f9 7b bf 7c f0 5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e b2 97 d8 f7 bd ea 8a b1 ea 87 97 bd 3a 78 75 cb 7 51 45 a6 95 c6 8d 29 f4 2f 65 2 45 70 b9 d8 4e cc ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e d8 8f 97 b6 5b 63 91 e3 c5 4b e5 3d 81 47 76 22 df b3 9 5b 7 68 fd db 73 53 dc 5 91 8f a7 90 cb 2 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e 98 a5 2 83 14 86 b7 be 98 9e 7f 4f 5c cc ca b 15 27 a1 b5 85 69 89 2d 56 7c d0 2b fd 4 c6 7c 57 2e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 b6 8c b9 35 7d 8c 53 47 a5 1e 3f a3 de 7b 2 76 37 bb 5d 7b 8d 89 f4 8a ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e ca 97 5e 77 fc d3 dc 90 bb 3d 38 1a 8e 33 cc d 1 a2 9b 62 10 73 7c de ad 39 14 19 fe 0 7f e d0 49 ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 0 19 55 f7 46 1e d5 69 d1 a2 8a 9d 49 41 93 dd 7c e1 48 54 5e 49 c0 36 5b 22 35 e9 27 5b 3f 41 ad e9 1 84 29 ec 98 f0 ]

Data packet discarded due to wrong packet type

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e d5 69 d1 a2 8a 9d 49 41 93 dd 7c e1 48 54 5e 49 c0 36 5b 22 35 e9 27 5b 3f 41 ad e9 1 84 7c ec 98 f0 ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 81 44 d8 c7 6f d9 a2 f9 2 58 df 10 ec b7 2b 56 1 f5 5d ed e a8 27 29 3d d8 6e c5 2d a7 6c 8b 60 76 ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e 8e 46 98 83 8d 80 2a f0 bb 9 bc 42 61 32 13 ea 17 89 ae 7b 3c c af 58 39 8b 92 65 66 a4 d6 48 c7 ee ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e 95 af e3 9 32 bd 46 ed c6 3c 72 72 ff ed b 2f de 6d b2 b9 ac 37 f8 3 57 4b ba af 99 eb 89 3a c8 4f ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e e9 c9 75 77 ad 3 93 c2 ee 2b d0 1a db 97 c8 d2 37 7e 9e 3e fd f0 db a6 d0 3b 25 b5 d7 f0 33 a9 64 38 ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e 76 b2 8a 11 ff ea f5 59 d2 ad e9 2e 17 60 8e 48 7 91 54 d9 85 25 c5 a9 2c c9 89 49 b7 25 46 79 87 be ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e 78 c6 87 24 c8 6f 88 3e d6 62 5c a8 1d d3 2d e1 b9 ff 22 5a 43 d 2c 12 d0 5d 24 cf aa 47 be 41 f2 ed ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e b5 d3 b2 ad d8 60 96 34 b 4f 62 ed 6f 1 de 5a ea 5 71 2f 70 2b a4 3 10 3 4e cc 5e 18 27 f0 eb 20 ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e 74 9a 47 f9 33 a6 ad 9d 34 e0 a5 92 6f 4b a0 94 b2 9 e9 6d aa 38 bf d8 9f e1 10 7e 4e 49 bc d6 c9 c2 ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e 6 82 26 65 99 40 20 90 fc 5a 7d 76 1a 99 19 66 55 80 35 62 a a5 9d 32 cf e6 f8 80 f1 98 53 32 5b 1a ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e 3c dc 5e 5 76 ca 5e 40 49 b5 f0 64 1a d8 4f 1c 26 c1 4c 2c 81 b4 ee e7 72 67 d5 35 6d 97 ec f6 25 8c ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e da 91 a3 f1 3c a6 41 d4 4a 8 c5 90 67 a6 46 6c ce a0 aa f3 12 a0 e8 40 7e f8 76 78 f9 7b bf 7c f0 5 ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e b2 97 d8 f7 bd ea 8a b1 ea 87 97 bd 3a 78 75 cb 7 51 45 a6 95 c6 8d 29 f4 2f 65 2 45 70 b9 d8 4e cc ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e d8 8f 97 b6 5b 63 91 e3 c5 4b e5 3d 81 47 76 22 df b3 9 5b 7 68 fd db 73 53 dc 5 91 8f a7 90 cb 2 ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e 98 a5 2 83 14 86 b7 be 98 9e 7f 4f 5c cc ca b 15 27 a1 b5 85 69 89 2d 56 7c d0 2b fd 4 c6 7c 57 2e ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 b6 8c b9 35 7d 8c 53 47 a5 1e 3f a3 de 7b 2 76 37 bb 5d 7b 8d 89 f4 8a ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ ca 97 5e 77 fc d3 dc 90 bb 3d 38 1a 8e 33 cc d 1 a2 9b 62 10 73 7c de ad 39 14 19 fe 0 d5 69 d1 a2 8a 9d 49 41 93 dd 7c e1 48 54 5e 49 c0 36 5b 22 35 e9 27 5b 3f 41 ad e9 1 84 81 44 d8 c7 6f d9 a2 f9 2 58 df 10 ec b7 2b 56 1 f5 5d ed e a8 27 29 3d d8 6e c5 2d a7 8e 46 98 83 8d 80 2a f0 bb 9 bc 42 61 32 13 ea 17 89 ae 7b 3c c af 58 39 8b 92 65 66 a4 95 af e3 9 32 bd 46 ed c6 3c 72 72 ff ed b 2f de 6d b2 b9 ac 37 f8 3 57 4b ba af 99 eb e9 c9 75 77 ad 3 93 c2 ee 2b d0 1a db 97 c8 d2 37 7e 9e 3e fd f0 db a6 d0 3b 25 b5 d7 f0 76 b2 8a 11 ff ea f5 59 d2 ad e9 2e 17 60 8e 48 7 91 54 d9 85 25 c5 a9 2c c9 89 49 b7 25 78 c6 87 24 c8 6f 88 3e d6 62 5c a8 1d d3 2d e1 b9 ff 22 5a 43 d 2c 12 d0 5d 24 cf aa 47 b5 d3 b2 ad d8 60 96 34 b 4f 62 ed 6f 1 de 5a ea 5 71 2f 70 2b a4 3 10 3 4e cc 5e 18 74 9a 47 f9 33 a6 ad 9d 34 e0 a5 92 6f 4b a0 94 b2 9 e9 6d aa 38 bf d8 9f e1 10 7e 4e 49 6 82 26 65 99 40 20 90 fc 5a 7d 76 1a 99 19 66 55 80 35 62 a a5 9d 32 cf e6 f8 80 f1 98 3c dc 5e 5 76 ca 5e 40 49 b5 f0 64 1a d8 4f 1c 26 c1 4c 2c 81 b4 ee e7 72 67 d5 35 6d 97 da 91 a3 f1 3c a6 41 d4 4a 8 c5 90 67 a6 46 6c ce a0 aa f3 12 a0 e8 40 7e f8 76 78 f9 7b b2 97 d8 f7 bd ea 8a b1 ea 87 97 bd 3a 78 75 cb 7 51 45 a6 95 c6 8d 29 f4 2f 65 2 45 70 d8 8f 97 b6 5b 63 91 e3 c5 4b e5 3d 81 47 76 22 df b3 9 5b 7 68 fd db 73 53 dc 5 91 8f 98 a5 2 83 14 86 b7 be 98 9e 7f 4f 5c cc ca b 15 27 a1 b5 85 69 89 2d 56 7c d0 2b fd 4 b6 8c b9 35 7d 8c 53 47 a5 1e 3f a3 de 7b 2 76 37 bb 5d 7b ]

Waiting for a packet

# Packet type of 1st ACK wrong; resent correctly

**Transmitter:**

500 bytes of data to be sent:

