Ch 3 Worked Out Example 3.5

Problem:

In a TCP connection , sliding window parameters are as follows:

At the Sender:

SendBuffer = 1024 Bytes

LastByteWritten = 1184

LastByteSent = 556

LastByteAcked = 412

At the Receiver:

RcvBuffer = 768 Bytes

LastByteRead = 256

LastByteAcked = 412

a. How many bytes are waiting in the receiver's buffer to be picked up by the receiving application?

b. What is the size of rwnd?

c. What is the number of the last byte that the receiver can accept?

d. How many more bytes can the sender safely transmit without overflowing the receiver's buffer? In other words, what is the size of swnd?

e. How many more bytes can the sending application write into the sender's buffer?

Answers:

a. LastByteAcked – LastByteRead = 412 – 256 = 156 Bytes

b. RcvBuffer – (LastByteAcked – LastByteRead) = 768 –(412-256) = 612 Bytes

c, LastByteRead + RcvBuffer = 256 + 768 = 1024

d. rwnd –(LastbyteSent – LastByteAcked) = 612 – (556-412) = 468 Bytes

e. LastByteAcked + SendBuffer – LastByteWritten = 412+1024-1184 = 252 Bytes

TCP Flow Control Example

Worked out Example 3.5