

عنوان مقاله:

A comparison between self-similarity of network traffics for different protocols

محل انتشار:

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خلاصه مقاله:

Self-similarity is a phenomenon that is involved in computer network literature during last two decades and plays a significant role in modelling of network traffic. It is proved that real network traffic is self-similar and its characteristics differ from exponential traffics such as Poisson based distributions. Proposed models of network traffic are crucial to improving QoS of networks. Consequently, self-similarity must be considered in network traffic models to achieve more appropriate QoS. In this paper, we analyse two sets of real traffic which are captured from diverse regions. We examine the effect of various conditions on self-similarity of network traffic. Hurst parameter of each sets are calculated and we discuss why there are differences between Hurst parameter of them. Moreover, we categorize our traffic sets based on protocols and compute Hurst parameter of each category which itself is divided to traces of different areas. Subsequently, we compare calculated Hurst parameters within each category and discuss why there are discrepancies between them. At last, according to our observations, we explain whether infrastructure circumstances could affect self-similarity of network traffic.

کلمات کلیدی:

Self-similarity, Network traffic modelling, Long-range dependency

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