LPWAN WG

WG Chairs:
Alexander Pelov <a@ackl.io>
Pascal Thubert <pthubert@cisco.com>

AD: Suresh Krishnan
<suresh@kaloom.com>

Note Well

This is a reminder of IETF policies in effect on various topics such as patents or code of conduct. It is only meant to point you in the right direction. Exceptions may apply. The IETF's patent policy and the definition of an IETF "contribution" and "participation" are set forth in BCP 79; please read it carefully.

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Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

BCP 9 (Internet Standards Process)

BCP 25 (Working Group processes)

BCP 25 (Anti-Harassment Procedures)

BCP 54 (Code of Conduct)

BCP 78 (Copyright)

BCP 79 (Patents, Participation)

https://www.ietf.org/privacy-policy/ (Privacy Policy)

I E T F

Reminder:

Minutes are taken *
This meeting might be recorded **
Presence is logged ***

*   Scribe; please contribute online to the minutes at: https://etherpad.tools.ietf.org/p/lpwan
**   Recordings and Minutes are public and may be subject to discovery in the event of litigation.
***   From the Webex login

Agenda bashing

17:05   Opening, agenda bashing (Chairs)   5mn
- Note-Well, Scribes, Agenda Bashing
- Status of drafts

17:10   SCHC WGLC completion (Dominique)   40mn

17:50   SCHC next steps (chairs)   10mn

18:00   AOB   0mn

draft-ietf-lpwan-ipv6-static-context-hc WGLC status

Authors:
Laurent Toutain <Laurent.Toutain@imt-atlantique.fr>
Carles Gomez <carlesgo@entel.upc.edu>
Ana Minaburo <ana@acklio.io>
Dominique Barthel <dominique.barthel@orange.com>
Juan Carlos Zuniga <juancarlos.zuniga@sigfox.com>

Note

- As always, all changes can be checked out at
  https://github.com/lp-wan/ip-compression/commits/master
  - Itemized commits
  - (hopefully) explicit commit messages
  - on-line diffs available

Last meeting action items

Next steps

- Come to a conclusion regarding the Rule table
  - Target Value type, Field ID
  - Specification in a Data Model? Which document? With a reference from this document?
  - Does interoperability goal include Rules description?
- Come to a decision regarding optional MIC
- Implement editorial changes following WGLC
- Shoot for -18 next week

LPWAN@interim_2018_11_28   draft-ietf-lpwan-ipv6-static-context-hc   9

Changes to GitHub since -17

- See list of commits and diff
  - https://github.com/lp-wan/ip-compression/compare/f7611bd...master

- Huge thanks to Charlie Perkins for his extensive review

- Thanks to Shoichi and Arun for their questions
  - Implementations in progress

- Thanks to co-authors and chairs for their inputs

"optional MIC" resolution

- Integrity Checking is mandatory, MIC is the default way of doing integrity checking.

- UDP checksum SHOULD be explicitly sent. If a full set of conditions is met, UDK checksum MAY be elided.

- [Ticket #32](#) to be closed again.

> Similarly, a SCHC compressor MAY elide the UDP checksum when another layer guarantees at least equal integrity protection for the UDP payload and the pseudo-header. In this case, the TV is not set, the MO is set to "ignore" and the CDA is set to "compute-checksum".
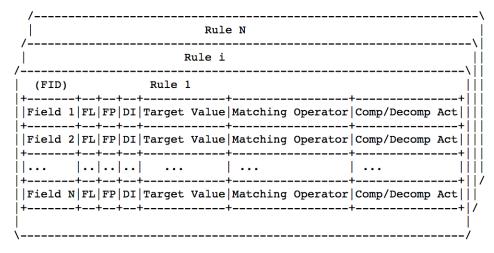>
> In particular, when SCHC fragmentation is used, a fragmentation MIC of 2 bytes or more provides equal or better protection than the UDP checksum; in that case, if the compressor is collocated with the fragmentation point and the decompressor is collocated with the packet reassembly point, and if the SCHC Packet is fragmented even when it would fit unfragmented in the L2 MTU, then the compressor MAY elide the UDP checksum. Whether and when the UDP Checksum is elided is to be specified in the Profile.
>
> Since the compression happens before the fragmentation, implementors should understand the risks when dealing with unprotected data below the transport layer and take special care when manipulating that data.
>
> In other cases, the checksum SHOULD be explicitly sent. The TV is not set, the MO is set to "ignore" and the CDA is set to "value-sent".