87 c8 7c 9e cd 64 c5 5d 71 af 6a 82 8f e4 36 67 4b ae 1a 4c 67 6f 3a 38 d7 d0 ed 2f 3c 92 7e 37 df c0 d2 21 49 85 1f 53 bb a9 65 6c 17 8d ab 9 a4 fb 93 12 60 a0 f4 47 d2 a8 f4 d5 31 18 24 9c a9 59 c8 a8 4 72 ab 24 8e ca 64 43 af d7 f4 5d 19 5d 14 6f 59 47 d6 8f b4 af 80 91 d1 65 78 10 f4 19 43 2c f9 4f b6 53 2c 9 cf 2 2f b4 74 2c 2 b8 db f8 cf 2a 95 46 17 6d 78 3c 44 bd d6 d3 3 a0 38 eb 45 dd 2f 27 26 e9 c 47 30 4a b9 64 2b c8 c7 f a1 98 b7 27 29 e6 5f 1f b9 d0 eb d9 cc d3 9e d1 ac f1 4e db e6 30 6 d8 92 ad fa 44 55 fa 4 3 94 6e 30 3f 2c 3c 6b a8 e0 3e a 96 7a e9 3f b9 13 8f 15 4 27 f0 2f 78 f9 a2 ea 1a b4 16 10 fa cf b2 43 cc f4 9a d6 fd 6e 1f e2 28 ec 33 1c 4f 4 82 16 29 77 d6 e4 bb 4b 74 8 10 72 bb 52 2b 5f bc 35 6 6c 77 dd 70 9d 9f ed 13 33 c7 43 53 2d 92 1e 4b bc d9 1 aa 33 d5 ea c7 2b a7 e4 4a b4 eb 86 9b 11 1e eb 67 a9 ae 24 ee 18 eb 51 fc e1 42 a3 b6 ac 2c 1 4c a2 d7 31 33 6f d3 3b 23 23 f3 bd 5a 75 91 de cf 54 ba c9 b5 93 5d f4 82 95 23 19 40 53 85 d 21 48 f0 12 de 44 5f d5 f8 62 af 2 92 be b8 7b 85 62 7b 61 43 55 65 28 3d 64 b0 93 c9 91 b3 c7 9c 1f b b1 2d a1 49 21 b1 e 90 b 59 24 de 63 71 1e d2 27 12 3f b4 17 3c 8c c2 50 bb 9a 87 b8 77 e1 af b2 73 f4 fb 3a b4 28 90 1f 27 76 7d 2f 42 d4 b2 93 a e9 19 bf 12 ef 90 11 eb 74 8 a9 9c 8d 36 c8 7b 9d a4 38 28 94 be 2e cd 96 62 83 c9 54 22 bc 3b 1c 6 c9 46 93 40 63 48 7c fa 5a eb e6 b 14 3b 71 61 1b 74 99 56 43 2a f8 17 3b 2 76 42 b0 78 58 db 45 f0 22 5 39 86 e1 b5 5b de f4 5 a7 95 38 3a aa ef

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 87 c8 7c 9e cd 64 c5 5d 71 af 6a 82 8f e4 36 67 4b ae 1a 4c 67 6f 3a 38 d7 d0 ed 2f 3c 92 d2 26 e2 8f ]

Waiting for ACK

ACK packet received

[ 0 19 55 f7 46 7a 48 c7 33 ]

ACK number of the received ACK: 425064262

ack discarded due to wrong packet type

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 87 c8 7c 9e cd 64 c5 5d 71 af 6a 82 8f e4 36 67 4b ae 1a 4c 67 6f 3a 38 d7 d0 ed 2f 3c 92 d2 26 e2 8f ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e 7e 37 df c0 d2 21 49 85 1f 53 bb a9 65 6c 17 8d ab 9 a4 fb 93 12 60 a0 f4 47 d2 a8 f4 d5 3b a5 39 37 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 31 18 24 9c a9 59 c8 a8 4 72 ab 24 8e ca 64 43 af d7 f4 5d 19 5d 14 6f 59 47 d6 8f b4 af e3 1c 36 bd ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e 80 91 d1 65 78 10 f4 19 43 2c f9 4f b6 53 2c 9 cf 2 2f b4 74 2c 2 b8 db f8 cf 2a 95 46 4a c9 92 d7 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e 17 6d 78 3c 44 bd d6 d3 3 a0 38 eb 45 dd 2f 27 26 e9 c 47 30 4a b9 64 2b c8 c7 f a1 98 6e 99 63 28 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e b7 27 29 e6 5f 1f b9 d0 eb d9 cc d3 9e d1 ac f1 4e db e6 30 6 d8 92 ad fa 44 55 fa 4 3 7c 8a f3 7f ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e 94 6e 30 3f 2c 3c 6b a8 e0 3e a 96 7a e9 3f b9 13 8f 15 4 27 f0 2f 78 f9 a2 ea 1a b4 16 f8 b0 89 3d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e 10 fa cf b2 43 cc f4 9a d6 fd 6e 1f e2 28 ec 33 1c 4f 4 82 16 29 77 d6 e4 bb 4b 74 8 10 6b b1 88 33 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e 72 bb 52 2b 5f bc 35 6 6c 77 dd 70 9d 9f ed 13 33 c7 43 53 2d 92 1e 4b bc d9 1 aa 33 d5 2f c2 7b 5e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e ea c7 2b a7 e4 4a b4 eb 86 9b 11 1e eb 67 a9 ae 24 ee 18 eb 51 fc e1 42 a3 b6 ac 2c 1 4c 67 6 a8 55 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e a2 d7 31 33 6f d3 3b 23 23 f3 bd 5a 75 91 de cf 54 ba c9 b5 93 5d f4 82 95 23 19 40 53 85 2c f5 d9 67 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e d 21 48 f0 12 de 44 5f d5 f8 62 af 2 92 be b8 7b 85 62 7b 61 43 55 65 28 3d 64 b0 93 c9 a7 23 ed d5 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e 91 b3 c7 9c 1f b b1 2d a1 49 21 b1 e 90 b 59 24 de 63 71 1e d2 27 12 3f b4 17 3c 8c c2 e5 68 c8 4 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e 50 bb 9a 87 b8 77 e1 af b2 73 f4 fb 3a b4 28 90 1f 27 76 7d 2f 42 d4 b2 93 a e9 19 bf 12 48 f0 ce f0 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e ef 90 11 eb 74 8 a9 9c 8d 36 c8 7b 9d a4 38 28 94 be 2e cd 96 62 83 c9 54 22 bc 3b 1c 6 43 44 f7 17 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e c9 46 93 40 63 48 7c fa 5a eb e6 b 14 3b 71 61 1b 74 99 56 43 2a f8 17 3b 2 76 42 b0 78 51 65 13 93 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 58 db 45 f0 22 5 39 86 e1 b5 5b de f4 5 a7 95 38 3a aa ef 2d 87 24 0 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 87 c8 7c 9e cd 64 c5 5d 71 af 6a 82 8f e4 36 67 4b ae 1a 4c 67 6f 3a 38 d7 d0 ed 2f 3c 92 d2 26 e2 8f ]

