Towards the Development of a Modified Token based Congestion Control with Adaptive Forwarding for Opportunistic Networks

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Authors:
E. A. Adedokun, Shaibu Idris Salawu, Basira Yahaya

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Abstract

In opportunistic networks the accessible network resources such as a storage capacity, bandwidth, etc., are limited, and simply be consumed over time. This always result to network congestion, which has substantial impact on the overall network throughput. Due to the distinctive features of the network and the implementation of custody transfer mechanism, the conventional TCP congestion control mechanism fails in OppNets. The congestion control in OppNet has attracted the attention of the researchers because it attempts to establish network in an extreme environment where infrastructure is not obtainable, and when it succeeds, the message should not be dropped instantly since it has serious impact on the objective of OppNet. Instead, the message should be rerouted to the next best neighbor whose buffer is not full because some of the application areas are extremely sensitive. Some congestion control strategies have been considered compared and modified token-based congestion control algorithm is proposed by examining them.

References


Index Terms

Computer Science

Networks

Keywords

Epidemic routing protocol, token-based congestion control and modified token-based congestion control