Retransmit bit for SCTP DATA, I-DATA and SACK

draft-proshin-tsvwg-sctp-rtx-bit

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Motivation

• SCTP cannot understand if SACK was sent in response to the originally sent DATA or retransmitted one

• Main use cases:
Internet Engineering Task Force
Internet-Draft
Updates: 4960 (if approved)
Intended status: Standards Track
Expires: June 7, 2019

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Abstract

This document defines a method which helps an SCTP sender to understand when a received SACK acknowledges the original transmission of a TSN or its retransmission. It is done by specifying a new bit, called Retransmit bit (R-bit), in the header of DATA, I-DATA and SACK chunks. The bit is used when a TSN is retransmitted and returned back in the acknowledgement.
Retransmit bit (R-bit) for SCTP

- R-bit is reserved in DATA, I-DATA and SACK

![Extended DATA chunk diagram]

- R-bit support requires negotiation in INIT/INIT ACK
- If negotiated, SCTP SHOULD set the R-bit every time it retransmits DATA or I-DATA
- When DATA or I-DATA with the R-bit is received, SCTP MUST immediately respond by SACK with R-bit
Challenges

• Does not help when DATA or I-DATA is retransmitted multiple times
• Adds complexity in case SCTP packet carries DATA or I-DATA chunks with and without R-bit
Status

• Some TBDs in the draft, e.g. state recovery after spurious retransmission is detected
• Implemented in Ericsson SCTP and enabled between Ericsson SCTP endpoints
• Local patch for LKSCTP (without negotiation) and first interoperability
Future

- Work on TBDs
- Run interoperability with patched LKSCTP
- Feedback from WG and other implementers
- WG adoption