ACK packet with ACK number 425064262 is sent

[ 0 19 55 f7 46 7a 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 87 c8 7c 9e cd 64 c5 5d 71 af 6a 82 8f e4 36 67 4b ae 1a 4c 67 6f 3a 38 d7 d0 ed 2f 3c 92 d2 26 e2 8f ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e 7e 37 df c0 d2 21 49 85 1f 53 bb a9 65 6c 17 8d ab 9 a4 fb 93 12 60 a0 f4 47 d2 a8 f4 d5 3b a5 39 37 ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 31 18 24 9c a9 59 c8 a8 4 72 ab 24 8e ca 64 43 af d7 f4 5d 19 5d 14 6f 59 47 d6 8f b4 af e3 1c 36 bd ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e 80 91 d1 65 78 10 f4 19 43 2c f9 4f b6 53 2c 9 cf 2 2f b4 74 2c 2 b8 db f8 cf 2a 95 46 4a c9 92 d7 ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e 17 6d 78 3c 44 bd d6 d3 3 a0 38 eb 45 dd 2f 27 26 e9 c 47 30 4a b9 64 2b c8 c7 f a1 98 6e 99 63 28 ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e b7 27 29 e6 5f 1f b9 d0 eb d9 cc d3 9e d1 ac f1 4e db e6 30 6 d8 92 ad fa 44 55 fa 4 3 7c 8a f3 7f ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e 94 6e 30 3f 2c 3c 6b a8 e0 3e a 96 7a e9 3f b9 13 8f 15 4 27 f0 2f 78 f9 a2 ea 1a b4 16 f8 b0 89 3d ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e 10 fa cf b2 43 cc f4 9a d6 fd 6e 1f e2 28 ec 33 1c 4f 4 82 16 29 77 d6 e4 bb 4b 74 8 10 6b b1 88 33 ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e 72 bb 52 2b 5f bc 35 6 6c 77 dd 70 9d 9f ed 13 33 c7 43 53 2d 92 1e 4b bc d9 1 aa 33 d5 2f c2 7b 5e ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e ea c7 2b a7 e4 4a b4 eb 86 9b 11 1e eb 67 a9 ae 24 ee 18 eb 51 fc e1 42 a3 b6 ac 2c 1 4c 67 6 a8 55 ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e a2 d7 31 33 6f d3 3b 23 23 f3 bd 5a 75 91 de cf 54 ba c9 b5 93 5d f4 82 95 23 19 40 53 85 2c f5 d9 67 ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e d 21 48 f0 12 de 44 5f d5 f8 62 af 2 92 be b8 7b 85 62 7b 61 43 55 65 28 3d 64 b0 93 c9 a7 23 ed d5 ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e 91 b3 c7 9c 1f b b1 2d a1 49 21 b1 e 90 b 59 24 de 63 71 1e d2 27 12 3f b4 17 3c 8c c2 e5 68 c8 4 ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e 50 bb 9a 87 b8 77 e1 af b2 73 f4 fb 3a b4 28 90 1f 27 76 7d 2f 42 d4 b2 93 a e9 19 bf 12 48 f0 ce f0 ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e ef 90 11 eb 74 8 a9 9c 8d 36 c8 7b 9d a4 38 28 94 be 2e cd 96 62 83 c9 54 22 bc 3b 1c 6 43 44 f7 17 ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e c9 46 93 40 63 48 7c fa 5a eb e6 b 14 3b 71 61 1b 74 99 56 43 2a f8 17 3b 2 76 42 b0 78 51 65 13 93 ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 58 db 45 f0 22 5 39 86 e1 b5 5b de f4 5 a7 95 38 3a aa ef 2d 87 24 0 ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ 87 c8 7c 9e cd 64 c5 5d 71 af 6a 82 8f e4 36 67 4b ae 1a 4c 67 6f 3a 38 d7 d0 ed 2f 3c 92 7e 37 df c0 d2 21 49 85 1f 53 bb a9 65 6c 17 8d ab 9 a4 fb 93 12 60 a0 f4 47 d2 a8 f4 d5 31 18 24 9c a9 59 c8 a8 4 72 ab 24 8e ca 64 43 af d7 f4 5d 19 5d 14 6f 59 47 d6 8f b4 af 80 91 d1 65 78 10 f4 19 43 2c f9 4f b6 53 2c 9 cf 2 2f b4 74 2c 2 b8 db f8 cf 2a 95 46 17 6d 78 3c 44 bd d6 d3 3 a0 38 eb 45 dd 2f 27 26 e9 c 47 30 4a b9 64 2b c8 c7 f a1 98 b7 27 29 e6 5f 1f b9 d0 eb d9 cc d3 9e d1 ac f1 4e db e6 30 6 d8 92 ad fa 44 55 fa 4 3 94 6e 30 3f 2c 3c 6b a8 e0 3e a 96 7a e9 3f b9 13 8f 15 4 27 f0 2f 78 f9 a2 ea 1a b4 16 10 fa cf b2 43 cc f4 9a d6 fd 6e 1f e2 28 ec 33 1c 4f 4 82 16 29 77 d6 e4 bb 4b 74 8 10 72 bb 52 2b 5f bc 35 6 6c 77 dd 70 9d 9f ed 13 33 c7 43 53 2d 92 1e 4b bc d9 1 aa 33 d5 ea c7 2b a7 e4 4a b4 eb 86 9b 11 1e eb 67 a9 ae 24 ee 18 eb 51 fc e1 42 a3 b6 ac 2c 1 4c a2 d7 31 33 6f d3 3b 23 23 f3 bd 5a 75 91 de cf 54 ba c9 b5 93 5d f4 82 95 23 19 40 53 85 d 21 48 f0 12 de 44 5f d5 f8 62 af 2 92 be b8 7b 85 62 7b 61 43 55 65 28 3d 64 b0 93 c9 91 b3 c7 9c 1f b b1 2d a1 49 21 b1 e 90 b 59 24 de 63 71 1e d2 27 12 3f b4 17 3c 8c c2 50 bb 9a 87 b8 77 e1 af b2 73 f4 fb 3a b4 28 90 1f 27 76 7d 2f 42 d4 b2 93 a e9 19 bf 12 ef 90 11 eb 74 8 a9 9c 8d 36 c8 7b 9d a4 38 28 94 be 2e cd 96 62 83 c9 54 22 bc 3b 1c 6 c9 46 93 40 63 48 7c fa 5a eb e6 b 14 3b 71 61 1b 74 99 56 43 2a f8 17 3b 2 76 42 b0 78 58 db 45 f0 22 5 39 86 e1 b5 5b de f4 5 a7 95 38 3a aa ef ]

Waiting for a packet

# Packet type of ACK always wrong

**Transmitter:**

500 bytes of data to be sent:

dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 6 19 84 f8 60 ea 80 c1 71 34 30 4f bc 3b bc 5d bd e1 5 70 a3 ee 16 60 96 c 0 50 3b 8a f0 80 d7 34 7 3c f8 71 a4 43 35 ba ea 21 32 46 d6 ce 11 c9 23 a7 ac 39 82 92 7f b2 73 da 87 9e db 5 60 bc c5 35 85 8b 37 2a d6 5e a 68 64 36 a8 b5 a7 4a e8 8a 30 f1 e8 1e ed 6a 6c e c0 65 bb d ca 98 23 55 7d 43 a 3e 63 f5 49 c5 43 9f 33 81 63 21 e9 87 93 4 5e 88 42 26 27 5d 7e f7 ea 53 c1 bf c 65 b1 d 1f d7 b9 3c 87 8e 4c 2b c8 64 fa 14 83 1a f1 3d 74 20 af ed 45 57 90 0 56 c9 19 44 6c f8 a3 a4 2b f cd a2 44 4a 36 47 91 e 1f ca 53 83 1c 4f a8 e1 a5 74 4a b5 4d cf 0 33 81 9e b4 e6 90 af 1b c4 b0 75 27 c1 e2 35 8 ae 1e 3e be 8b 53 85 f0 19 86 5e 1d f0 97 b3 7f 18 56 c6 59 d8 37 4e 8b 6a 12 e9 7b 9e ee ff 7e 4a a8 ad 6a 5a d5 e1 35 e5 be 1f 8a 69 4 a9 7a 2 fe db 55 e3 bb b9 50 b0 9 c2 ad a0 85 db 95 69 b8 23 c3 57 cf 29 d2 77 f7 40 c3 24 f3 cf 32 9 55 37 a5 37 2a 2 f0 ee 6a e cf 59 5c db c6 5 e3 d2 77 22 52 9c 19 39 6 52 db e 94 50 f5 b2 10 a6 c9 db 79 90 25 6e 5 8 18 80 f1 ed dd d4 75 a8 fa 93 40 61 ce ad c0 9 4a d7 1c e1 ac 22 30 87 47 79 16 7d 5e 76 77 27 62 ce 78 78 78 de 2c 3e 3 d5 6a 70 aa 32 ee e6 6c 58 b1 4e 4e 96 d3 39 27 39 48 fb 3e 33 82 75 ab 74 11 23 8b 62 73 6c d 82 47 a4 d9 86 e7 25 1 90 c0 16 6a 35 15 7 78 b0 a 12 1b 66 7 5d 94 18 2a be de f 6b 44 d7 df fc e7 7c 26 ad 5 af 27 d8 54 a2 2f bd 47 ca dc 24 9b 80 e8 1a 9b e5 65 34 83 8d 8a 33 26 e5 1f ac f4

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

Waiting for ACK

ACK packet received

[ 0 19 55 f7 46 7a 48 c7 33 ]

ACK number of the received ACK: 425064262

ack discarded due to wrong packet type

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

Waiting for ACK

ACK packet received

[ 0 19 55 f7 46 7a 48 c7 33 ]

ACK number of the received ACK: 425064262

ack discarded due to wrong packet type

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

Waiting for ACK

ACK packet received

[ 0 19 55 f7 46 7a 48 c7 33 ]

ACK number of the received ACK: 425064262

ack discarded due to wrong packet type

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

Waiting for ACK

ACK packet received

[ 0 19 55 f7 46 7a 48 c7 33 ]

ACK number of the received ACK: 425064262

ack discarded due to wrong packet type

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

ACK packet with ACK number 425064262 is sent

[ 0 19 55 f7 46 7a 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ 0 19 55 f7 46 7a 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ 0 19 55 f7 46 7a 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e dd fa 2d 60 b3 7 5e 6d c5 c c a 2e 51 60 17 39 e4 26 63 7f c8 48 14 bb a4 82 fd b5 aa 9 c1 5c 69 ]

