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MPLS-TRAFFIC ENGINEERING LOAD BALANCE ALGORITHM USING UNCOMMON PATH

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ABSTRACT

This paper presents a new path computing algorithm called Uncommon Path Algorithm (UPA) to implement Load Balance in Multiple Protocol Label Switching – Traffic Engineering (MPLS-TE). This algorithm finds an alternate path, called Uncommon Path (UP), for a selected flow, having no common path to other flow paths. Then we use explicit routing technology of MPLS to route selected flow via Uncommon Path. We used Network Simulator-2 (NS-2) for simulation. The simulation results show that UPA effectively balances traffic load between different links and improves network performance giving lower packet drop rate, lower end to end packet delay, lower variation in packet arrival and higher throughput.

KEYWORDS: Multiple Protocol Label Switching (MPLS), Traffic Engineering (TE), Uncommon Path Algorithm (UPA), Uncommon Path (UP)