"Target Value type" resolution

- Interoperable representations of Rules is out of scope

- To be specified in "other documents"

```
/-----------------------------------------------------------------\
|                         Rule N                                  |\
\-----------------------------------------------------------------\|\
|                         Rule i                                   ||
/-----------------------------------------------------------------\||
|  (FID)              Rule 1                                       |||
|+--------+--+--+--+------------+-----------------+--------------+|||
||Field 1|FL|FP|DI|Target Value|Matching Operator|Comp/Decomp Act||||
|+--------+--+--+--+------------+-----------------+--------------+|||
||Field 2|FL|FP|DI|Target Value|Matching Operator|Comp/Decomp Act||||
|+--------+--+--+--+------------+-----------------+--------------+|||
||...     |..|..|..|   ...      |   ...           |    ...       ||||
|+--------+--+--+--+------------+-----------------+--------------+|||
||Field N|FL|FP|DI|Target Value|Matching Operator|Comp/Decomp Act||||
|+--------+--+--+--+------------+-----------------+--------------+|/
|                                                                 ||
\-----------------------------------------------------------------/
```

- Side benefit: extensive rewrite of 7.1 and 7.3
  - Better description of SCHC Compression
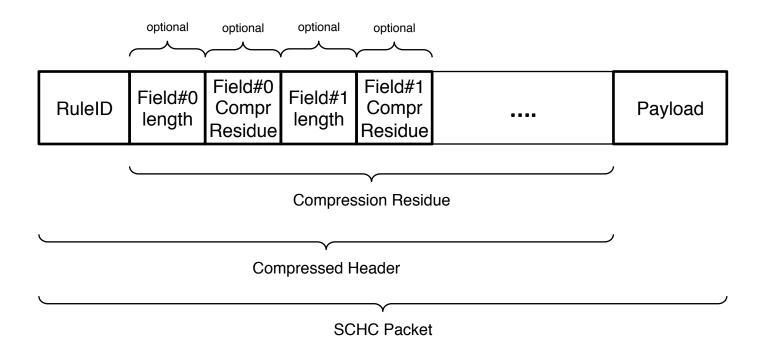
To be approved at this meeting

- Keep Appendix D, which lists what parameters/options need to be specified in a Profile
  - Non-normative guideline for authors of other documents
- Keep current definition of Context

To be discussed at this meeting

- RFC 3385, 6282, 6936 and 8200 Normative/Info?
- Move Padding section before SCHC C/D and SCHC F/R?
- Normative language about releasing resources in F/R
- MUST/MAY exit SCHC F/R
- WINDOW_SIZE v.s. MAX_WIND_FCN / MAX_FCN
- Compression Residue for field, Compression Residue for SCHC Packet, length of field Compression Residue
- Borrowing from penultimate tile
    - Make sure last tile is big enough to be noticeable if Profile allows last tile to be either in Regular Fragment or in All-1 Frag
    - Issue is void if Header+MIC is aligned
- Regular tiles needs to be noticeable, too
    - Mandate that a tile be at least an L2 Word? Two L2 Words?

draft-ietf-lpwan-ipv6-static-context-hc

"Compression Residue" description

optional   optional   optional   optional

| RuleID | Field#0 length | Field#0 Compr Residue | Field#1 length | Field#1 Compr Residue | .... | Payload |

Compression Residue

Compressed Header

SCHC Packet

Next steps

- Implement decisions of this meeting

- Volunteers to quickly review changes since -17?

- Publish -18 on Friday 14th

draft-ietf-lpwan-ipv6-static-context-hc

Thank you!

Thank you!

draft-ietf-lpwan-ipv6-static-context-hc

AOB ?