Duplicate packet: discarded; ACK with expected seq num sent

ACK packet with ACK number 425064262 is sent

[ 0 19 55 f7 46 7a 48 c7 33 ]

Waiting for a packet

# Length field of all TX data packet wrong

**Transmitter:**

500 bytes of data to be sent:

6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 fa df fd 30 4f f 62 da 35 25 54 3e 1 e7 ad a4 50 2 8b e7 51 fa 8e ce a0 fd e9 87 47 81 84 d9 12 b9 ba c9 e6 74 83 7a 7e d2 c3 59 e6 e1 ee b0 35 79 d6 4e e2 5f cb ce 66 7 4f 16 59 f8 f7 d4 4f c5 c0 a4 e1 b7 6d 77 75 6 1c e2 e7 d e4 90 ca 7f 15 db 2a c7 3e 92 ae e0 9c bd c8 79 ab e1 cf 12 90 1c c2 cb 70 f6 c7 b6 2a f7 91 69 a5 99 24 2f ac 9a 4e 38 6e e1 86 79 4e 39 d3 1d 81 8b d4 3a 8d f f0 b2 ec 1c 8b b3 40 b9 3a cc 7b f0 81 5c 20 fa cf 8b 39 f2 5d 2a aa 49 0 cb ce 7d 88 6f 80 f8 47 94 d7 7e 2c fb b2 55 a8 84 67 dd 37 db 9b e4 28 a9 4c 3e fa fd 37 8 cd 3 da 7d 70 fb 15 97 44 6d 3a dd 91 59 59 23 bc 3c 99 ed 28 6e 6c 74 16 47 ad a9 47 48 3f 4c 9c ea 62 35 11 8f 5c 28 85 c3 b4 34 2 ab 14 cf b4 37 f9 e5 ec c3 84 33 7a ba 32 f9 32 92 51 1f 9f 18 17 cd 93 0 48 2f b2 8e f5 1b b2 d4 41 98 d9 60 a2 85 14 54 f9 eb f2 5a 7 99 d f0 c2 41 a7 8 1d 57 73 10 33 cd 2 f2 44 72 d 26 48 9d a0 c8 61 18 33 97 86 8 8f 6 2c b3 33 4d 27 bf 15 43 8d 9 7d 5d 58 aa e4 42 fa 5d 18 5f 10 38 a2 1e 3a d9 97 de 9 85 3a 58 f5 95 ee 14 dc 92 57 2c f3 48 ad f1 58 6e 88 48 5 9b 81 9 88 6a eb 6e e3 24 e1 3 5 6f ca 36 88 6a cd e5 80 5c a2 53 d0 82 b3 b8 b6 c8 54 96 66 19 40 2b 20 5b 81 e9 48 7c d3 43 1e f6 c7 7c 62 3b ee a9 77 24 e3 63 19 d8 26 c0 5b 9 82 61 b3 eb d5 9a 4d e1 27 c3 5 57 1e db 9f c 5d 9b d3 4a f1 83 67 30 11 65 b6 97 b5 58 12 49 60 38 96 85 92 66 8 22 bd 4e ef c5 f8 66 f7 97 4 45

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Data packet discarded due to wrong payload length

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Data packet discarded due to wrong payload length

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Data packet discarded due to wrong payload length

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 0 6d 7b 7 15 51 53 3b 53 4 74 83 20 be 64 de 23 76 64 2f 7 d5 af 8e db 30 17 cc 72 66 58 f6 ae e2 57 ]

Data packet discarded due to wrong payload length

Waiting for a packet

# Length field of 2nd data packet is set wrong by TX once

**Transmitter:**

500 bytes of data to be sent:

d4 3b 12 1e d4 51 31 d0 c5 b7 e4 c5 82 38 ce 6c 55 c8 ad a7 11 e2 fc 17 60 3f 10 71 dc 11 1b 80 b6 46 1f 65 e8 2c 47 95 15 15 bf 8b 55 f4 f1 e5 33 f3 dc fd 17 9d b8 42 c3 c1 77 69 a8 87 71 4d 9d 1f 97 10 d2 cb 1c 0 69 87 c3 c6 c9 3f 6f 6f 81 4e 6f 82 1f 67 6b c ea ea 57 eb 60 1d 9d e4 8a 5c e3 9a 60 a9 48 10 f 96 a8 22 75 81 66 60 23 5c f7 bb 31 36 5d d6 d2 d5 26 95 67 8 1a 9b 60 7 af 21 74 70 8e a4 d9 38 4 95 22 a0 e1 74 1e ec 91 39 a9 9d 1d 28 40 12 a2 8a 90 4d 69 55 68 b6 3 d1 82 6a 45 d0 9b e4 2f 9f 4f 55 28 45 1c 3d ec 31 b6 a4 52 dc 3a f9 96 1b a5 bb 47 6c cd 34 c1 ce 15 3e ae f4 ae a7 f1 be b0 4f 5c 73 eb ac bd 3 dc ec 1b df 8c 11 b1 66 e1 b5 d9 12 21 bb 31 c1 4a fd d1 4e 70 56 7c 9b ab 25 87 2 fe f8 96 5c 72 28 44 5e 45 84 0 8d 76 ce 95 79 d6 b7 bc e1 52 84 c4 63 c2 c7 98 dc d9 17 84 c5 ea e 29 c5 25 e1 ba 58 37 a1 2a 2f 9 31 f8 d8 c6 27 fa ea f5 27 64 56 89 21 a c2 8b a3 6f 77 ea 6c 65 54 73 8e 10 f0 7a 73 76 59 31 dd 48 26 ac 7e a8 17 a b4 f0 ba 2d 35 7f 81 43 e5 86 da 5c 12 1a 55 31 fc ee bb e9 65 27 b8 fb b0 fe 73 a9 1f 47 d6 0 ba 13 ee 1c ec a2 29 36 cb a0 2d 42 0 eb bb 6 1 c8 a4 a3 f7 d7 e9 69 43 89 e6 c0 65 57 cb 59 2f 34 4e 48 c4 1d 49 d1 17 ab 63 c2 49 cb 65 ed 84 34 78 8b 80 c6 9 ee 8e 8b b5 59 3c 86 3a 29 5c 2f f7 a5 5c 9a e0 31 34 d5 cb a6 b4 57 39 b7 d7 bd 7e c9 5 46 18 f3 6b d1 e8 c2 47 40 f5 9b 19 d1 c9 ac 11 1f 37 a9 d2 52 44 dd e9 b4 6f 87 57 b d8 47 1e c5 bb 56 db 89 5f a9 9d 72 7b 6c 60 a5 99 db a9 4e 0 40 61 e0 a4 f8 35 d3 7b

