LPWAN WG

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Webex

Note Well

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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)

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I E T F

Reminder:

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

* Please contribute to the minutes at: https://codimd.ietf.org/notes-ietf-interim-2021-lpwan-08-lpwan
** Recordings and Minutes are public and may be subject to discovery in the event of litigation.
*** From the Webex login

Agenda bashing

[16:05] Administrivia   [15min]
- o   Note-Well, Scribes, Agenda Bashing
- o   WG Status, IETF 111 query
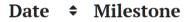
[16:20] Data Model for SCHC
[15min]
   Yang Doctors feedback

 [16:35] AOB   [QS]

WG Status

Date	Milestone
Feb 2022	Produce a Standards Track document for SCHC over NBIOT draft-ietf-lpwan-schc-over-nbiot
Oct 2021	Produce a Standards Track document for SCHC over SigFox draft-ietf-lpwan-schc-over-sigfox
Jul 2021	Produce a Standards Track document to enable operations, administration and maintenance (OAM) to the LPWAN device, including support for delayed or proxied liveness verification (Ping)
Feb 2021	Produce a Standards Track document to define the generic data models to formalize the compression and fragmentation contexts for LPWANs
Dec 2020	Produce Standard Track documents to apply SCHC IPv6/UDP over the baseline technologies
May 2020	Perform SCHC Maintenance, including enabling SCHC mechanisms for Upper layer Protocols

Document advancement

Active Internet-Drafts (4 hits)

draft-ietf-lpwan-coap-static-context-hc-19	2021-03-08	RFC Ed Queue : RFC-EDITOR for 53 days	Éric Vyncke ✉
LPWAN Static Context Header Compression (SCHC) for CoAP	34 pages	Submitted to IESG for Publication: Proposed Standard Reviews: genart, iotdir, opsdir, secdir, tsvart	Pascal Thubert ✉

draft-ietf-lpwan-schc-over-nbiot-04	2021-01-19	I-D Exists	Éric Vyncke ✉
SCHC over NB-IoT	22 pages	WG Document *Feb 2022*	

draft-ietf-lpwan-schc-over-sigfox-05	2021-02-22	I-D Exists	Éric Vyncke ✉
SCHC over Sigfox LPWAN	23 pages	WG Document *Oct 2021*	

draft-ietf-lpwan-schc-yang-data-model-04	2021-02-02	I-D Exists	Éric Vyncke ✉
Data Model for Static Context Header Compression (SCHC)	42 pages	WG Document Reviews: yangdoctors	

RFCs (3 hits)

RFC 8376 *(was draft-ietf-lpwan-overview)*	2018-05	Informational RFC	Suresh Krishnan ✉
Low-Power Wide Area Network (LPWAN) Overview	43 pages		Alexander Pelov ✉

RFC 8724 *(was draft-ietf-lpwan-ipv6-static-context-hc)*	2020-04	Proposed Standard RFC	Suresh Krishnan ✉
SCHC: Generic Framework for Static Context Header Compression and Fragmentation	71 pages		Pascal Thubert ✉

RFC 9011 *(was draft-ietf-lpwan-schc-over-lorawan)*	2021-04	Proposed Standard RFC	[1] Éric Vyncke ✉
Static Context Header Compression and Fragmentation (SCHC) over LoRaWAN	26 pages `New`		Dominique Barthel ✉

Document	⇕ Date	⇕ Status	⇕ IPR	⇕ AD / Shepherd	⇕
Related Internet-Drafts (2 hits)					
draft-barthel-lpwan-oam-schc-02	2020-11-02	I-D Exists			
OAM for LPWAN using Static Context Header Compression (SCHC)	14 pages `Expires soon`				
draft-pelov-lpwan-architecture-02	2021-04-29	I-D Exists			
LPWAN Static Context Header Compression (SCHC) Architecture	10 pages `New`				

