RESEARCH ARTICLE

MULTIHOMING AND MULTISTREAM PROTOCOL IN COMPUTER NETWORKS

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Abstract

SCTP (stream control transmission protocol) is a reliable message oriented transport layer protocol. It is an IETF standard developed by the Transport Area Working Group (TSVWG). SCTP has been standardized by the IETF(Internet Engineering Task Force) in series of RFCs ,as a reliable transport protocol to transport SS7(Signaling System 7) signaling messages for internet applications such as ISDN over IP, telephony sinagaling , media gateway control, IP telephony[5]. SCTP is similar to TCP in many services. They are both unicast connection-oriented reliable protocols, provide in-sequence packet delivery and congestion control. SCTP preserves message boundaries and at the same time detects lost data, and out of order data. It uses 32 bit checksum as opposed to a 16 bit checksum of TCP. Although TCP has traditionally been used, we argue that SCTP provides better services than TCP in terms of reliability and performance. Due to its attractive features such as multi-streaming and multi-homing. SCTP has received much popularity, in terms of both research and development [6, 7]. SCTP provides multi-homing in that endpoints can use multiple IP addresses for the connection. SCTP may be more resistant to Man in the Middle (MITM) and Denial of Service (DoS). Multi-stream does not refer to multiple streams in the TCP sense but rather each stream represents a sequence of messages within a single association. These may be long or short messages which include flags for control of segmentation and reassembly.

Keywords- SCTP, Multi-homing, Multi-stream

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