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e d4 3b 12 1e d4 51 31 d0 c5 b7 e4 c5 82 38 ce 6c 55 c8 ad a7 11 e2 fc 17 60 3f 10 71 dc 11 b2 fd 2e a ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 0 1b 80 b6 46 1f 65 e8 2c 47 95 15 15 bf 8b 55 f4 f1 e5 33 f3 dc fd 17 9d b8 42 c3 c1 77 69 ee d c9 5f ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e 1b 80 b6 46 1f 65 e8 2c 47 95 15 15 bf 8b 55 f4 f1 e5 33 f3 dc fd 17 9d b8 42 c3 c1 77 69 ee 13 c9 5f ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e a8 87 71 4d 9d 1f 97 10 d2 cb 1c 0 69 87 c3 c6 c9 3f 6f 6f 81 4e 6f 82 1f 67 6b c ea ea a4 88 4c e ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e 57 eb 60 1d 9d e4 8a 5c e3 9a 60 a9 48 10 f 96 a8 22 75 81 66 60 23 5c f7 bb 31 36 5d d6 ba 40 6f 13 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e d2 d5 26 95 67 8 1a 9b 60 7 af 21 74 70 8e a4 d9 38 4 95 22 a0 e1 74 1e ec 91 39 a9 9d cc c5 7 35 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e 1d 28 40 12 a2 8a 90 4d 69 55 68 b6 3 d1 82 6a 45 d0 9b e4 2f 9f 4f 55 28 45 1c 3d ec 31 5f f6 a3 16 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e b6 a4 52 dc 3a f9 96 1b a5 bb 47 6c cd 34 c1 ce 15 3e ae f4 ae a7 f1 be b0 4f 5c 73 eb ac 7 32 d6 db ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e bd 3 dc ec 1b df 8c 11 b1 66 e1 b5 d9 12 21 bb 31 c1 4a fd d1 4e 70 56 7c 9b ab 25 87 2 eb e8 dc a3 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e fe f8 96 5c 72 28 44 5e 45 84 0 8d 76 ce 95 79 d6 b7 bc e1 52 84 c4 63 c2 c7 98 dc d9 17 83 96 16 91 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e 84 c5 ea e 29 c5 25 e1 ba 58 37 a1 2a 2f 9 31 f8 d8 c6 27 fa ea f5 27 64 56 89 21 a c2 5e 21 4d 1d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e 8b a3 6f 77 ea 6c 65 54 73 8e 10 f0 7a 73 76 59 31 dd 48 26 ac 7e a8 17 a b4 f0 ba 2d 35 1d 6 91 50 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e 7f 81 43 e5 86 da 5c 12 1a 55 31 fc ee bb e9 65 27 b8 fb b0 fe 73 a9 1f 47 d6 0 ba 13 ee b1 4e 4 34 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e 1c ec a2 29 36 cb a0 2d 42 0 eb bb 6 1 c8 a4 a3 f7 d7 e9 69 43 89 e6 c0 65 57 cb 59 2f c2 b1 5d c7 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e 34 4e 48 c4 1d 49 d1 17 ab 63 c2 49 cb 65 ed 84 34 78 8b 80 c6 9 ee 8e 8b b5 59 3c 86 3a 2e 49 4 79 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e 29 5c 2f f7 a5 5c 9a e0 31 34 d5 cb a6 b4 57 39 b7 d7 bd 7e c9 5 46 18 f3 6b d1 e8 c2 47 7 34 62 9b ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e 40 f5 9b 19 d1 c9 ac 11 1f 37 a9 d2 52 44 dd e9 b4 6f 87 57 b d8 47 1e c5 bb 56 db 89 5f eb 17 b 75 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 a9 9d 72 7b 6c 60 a5 99 db a9 4e 0 40 61 e0 a4 f8 35 d3 7b ad 68 d5 54 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e d4 3b 12 1e d4 51 31 d0 c5 b7 e4 c5 82 38 ce 6c 55 c8 ad a7 11 e2 fc 17 60 3f 10 71 dc 11 b2 fd 2e a ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 0 1b 80 b6 46 1f 65 e8 2c 47 95 15 15 bf 8b 55 f4 f1 e5 33 f3 dc fd 17 9d b8 42 c3 c1 77 69 ee d c9 5f ]

Data packet discarded due to wrong payload length

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e 1b 80 b6 46 1f 65 e8 2c 47 95 15 15 bf 8b 55 f4 f1 e5 33 f3 dc fd 17 9d b8 42 c3 c1 77 69 ee 13 c9 5f ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e a8 87 71 4d 9d 1f 97 10 d2 cb 1c 0 69 87 c3 c6 c9 3f 6f 6f 81 4e 6f 82 1f 67 6b c ea ea a4 88 4c e ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e 57 eb 60 1d 9d e4 8a 5c e3 9a 60 a9 48 10 f 96 a8 22 75 81 66 60 23 5c f7 bb 31 36 5d d6 ba 40 6f 13 ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e d2 d5 26 95 67 8 1a 9b 60 7 af 21 74 70 8e a4 d9 38 4 95 22 a0 e1 74 1e ec 91 39 a9 9d cc c5 7 35 ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e 1d 28 40 12 a2 8a 90 4d 69 55 68 b6 3 d1 82 6a 45 d0 9b e4 2f 9f 4f 55 28 45 1c 3d ec 31 5f f6 a3 16 ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e b6 a4 52 dc 3a f9 96 1b a5 bb 47 6c cd 34 c1 ce 15 3e ae f4 ae a7 f1 be b0 4f 5c 73 eb ac 7 32 d6 db ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e bd 3 dc ec 1b df 8c 11 b1 66 e1 b5 d9 12 21 bb 31 c1 4a fd d1 4e 70 56 7c 9b ab 25 87 2 eb e8 dc a3 ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e fe f8 96 5c 72 28 44 5e 45 84 0 8d 76 ce 95 79 d6 b7 bc e1 52 84 c4 63 c2 c7 98 dc d9 17 83 96 16 91 ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e 84 c5 ea e 29 c5 25 e1 ba 58 37 a1 2a 2f 9 31 f8 d8 c6 27 fa ea f5 27 64 56 89 21 a c2 5e 21 4d 1d ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e 8b a3 6f 77 ea 6c 65 54 73 8e 10 f0 7a 73 76 59 31 dd 48 26 ac 7e a8 17 a b4 f0 ba 2d 35 1d 6 91 50 ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e 7f 81 43 e5 86 da 5c 12 1a 55 31 fc ee bb e9 65 27 b8 fb b0 fe 73 a9 1f 47 d6 0 ba 13 ee b1 4e 4 34 ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e 1c ec a2 29 36 cb a0 2d 42 0 eb bb 6 1 c8 a4 a3 f7 d7 e9 69 43 89 e6 c0 65 57 cb 59 2f c2 b1 5d c7 ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e 34 4e 48 c4 1d 49 d1 17 ab 63 c2 49 cb 65 ed 84 34 78 8b 80 c6 9 ee 8e 8b b5 59 3c 86 3a 2e 49 4 79 ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e 29 5c 2f f7 a5 5c 9a e0 31 34 d5 cb a6 b4 57 39 b7 d7 bd 7e c9 5 46 18 f3 6b d1 e8 c2 47 7 34 62 9b ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e 40 f5 9b 19 d1 c9 ac 11 1f 37 a9 d2 52 44 dd e9 b4 6f 87 57 b d8 47 1e c5 bb 56 db 89 5f eb 17 b 75 ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 a9 9d 72 7b 6c 60 a5 99 db a9 4e 0 40 61 e0 a4 f8 35 d3 7b ad 68 d5 54 ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ d4 3b 12 1e d4 51 31 d0 c5 b7 e4 c5 82 38 ce 6c 55 c8 ad a7 11 e2 fc 17 60 3f 10 71 dc 11 1b 80 b6 46 1f 65 e8 2c 47 95 15 15 bf 8b 55 f4 f1 e5 33 f3 dc fd 17 9d b8 42 c3 c1 77 69 a8 87 71 4d 9d 1f 97 10 d2 cb 1c 0 69 87 c3 c6 c9 3f 6f 6f 81 4e 6f 82 1f 67 6b c ea ea 57 eb 60 1d 9d e4 8a 5c e3 9a 60 a9 48 10 f 96 a8 22 75 81 66 60 23 5c f7 bb 31 36 5d d6 d2 d5 26 95 67 8 1a 9b 60 7 af 21 74 70 8e a4 d9 38 4 95 22 a0 e1 74 1e ec 91 39 a9 9d 1d 28 40 12 a2 8a 90 4d 69 55 68 b6 3 d1 82 6a 45 d0 9b e4 2f 9f 4f 55 28 45 1c 3d ec 31 b6 a4 52 dc 3a f9 96 1b a5 bb 47 6c cd 34 c1 ce 15 3e ae f4 ae a7 f1 be b0 4f 5c 73 eb ac bd 3 dc ec 1b df 8c 11 b1 66 e1 b5 d9 12 21 bb 31 c1 4a fd d1 4e 70 56 7c 9b ab 25 87 2 fe f8 96 5c 72 28 44 5e 45 84 0 8d 76 ce 95 79 d6 b7 bc e1 52 84 c4 63 c2 c7 98 dc d9 17 84 c5 ea e 29 c5 25 e1 ba 58 37 a1 2a 2f 9 31 f8 d8 c6 27 fa ea f5 27 64 56 89 21 a c2 8b a3 6f 77 ea 6c 65 54 73 8e 10 f0 7a 73 76 59 31 dd 48 26 ac 7e a8 17 a b4 f0 ba 2d 35 7f 81 43 e5 86 da 5c 12 1a 55 31 fc ee bb e9 65 27 b8 fb b0 fe 73 a9 1f 47 d6 0 ba 13 ee 1c ec a2 29 36 cb a0 2d 42 0 eb bb 6 1 c8 a4 a3 f7 d7 e9 69 43 89 e6 c0 65 57 cb 59 2f 34 4e 48 c4 1d 49 d1 17 ab 63 c2 49 cb 65 ed 84 34 78 8b 80 c6 9 ee 8e 8b b5 59 3c 86 3a 29 5c 2f f7 a5 5c 9a e0 31 34 d5 cb a6 b4 57 39 b7 d7 bd 7e c9 5 46 18 f3 6b d1 e8 c2 47 40 f5 9b 19 d1 c9 ac 11 1f 37 a9 d2 52 44 dd e9 b4 6f 87 57 b d8 47 1e c5 bb 56 db 89 5f a9 9d 72 7b 6c 60 a5 99 db a9 4e 0 40 61 e0 a4 f8 35 d3 7b ]

