COMP90007 Internet Technologies

Week 9 Workshop

Semester 2, 2021

Suggested solutions

Question 1

In determining maximum packet lifetime, we have to be careful and pick a large enough period to ensure that not only the packet but also it acknowledgemen vanished. Discuss why this is needed.

Answer:

Look at the second duplicate packet in Fig. 6-11(c). When the packet arrives, it would be a disaster if acknowledgements to *y* were still floating around.

Question 2

Imagine that a two-way handshake, rather than a three-way handshake were used to set up connections. In other words, the third message was not required. Are deadlocks now possible? Gi that none exist.

Answer:

Deadlocks are possible!

For example, a packet arrives at A out of the blue, and A acknowledges it. The acknowledgement gets lost, but A is now open while B knows nothing at all about what has happened. Now the same thing happens to B, and both are open, but expecting different sequence numbers. Timeouts have to be introduced to avoid the deadlocks at least.

Question 3

Does the 3 way handshake based connection release protocol create a flawless disconnection?

Answer: No. The three-way handshake-based solution is an appro .. Imagine the timeout for case (b) on page 521, if the timeout triggers while there is data lingering in the network then the data will be lost as connection will be terminated early.

Question 4

What is the 2 army problem? Where does it occur in networking? Provide an example.

Ans. Refer to Pag of two armies, one of which is split u https://eduassistpro.github.io/ ide, and how they communicate with each other d coordinate for launching an attack.

Example – Connection Release.

Question 5

What information is sent with the TCP Segment header, explain each field briefly?

Ans.

See explanation for each field in slides.

Question 6

Describe with a simple flowchart how a single socket-based client-server communication works?

Answer: