A Stateless Approach for Internet Transport Protocols

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Abstract

Transport protocols keep system state on both sides of a connection. We analyze a novel TCP-like transport protocol which operates keeping the state on the side of the receiver.

Protocol Trickles connection-oriented method without remembering the state of the server, which will ultimately allow all states to be stored on a single endpoint (client). The client performs all necessary calculations (eg: RTT, calculates the size of the window and slow start). The only thing that makes the server, with the full implementation of the protocol is signed packages to its unique key and sends the requested data. Thus, after sending the package server remembers nothing about the client interacts with. The session continues as a result sent a unique key.

Qualitative properties and interaction with other flows were studied for the model of the Trickles implemented in ns-2. For simulations we have implemented Trickles server and client in ns-2. In our work we focused on a wireless network simulations.

Index Terms: Trickles, protocol, a stateless approach.