

Abstract

Trivial File Transfer protocol (TFTP) has been widely used file transfer protocol in recent time. TFTP is a simple file transfer protocol based on TCP for its transport layer services in many applications. Based on different applications, it is found in the literature survey that TFTP faces overheads during data transfer due to the use of TCP as its transport layer protocol. The overheads associated with TFTP using TCP are such as head of line blocking, connection termination due to loss of packets, SYN flooding attack etc. Suffering from the overheads, the TFTP performance degrades significantly. So, these problems need to be addressed to overcome the issue of overall performance of TFTP protocol. This work aims to solve and modify TFTP protocol in terms of data transfer and peer-to-peer connection by using Stream Control Transmission Protocol (SCTP) over TCP protocols. It has been successfully designed & implemented TFTP using SCTP features and found satisfactory result compared to the traditional TFTP. This work shows that the enhanced TFTP outperforms the original one in terms of performance in data transfer rate by embedding multi-streaming feature of SCTP. Also frequency of connection termination has been significantly reduced using multi-homing using features of SCTP. Issues like error control, congestion control etc. are yet to be addressed that will further enhance functionalities of TFTP which is still open for future work.