Waiting for a packet

# MPS and max message size of RX less than TX:

**Transmitter:**

500 bytes of data to be sent:

f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 bc c1 84 46 e 7d 76 28 9 48 72 3 e6 4d ec 64 42 75 b7 57 27 a 5a c6 58 7d fc 6e 6d 90 58 35 34 75 a9 b9 6f 9 44 90 fa f 69 54 8a 72 8e 5a 24 9b 68 2f 22 14 90 2b ea 8e b 7 12 b1 13 24 94 ca 31 b8 bc 71 fc a7 b5 c0 bd cc 7b e4 ad c6 51 7d 12 1f 87 b6 c4 ef 81 20 1e c 8b 53 ff e8 19 32 ec 14 75 37 af 27 50 a7 ca e7 51 bd 11 f 83 a1 ed 70 2f 67 5d 82 86 65 a8 91 59 4e 6f 61 20 dd 6f 86 6d 70 9c 66 a8 b0 4c 23 1a 35 b9 79 dc bc 63 fd 87 a1 74 76 66 e9 a4 fe b3 89 ae 49 aa 3e 5e 16 4c 7d 8b 9 da 1d 46 60 d6 7c 8d 81 60 bc 18 73 12 85 55 22 12 c 9e 23 4 2 e4 ea de 1b 24 3a e 10 d2 37 cb 48 d3 c4 fa 68 84 4c 76 5d dc f6 e5 c3 5c 5e 7f 8e ba 74 6a 9a a5 9e 87 2c 9c cf 82 82 c5 3e a2 78 23 e5 ee eb 7d 92 6b 56 6 5a 2a e1 98 cc 27 2f 1f 1f 39 bf 22 e2 92 4b 35 62 cd 7c 90 8 48 c6 7 ce 8f 60 66 23 ef e ff b3 9d bf c3 23 87 56 37 89 76 d8 10 46 92 37 7e 4f e4 eb a6 b0 ef 10 ca a7 ad a4 67 c2 95 e8 f6 41 12 80 6f f1 9f d3 b6 6d 5d 8c c3 43 3c e3 38 9c 15 48 52 cd 88 2 3e c 8e 3 33 3b 57 17 e e ed af 80 28 75 a8 66 29 dc d1 1a e3 eb 55 57 8d 7f 2b 10 bb 4b 24 3e d7 6a f0 ad 6d 11 a 6f 5 a8 c7 4f 9a 92 e6 e 4 15 d3 30 28 1d 1c 84 62 95 38 bd 53 33 3 7 2d ec 90 8b 8b 1 63 1d d3 51 f9 b 2a 83 9b f 35 e0 9f f1 72 f3 47 18 e2 9e 50 c6 0 7f 64 22 ae b7 17 9d ea 4e 80 7b b 9 4f 39 23 59 cd 7a 24 46 b0 6 56 b5 1 a1 c0 38 1a da 4 33 8a d4 54 df ee e2 9d 7e 94 c8 f2 86 19 64 9d 29 87 c1 f1

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 bc c1 84 46 e 7d dd 55 73 8c ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 bc c1 84 46 e 7d dd 55 73 8c ]

Waiting for ACK

Timeout occured; Timeout number: 2

New timer value is 4secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 bc c1 84 46 e 7d dd 55 73 8c ]

Waiting for ACK

Timeout occured; Timeout number: 3

New timer value is 8secs

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 bc c1 84 46 e 7d dd 55 73 8c ]

Waiting for ACK

Timeout occured; Timeout number: 4

Communication Failure; java.net.SocketTimeoutException: Receive timed out

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e f 17 ff 46 eb 70 ed 14 d2 3c 95 b3 cf d9 41 b4 e5 a3 ea ea 4c fa 8f f7 ]

Data packet discarded due to integrity fail

Waiting for a packet

# 2nd Data packet corrupted by the channel & retransmitted correctly:

**Transmitter:**

500 bytes of data to be sent:

40 f0 9 b7 b0 50 eb f8 74 47 da e3 e9 2e f8 a9 e3 ff 56 a8 fb 23 da fc 4a d5 12 69 33 dd f2 20 50 92 1b 34 84 27 3c f5 a7 c7 c2 4f 28 b8 18 65 ab 2e d4 3e 34 e1 d8 45 f4 6d da 3b 5d 4c 22 22 6a 20 7d a4 7b 53 93 d dc d3 34 c6 90 6d e3 37 38 42 4c d4 60 38 fe 22 c6 e0 38 3 d8 39 e6 54 1b 13 82 f5 d9 59 90 4f 9f 6b ee 4 1e 9c d6 79 d8 79 54 4e 5c 9b 55 e5 dc 46 6a d2 cb 1 ff f0 95 da 37 49 b5 88 ae d3 bf 88 20 db c2 37 ee eb c0 62 f1 e1 1a 7e 79 36 d8 93 dc 2f 91 a2 69 ee 30 af 27 b5 7c bd 1d 4d ce a3 12 29 e2 45 4e a0 89 30 d5 0 1f 5 a2 b5 5f e2 36 3 37 4f 36 73 e3 f1 51 dc 6c 7b 7d 68 a4 48 2 a d6 17 e0 93 ad a5 e0 f1 5 4 6b d 99 d0 4d 5b 1 d2 ae ed cf 1c 5 5c 1a 52 74 f5 dc ba b0 d 6a 55 6c 17 f 8c a8 a4 fa 4b eb 3 b5 ec 96 96 e5 be f6 6 b5 43 72 95 ed 93 5d 9c 56 aa 50 e3 5f d7 fb 8c 70 bd 1 c6 40 4a f7 df 63 31 ed 78 e 76 8f 35 7a 24 21 f8 a0 5c 87 e b3 f7 c5 9b e9 51 89 d fb bb d5 19 ab f6 a8 3f 58 92 b8 81 5a f6 69 7a aa c7 a5 93 c4 e7 ba 34 dc 88 69 b5 32 cf 4d 42 ba da c1 a4 26 12 87 25 cd 98 ca 65 dd 7f 70 be f3 b0 39 61 3b 37 9 dd 7c 2d c3 77 d6 f9 31 1c 1e f6 42 3e 2e b5 e5 92 1 10 82 e8 5c 6 b2 59 a5 9f 1a 68 be 9 16 ce 81 93 eb c1 66 37 2e 1b 7b bc 6f ba 55 2e 5a 7f b3 c1 7 70 d3 73 99 88 39 df d0 99 58 21 5b f3 9f 4b 88 52 e5 92 a3 86 89 86 83 f8 c0 30 5c 5e a8 42 b6 98 f0 ba da f6 c7 27 bf 5 e9 d9 1d 8b cd dd 93 bc 4e 77 f7 4e e4 bf bb c9 aa 52 6e ad 2b cf fe bb 95 b9 ff 12 8e e 9e cd a5 f 11 dc c5 ed 63 b0 b 3a fc 4f 8d df 49 d2

Sending data packet number with sequence number: 425064232

[ 55 19 55 f7 28 1e 40 f0 9 b7 b0 50 eb f8 74 47 da e3 e9 2e f8 a9 e3 ff 56 a8 fb 23 da fc 4a d5 12 69 33 dd a4 63 9d f6 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 46 85 48 c7 33 ]

ACK number of the received ACK: 425064262

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e f2 20 50 92 28 34 84 27 3c f5 a7 c7 c2 4f 28 b8 18 65 ab 2e d4 3e 34 e1 d8 45 f4 6d da 3b 27 5f e 1c ]

Waiting for ACK

Timeout occured; Timeout number: 1

New timer value is 2secs

Sending data packet number with sequence number: 425064262

[ 55 19 55 f7 46 1e f2 20 50 92 1b 34 84 27 3c f5 a7 c7 c2 4f 28 b8 18 65 ab 2e d4 3e 34 e1 d8 45 f4 6d da 3b 27 5f e 1c ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 64 3b 44 5b 42 ]

