National Institute of Technology Rourkela

Departmental Seminar

Seminar Title	: Performance Analysis of Multipath TCP Congestion Control Algorithms
Speaker	: Subhra Priyadarshini Biswal
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Venue	: Convention Room, CSE Dept.
Date and Time	: 17 Mar 2025 (15:00)
Abstract	: In modern high-speed networks, providing reliable and high-quality Internet services is essential. However, maintaining consistent network performance in dynamic environments with varying scenarios presents significant challenges. To address these, Multipath TCP (Transmission Control Protocol) offers a viable solution by aggregating multiple network paths, resulting in improved bandwidth utilization, higher throughput, and reduced delay. This approach overcomes the limitations of traditional single-path TCP by enhancing responsiveness, friendliness, and reducing window oscillation. Moreover, MPTCP incorporates congestion control mechanisms that couple several subflows, ensuring efficient traffic distribution across multiple paths, thereby improving overall network performance and fairness. In this paper, we analyze the performance of LIA (Linked Increases Algorithm), OLIA (Opportunistic Linked Increases Algorithm), and BALIA (Balanced Linked Adaptation) congestion control algorithms using the ns-3 network simulator. The results show that BALIA achieves 21\% higher throughput compared to LIA