Traffic engineering in MPLS and simulation on NS2

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Abstract: This topic focuses on researching traffic engineering in Multi-Protocol Label Switching (MPLS) and applying simulation through the Network Simulator 2 (NS2) tool. Through theoretical analysis of traffic mechanisms in MPLS, we identify the problem of efficient network traffic management. The objective of the research is to build a simulation system to test and optimize the traffic switching process. The approach includes both theorizing concepts and experimentation via NS2. Expected results confirm the value of the topic in enhancing network service quality, contributing to the sustainable development of MPLS.

Keywords: MPLS, Network Simulator 2 (NS2), traffic engineering, simulation, switching process optimization