ACK number of the received ACK: 425064292

Sending data packet number with sequence number: 425064292

[ 55 19 55 f7 64 1e 5d 4c 22 22 6a 20 7d a4 7b 53 93 d dc d3 34 c6 90 6d e3 37 38 42 4c d4 60 38 fe 22 c6 e0 5f 7e e1 3d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 82 5b a6 18 8d ]

ACK number of the received ACK: 425064322

Sending data packet number with sequence number: 425064322

[ 55 19 55 f7 82 1e 38 3 d8 39 e6 54 1b 13 82 f5 d9 59 90 4f 9f 6b ee 4 1e 9c d6 79 d8 79 54 4e 5c 9b 55 e5 47 b3 9f 82 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 a0 c7 dc 5e ec ]

ACK number of the received ACK: 425064352

Sending data packet number with sequence number: 425064352

[ 55 19 55 f7 a0 1e dc 46 6a d2 cb 1 ff f0 95 da 37 49 b5 88 ae d3 bf 88 20 db c2 37 ee eb c0 62 f1 e1 1a 7e 96 ff 7a c0 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 be ca b 7c 3e ]

ACK number of the received ACK: 425064382

Sending data packet number with sequence number: 425064382

[ 55 19 55 f7 be 1e 79 36 d8 93 dc 2f 91 a2 69 ee 30 af 27 b5 7c bd 1d 4d ce a3 12 29 e2 45 4e a0 89 30 d5 0 d c a7 8d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 dc 99 47 63 b9 ]

ACK number of the received ACK: 425064412

Sending data packet number with sequence number: 425064412

[ 55 19 55 f7 dc 1e 1f 5 a2 b5 5f e2 36 3 37 4f 36 73 e3 f1 51 dc 6c 7b 7d 68 a4 48 2 a d6 17 e0 93 ad a5 2a 86 f5 ab ]

Waiting for ACK

ACK packet received

[ ff 19 55 f7 fa 50 8e a2 a0 ]

ACK number of the received ACK: 425064442

Sending data packet number with sequence number: 425064442

[ 55 19 55 f7 fa 1e e0 f1 5 4 6b d 99 d0 4d 5b 1 d2 ae ed cf 1c 5 5c 1a 52 74 f5 dc ba b0 d 6a 55 6c 17 14 32 cc e4 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 18 8f f 64 7a ]

ACK number of the received ACK: 425064472

Sending data packet number with sequence number: 425064472

[ 55 19 55 f8 18 1e f 8c a8 a4 fa 4b eb 3 b5 ec 96 96 e5 be f6 6 b5 43 72 95 ed 93 5d 9c 56 aa 50 e3 5f d7 78 e3 c2 d0 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 36 f9 bc 1d 39 ]

ACK number of the received ACK: 425064502

Sending data packet number with sequence number: 425064502

[ 55 19 55 f8 36 1e fb 8c 70 bd 1 c6 40 4a f7 df 63 31 ed 78 e 76 8f 35 7a 24 21 f8 a0 5c 87 e b3 f7 c5 9b 21 40 10 79 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 54 27 11 53 d4 ]

ACK number of the received ACK: 425064532

Sending data packet number with sequence number: 425064532

[ 55 19 55 f8 54 1e e9 51 89 d fb bb d5 19 ab f6 a8 3f 58 92 b8 81 5a f6 69 7a aa c7 a5 93 c4 e7 ba 34 dc 88 5b 70 4a 90 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 72 e3 55 ec bc ]

ACK number of the received ACK: 425064562

Sending data packet number with sequence number: 425064562

[ 55 19 55 f8 72 1e 69 b5 32 cf 4d 42 ba da c1 a4 26 12 87 25 cd 98 ca 65 dd 7f 70 be f3 b0 39 61 3b 37 9 dd 52 52 6c 63 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 90 5b 73 76 94 ]

ACK number of the received ACK: 425064592

Sending data packet number with sequence number: 425064592

[ 55 19 55 f8 90 1e 7c 2d c3 77 d6 f9 31 1c 1e f6 42 3e 2e b5 e5 92 1 10 82 e8 5c 6 b2 59 a5 9f 1a 68 be 9 95 70 bc 8 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ae 41 9a 10 2b ]

ACK number of the received ACK: 425064622

Sending data packet number with sequence number: 425064622

[ 55 19 55 f8 ae 1e 16 ce 81 93 eb c1 66 37 2e 1b 7b bc 6f ba 55 2e 5a 7f b3 c1 7 70 d3 73 99 88 39 df d0 99 34 3e 1a 36 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 cc 62 13 d5 4b ]

ACK number of the received ACK: 425064652

Sending data packet number with sequence number: 425064652

[ 55 19 55 f8 cc 1e 58 21 5b f3 9f 4b 88 52 e5 92 a3 86 89 86 83 f8 c0 30 5c 5e a8 42 b6 98 f0 ba da f6 c7 27 d9 b0 c2 74 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f8 ea f3 98 8 a ]

ACK number of the received ACK: 425064682

Sending data packet number with sequence number: 425064682

[ 55 19 55 f8 ea 1e bf 5 e9 d9 1d 8b cd dd 93 bc 4e 77 f7 4e e4 bf bb c9 aa 52 6e ad 2b cf fe bb 95 b9 ff 12 a4 5e 36 d8 ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 8 9 19 81 14 ]

ACK number of the received ACK: 425064712

Sending data packet number with sequence number: 425064712

[ aa 19 55 f9 8 14 8e e 9e cd a5 f 11 dc c5 ed 63 b0 b 3a fc 4f 8d df 49 d2 5e 69 1b 5d ]

Waiting for ACK

ACK packet received

[ ff 19 55 f9 1c 7d 76 d 25 ]

ACK number of the received ACK: 425064732

**Receiver:**

Waiting for a packet

Expected sequence number: 425064232

Received a data packet with sequence number 425064232

[ 55 19 55 f7 28 1e 40 f0 9 b7 b0 50 eb f8 74 47 da e3 e9 2e f8 a9 e3 ff 56 a8 fb 23 da fc 4a d5 12 69 33 dd a4 63 9d f6 ]

ACK packet with ACK number 425064262 is sent

[ ff 19 55 f7 46 85 48 c7 33 ]

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e f2 20 50 92 28 34 84 27 3c f5 a7 c7 c2 4f 28 b8 18 65 ab 2e d4 3e 34 e1 d8 45 f4 6d da 3b 27 5f e 1c ]

Data packet discarded due to integrity fail

Waiting for a packet

Expected sequence number: 425064262

Received a data packet with sequence number 425064262

[ 55 19 55 f7 46 1e f2 20 50 92 1b 34 84 27 3c f5 a7 c7 c2 4f 28 b8 18 65 ab 2e d4 3e 34 e1 d8 45 f4 6d da 3b 27 5f e 1c ]

ACK packet with ACK number 425064292 is sent

[ ff 19 55 f7 64 3b 44 5b 42 ]

Waiting for a packet

Expected sequence number: 425064292

Received a data packet with sequence number 425064292

[ 55 19 55 f7 64 1e 5d 4c 22 22 6a 20 7d a4 7b 53 93 d dc d3 34 c6 90 6d e3 37 38 42 4c d4 60 38 fe 22 c6 e0 5f 7e e1 3d ]

ACK packet with ACK number 425064322 is sent

[ ff 19 55 f7 82 5b a6 18 8d ]

Waiting for a packet

Expected sequence number: 425064322

Received a data packet with sequence number 425064322

[ 55 19 55 f7 82 1e 38 3 d8 39 e6 54 1b 13 82 f5 d9 59 90 4f 9f 6b ee 4 1e 9c d6 79 d8 79 54 4e 5c 9b 55 e5 47 b3 9f 82 ]

ACK packet with ACK number 425064352 is sent

[ ff 19 55 f7 a0 c7 dc 5e ec ]

Waiting for a packet

Expected sequence number: 425064352

Received a data packet with sequence number 425064352

[ 55 19 55 f7 a0 1e dc 46 6a d2 cb 1 ff f0 95 da 37 49 b5 88 ae d3 bf 88 20 db c2 37 ee eb c0 62 f1 e1 1a 7e 96 ff 7a c0 ]

ACK packet with ACK number 425064382 is sent

[ ff 19 55 f7 be ca b 7c 3e ]

Waiting for a packet

Expected sequence number: 425064382

Received a data packet with sequence number 425064382

[ 55 19 55 f7 be 1e 79 36 d8 93 dc 2f 91 a2 69 ee 30 af 27 b5 7c bd 1d 4d ce a3 12 29 e2 45 4e a0 89 30 d5 0 d c a7 8d ]

ACK packet with ACK number 425064412 is sent

[ ff 19 55 f7 dc 99 47 63 b9 ]

Waiting for a packet

Expected sequence number: 425064412

Received a data packet with sequence number 425064412

[ 55 19 55 f7 dc 1e 1f 5 a2 b5 5f e2 36 3 37 4f 36 73 e3 f1 51 dc 6c 7b 7d 68 a4 48 2 a d6 17 e0 93 ad a5 2a 86 f5 ab ]

ACK packet with ACK number 425064442 is sent

[ ff 19 55 f7 fa 50 8e a2 a0 ]

Waiting for a packet

Expected sequence number: 425064442

Received a data packet with sequence number 425064442

[ 55 19 55 f7 fa 1e e0 f1 5 4 6b d 99 d0 4d 5b 1 d2 ae ed cf 1c 5 5c 1a 52 74 f5 dc ba b0 d 6a 55 6c 17 14 32 cc e4 ]

ACK packet with ACK number 425064472 is sent

[ ff 19 55 f8 18 8f f 64 7a ]

Waiting for a packet

Expected sequence number: 425064472

Received a data packet with sequence number 425064472

[ 55 19 55 f8 18 1e f 8c a8 a4 fa 4b eb 3 b5 ec 96 96 e5 be f6 6 b5 43 72 95 ed 93 5d 9c 56 aa 50 e3 5f d7 78 e3 c2 d0 ]

ACK packet with ACK number 425064502 is sent

[ ff 19 55 f8 36 f9 bc 1d 39 ]

Waiting for a packet

Expected sequence number: 425064502

Received a data packet with sequence number 425064502

[ 55 19 55 f8 36 1e fb 8c 70 bd 1 c6 40 4a f7 df 63 31 ed 78 e 76 8f 35 7a 24 21 f8 a0 5c 87 e b3 f7 c5 9b 21 40 10 79 ]

ACK packet with ACK number 425064532 is sent

[ ff 19 55 f8 54 27 11 53 d4 ]

Waiting for a packet

Expected sequence number: 425064532

Received a data packet with sequence number 425064532

[ 55 19 55 f8 54 1e e9 51 89 d fb bb d5 19 ab f6 a8 3f 58 92 b8 81 5a f6 69 7a aa c7 a5 93 c4 e7 ba 34 dc 88 5b 70 4a 90 ]

ACK packet with ACK number 425064562 is sent

[ ff 19 55 f8 72 e3 55 ec bc ]

Waiting for a packet

Expected sequence number: 425064562

Received a data packet with sequence number 425064562

[ 55 19 55 f8 72 1e 69 b5 32 cf 4d 42 ba da c1 a4 26 12 87 25 cd 98 ca 65 dd 7f 70 be f3 b0 39 61 3b 37 9 dd 52 52 6c 63 ]

ACK packet with ACK number 425064592 is sent

[ ff 19 55 f8 90 5b 73 76 94 ]

Waiting for a packet

Expected sequence number: 425064592

Received a data packet with sequence number 425064592

[ 55 19 55 f8 90 1e 7c 2d c3 77 d6 f9 31 1c 1e f6 42 3e 2e b5 e5 92 1 10 82 e8 5c 6 b2 59 a5 9f 1a 68 be 9 95 70 bc 8 ]

ACK packet with ACK number 425064622 is sent

[ ff 19 55 f8 ae 41 9a 10 2b ]

Waiting for a packet

Expected sequence number: 425064622

Received a data packet with sequence number 425064622

[ 55 19 55 f8 ae 1e 16 ce 81 93 eb c1 66 37 2e 1b 7b bc 6f ba 55 2e 5a 7f b3 c1 7 70 d3 73 99 88 39 df d0 99 34 3e 1a 36 ]

ACK packet with ACK number 425064652 is sent

[ ff 19 55 f8 cc 62 13 d5 4b ]

Waiting for a packet

Expected sequence number: 425064652

Received a data packet with sequence number 425064652

[ 55 19 55 f8 cc 1e 58 21 5b f3 9f 4b 88 52 e5 92 a3 86 89 86 83 f8 c0 30 5c 5e a8 42 b6 98 f0 ba da f6 c7 27 d9 b0 c2 74 ]

ACK packet with ACK number 425064682 is sent

[ ff 19 55 f8 ea f3 98 8 a ]

Waiting for a packet

Expected sequence number: 425064682

Received a data packet with sequence number 425064682

[ 55 19 55 f8 ea 1e bf 5 e9 d9 1d 8b cd dd 93 bc 4e 77 f7 4e e4 bf bb c9 aa 52 6e ad 2b cf fe bb 95 b9 ff 12 a4 5e 36 d8 ]

ACK packet with ACK number 425064712 is sent

[ ff 19 55 f9 8 9 19 81 14 ]

Waiting for a packet

Expected sequence number: 425064712

Received a data packet with sequence number 425064712

[ aa 19 55 f9 8 14 8e e 9e cd a5 f 11 dc c5 ed 63 b0 b 3a fc 4f 8d df 49 d2 5e 69 1b 5d ]

ACK packet with ACK number 425064732 is sent

[ ff 19 55 f9 1c 7d 76 d 25 ]

The complete received data:

[ 40 f0 9 b7 b0 50 eb f8 74 47 da e3 e9 2e f8 a9 e3 ff 56 a8 fb 23 da fc 4a d5 12 69 33 dd f2 20 50 92 1b 34 84 27 3c f5 a7 c7 c2 4f 28 b8 18 65 ab 2e d4 3e 34 e1 d8 45 f4 6d da 3b 5d 4c 22 22 6a 20 7d a4 7b 53 93 d dc d3 34 c6 90 6d e3 37 38 42 4c d4 60 38 fe 22 c6 e0 38 3 d8 39 e6 54 1b 13 82 f5 d9 59 90 4f 9f 6b ee 4 1e 9c d6 79 d8 79 54 4e 5c 9b 55 e5 dc 46 6a d2 cb 1 ff f0 95 da 37 49 b5 88 ae d3 bf 88 20 db c2 37 ee eb c0 62 f1 e1 1a 7e 79 36 d8 93 dc 2f 91 a2 69 ee 30 af 27 b5 7c bd 1d 4d ce a3 12 29 e2 45 4e a0 89 30 d5 0 1f 5 a2 b5 5f e2 36 3 37 4f 36 73 e3 f1 51 dc 6c 7b 7d 68 a4 48 2 a d6 17 e0 93 ad a5 e0 f1 5 4 6b d 99 d0 4d 5b 1 d2 ae ed cf 1c 5 5c 1a 52 74 f5 dc ba b0 d 6a 55 6c 17 f 8c a8 a4 fa 4b eb 3 b5 ec 96 96 e5 be f6 6 b5 43 72 95 ed 93 5d 9c 56 aa 50 e3 5f d7 fb 8c 70 bd 1 c6 40 4a f7 df 63 31 ed 78 e 76 8f 35 7a 24 21 f8 a0 5c 87 e b3 f7 c5 9b e9 51 89 d fb bb d5 19 ab f6 a8 3f 58 92 b8 81 5a f6 69 7a aa c7 a5 93 c4 e7 ba 34 dc 88 69 b5 32 cf 4d 42 ba da c1 a4 26 12 87 25 cd 98 ca 65 dd 7f 70 be f3 b0 39 61 3b 37 9 dd 7c 2d c3 77 d6 f9 31 1c 1e f6 42 3e 2e b5 e5 92 1 10 82 e8 5c 6 b2 59 a5 9f 1a 68 be 9 16 ce 81 93 eb c1 66 37 2e 1b 7b bc 6f ba 55 2e 5a 7f b3 c1 7 70 d3 73 99 88 39 df d0 99 58 21 5b f3 9f 4b 88 52 e5 92 a3 86 89 86 83 f8 c0 30 5c 5e a8 42 b6 98 f0 ba da f6 c7 27 bf 5 e9 d9 1d 8b cd dd 93 bc 4e 77 f7 4e e4 bf bb c9 aa 52 6e ad 2b cf fe bb 95 b9 ff 12 8e e 9e cd a5 f 11 dc c5 ed 63 b0 b 3a fc 4f 8d df 49 d2 ]

Waiting for a packet