

Example of essay on tcp protocol

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It is true that the TCP protocol is the most used protocol for data transfer in the world. It's more reliable and easy to implement. Furthermore, its ability to control the congestion of flow of data makes it a popular protocol. It would be ideal to give an insight as to how the TCP manages or controls the flow of data, with this then we can clearly understand the congestion control mechanism. TCP has inbuilt mechanisms for controlling the flow of data between the sender and the receiver. TCP flow control allows the receiver to broadcast the amount of data it can receive and the sender also broadcasts the amount of data it can transmit. This happens via transfer windows. The receiver window size eventually becomes the sender's transmission window size.

The response is an in-depth explanation of how the congestion arising from the ineffective flow control mechanism. It should be noted that the algorithms mentioned in the response are standard TCP congestion control algorithms. They can be found in the reference document RFC 2581. They have been used for a long time and have passed the test of time.

Additional, research has been done in the field of TCP transmission, and it has been noted that the algorithms mentioned can be supplemented by ideologies such as selective acknowledgement (SACK). This technique is implemented to help reduce unnecessary retransmission by the sender. It allows the receiver to send acknowledgements of receiving segments and the sender would retransmit only the lost segments of data.

In addition to the mentioned algorithms, there are two more algorithms that have gained use in congestion control. This includes increasing the TCP, s

initial window size up from one segment to approximately 4 kilobytes. This algorithm is suggested by the experimental reference document RFC 2414. The other algorithm is the TCP pacing technique where bursts in the network traffic are reduced by spacing TCP packets apart thus reducing congestion.

The answer provided provides an adequate explanation to the way the TCP handles congestion in the flow of network traffic.

References

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