Fragmentation update for 6LoWPAN

draft-ietf-6lo-minimal-fragment
draft-ietf-6lo-fragment-recovery

Pascal Thubert

IETF 105

Montreal

6lo standard work

Performance and Reliability improvements to 6LoWPAN Fragmentation

- [RFC 4944](#) (6LoWPAN)
  - Defines a minimal Fragmentation
  - End-to-End in Mesh Under, one hop in Route Over
- [draft-ietf-6lo-minimal-fragment](#) (WGLC completed in May 2019)
  - Enables Fragment Forwarding for Streamlining
  - Builds upon [draft-ietf-lwig-6lowpan-virtual-reassembly](#)
- [draft-ietf-6lo-fragment-recovery](#) (WGLC completed in June 2019)
  - Provides 6LoWPAN route-over end-to-end reliability
  - Selective retry, flow control
  - Requires new fragment formats

Changes in draft-ietf-6lo-minimal-fragment

- Removed claims on VRB size, replaced by abstract content

- Improved security section about DoS attacks

- When to remove entries (Yasuyuki)

- Clarifications, e.g., only the first fragment is routed (Georgios)

- Christian Hopfner working on Dissector

Changes in draft-ietf-6lo-fragment-recovery

- Reworded that the sequence is not that of Fragments but that of bits (Laurent)

  e.g., fragment 13 can be retried as fragments 13 and 27 if MTU goes down
- Indicated that the nature of the datagram-tag is changed (Laurent)
- PMTUD is out of scope though
- Defined all terms
- Also clarified that only the first frag is routed and other follow that path
- Added ref to cocoa security section (Carles)
- Lot of clean up (also Carles) e.g., double useECN parameter

Next steps

- In the hands of the shepherd (Carles)