A Core-Stateless Dynamic Bandwidth Allocation Mechanism Based on Resource Reservation

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ABSTRACT

This paper presents a core-stateless dynamic bandwidth allocation mechanism based on resource reservation. A stateless recursive monitoring mechanism is introduced to adjust the reservation bandwidth dynamically, which enhances the scalability and robustness of QOS. To achieve bandwidth allocation dynamically, three key techniques are developed. The first one is the lightweight certificate on control planes. The second one is stateless recursive monitoring mechanism on data planes and the last one is that the traffics are divided into marked flows and non-marked flows. Finally, the simulation results are presented and the mechanism is testified.

Keywords: resource reservation, recursive monitoring, lightweight certificates, dynamical bandwidth allocation, core-staleless