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Load Balancing Using Adaptive Packet Scheduling

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Abstract - Literature reported, architecture for load balancing , which contains an adaptive packet scheduler with a bursty traffic splitting algorithm . The scheduler has one classifier which classifies the flows into the aggressive and normal flow . Aggressive flows are treated as high priority flows . Based on the buffer occupancy threshold , a trigger handler checks for load un- balance of the network and automatically triggers the load adapter. The load adapter reroutes the high priority aggressive flows into the least loaded best path, using the bursty traffic splitter algorithm. The bursty traffic splitting algorithm splits the aggressive flows into multiple parallel paths based on a split vector .In this algorithm, instead of switching packets or flows, it switches packet bursts .since the packet bursts are smaller in size , the algorithm splits the traffic dynamically and accurately. At the same time, the condition forced on their latency difference ensures that no packets are recorded. To achieve fair bandwidth allocations, load balancing is attained in the system since the high rate aggressive traffic flows are spitted along multile parallel paths. The proposed switching system is executed in the edge and core routers. We will show by simulations , that adaptive packet scheduler performs better than the standard fair-queuing techniques .