Action items

- SCHC architecture / framework adopted
  - Thanks Eric for handling the rough consensus!
  - Published as draft-ietf-lpwan-architecture-00
- draft-ietf-lpwan-coap-static-context-hc: not far
  - current_queue => coap-static-context-hc
- Nothing much else

IETF 111

- Meetings will be middle of the CEST night
  - Or not, that ...
- We have interims
  - 5 interims
  - Scheduled between now and then
- Should we ask for an official meeting?

interim-2021-lpwan-	Tue	2021-05-18
interim-2021-lpwa	Tue	2021-06-01
	Tue	2021-06-15
an-11	Tue	2021-06-29
interim-2021-lpwan-12	Tue	2021-07-13

NO LPWAN-ing

draft-ietf-lpwan-schc-yang-data-model-04

Laurent Toutain (laurent.toutain@imt-atlantique.fr)

Ana Minaburo (ana@ackl.io)

YANG doctor review

- Many thanks to Carl Moberg
  - Very good remarks to make a better document

- Presentation: pyang -m yang

- IETF compatibility: pyang --ietf

- New model version on github:
  - https://github.com/lp-wan/datamodel/blob/master/ietf-schc%402021-04-23.yang

Changes

- Module name: ietf-schc
- Version: 1.1

- *As is right now, the YANG module assumes that all implementations support all FID types defined to be derived from field-id-base-type. It includes fields related IPv6, COAP/OSCORE, and ICMPv6 all in the same module.*
- *Is there a possibility that some implementations won't implement all three of those protocol groups? <u>If so, it might be worth considering making FID type groups either optional using YANG 'feature' statements or break them out into separate modules to be advertised separately.</u>*

- Hierarchical FID
    - A type for each protocol IPv6, UDP, CoAP, ICMPv6
    - A sub-type for sub-fields

Field-id

```
identity field-id-base-type  {
        description "Field ID base type for all fields";
}

identity field-id-ipv6-base-type {
    base field-id-base-type;
    description "Field IP base type for IPv6 headers described in RFC 8200";
}

identity fid-ipv6-version {
        base field-id-ipv6-base-type;
        description "IPv6 version field from RFC8200";
}

identity fid-ipv6-trafficclass {
    base field-id-ipv6-base-type;
    description "IPv6 Traffic Class field from RFC8200";
}

identity fid-ipv6-trafficclass-ds {
    base fid-ipv6-trafficclass;
    description "IPv6 Traffic Class field from RFC8200,
    DiffServ field from RFC3168";
}

identity fid-ipv6-trafficclass-ecn {
    base fid-ipv6-trafficclass;
    description "IPv6 Traffic Class field from RFC8200,
    ECN field from RFC3168";
}
```

Relation between fields

- *"does the authors think it important (and possible) to work towards a more stringent validation of "meaningful" configuration by capturing the relationships between fields like in this example?"*
  - *The current YANG permits a field-identifier 'fid-ipv6-version' combined with a field-length 'fl-token-length' in a rule entry, which I understand to be nonsensical.*

  - TV is mandatory for MO equal, MSB and match-mapping

  - Window size in mandatory for AA and equal 1, any size for AoE,
  - No Window for NoAck

  - ????

```
750    grouping fragmentation-content {
751        description "This grouping defines the fragmentation parameters for
752        all the modes (No Ack, Ack Always and Ack on Error) specified in
753        RFC 8724.";
754
755        leaf direction {
756            type schc:direction-indicator-type;
757            mandatory true;
758            description "should be up or down, bi directionnal is forbiden.";
759        }
760        leaf dtagsize {
761            type uint8;
762            description "size in bit of the DTag field";
763
764        }
765        leaf wsize {
766            when "not(derived-from(../fragmentation-mode, 'fragmentation-mode-no-ack'))";
767            type uint8;
768            description "size in bit of the window field";
769        }
770        leaf fcnsize {
771            type uint8;
772            mandatory true;
773            description "size in bit of the FCN field";
774        }
```

?????

Syntax

AOB ?