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.

As a reminder:
• By participating in the IETF, you agree to follow IETF processes and policies.
• If you are aware that any IETF contribution is covered by patents or patent applications that are owned or controlled by you or your sponsor, you must disclose that fact, or not participate in the discussion.
• As a participant in or attendee to any IETF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.
• Personal information that you provide to IETF will be handled in accordance with the IETF Privacy Statement.
• As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (https://www.ietf.org/contact/ombudsteam/) if you have questions or concerns about this.

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)
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)
   • Note-Well, Scribes, Agenda Bashing
   • Last time todos
   • Status of drafts
   • IETF 104  
   10mn

17:15  SCHC IESG review (Dominique)  
   10mn

17:25  SCHC next steps (chairs)  
   10mn

17:35  Recharter (chairs)  
   25mn

18:00  AOB  
   0mn
Last meeting Todos

• Pascal to schedule new meetings starting 16 of Jan.
  => Created 6 meetings, every other week till March 13\textsuperscript{th}

• Pascal to update the milestone for SCHC COAP: November next year
  => See next slide

• Juan Carlos to check the references
## WG progress

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestone</th>
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| Nov 2019     | Submit CoAP compression mechanism to the IESG for publication as a Proposed Standard  
               | draft-ietf-lpwan-coap-static-context-hc                                                                                                    |
| **Done**     | Submit IP/UDP compression and fragmentation mechanism to the IESG for publication as a Proposed Standard  
               | draft-ietf-lpwan-ipv6-static-context-hc                                                                                                    |
| **Done**     | Submit LPWAN specification to the IESG for publication as an Informational Document                                                       |
| **Done**     | Adopt CoAP compression mechanism as a WG item                                                                                               |
| **Done**     | Adopt IP/UDP compression and fragmentation mechanism as a WG item                                                                         |
| **Done**     | Adopt LPWAN specifications as WG item                                                                                                       |
# Draft Status (1/2)

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<th>AD / Shepherd</th>
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<tr>
<td>draft-ietf-lpwan-coap-static-context-hc-05</td>
<td>2018-10-22</td>
<td>I-D Exists</td>
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<td>LPWAN Static Context Header Compression (SCHC) for CoAP</td>
<td></td>
<td>28 pages</td>
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<td></td>
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<td>WG Document: Proposed Standard Nov 2019</td>
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<tr>
<td>draft-ietf-lpwan-ipv6-static-context-hc-18</td>
<td>2018-12-14</td>
<td>AD Evaluation for 13 days</td>
<td>Suresh Krishnan</td>
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<tr>
<td>LPWAN Static Context Header Compression (SCHC) and fragmentation for IPv6 and UDP</td>
<td></td>
<td>76 pages</td>
<td>Pascal Thubert</td>
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<td></td>
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<td>Submitted to IESG for Publication: Proposed Standard Reviews: intdir, iotdir Dec 2018</td>
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<td><strong>RFC (1 hit)</strong></td>
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<td>RFC 8376 (was draft-ietf-lpwan-overview)</td>
<td>2018-05</td>
<td>Informational RFC</td>
<td>Suresh Krishnan</td>
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<td>Low-Power Wide Area Network (LPWAN) Overview</td>
<td></td>
<td>45 pages</td>
<td>Alexander Pelov</td>
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Interim, January 16th, 2019
## Draft Status (2/2)

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<tr>
<td>draft-authors-lpwan-schc-802154-00 SCHC for 802.15.4 lwan applications</td>
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<td>draft-balakrichenan-lpwan-dns-usage-00 DNS usage in LPWAN</td>
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<td>draft-minaburo-lpwan-nbiot-hc-01 LPWAN Static Context Header Compression (SCHC) over NB-IoT</td>
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<td>draft-zuniga-lpwan-schc-over-sigfox-05 SCHC over Sigfox LPWAN</td>
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<td>draft-farrell-lpwan-lora-overview-01 LoRaWAN Overview</td>
<td>2016-10-28</td>
<td>12</td>
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<td>draft-minaburo-lpwan-gap-analysis-02 LPWAN Survey and GAP Analysis</td>
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<td>draft-ratlainen-lpwan-nb-iot-00 NB-IoT characteristics</td>
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<td>draft-toutain-6lqwa-ipv6-static-context-hc-01 6LPWA Static Context Header Compression (SCHC) for IPv6 and UDP</td>
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## IETF 104 (1/2)

### Sessions - View (meeting: 104)

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<tr>
<th>Working Group Name:</th>
<th>IPv6 over Low Power Wide-Area Networks (lpwan)</th>
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<tbody>
<tr>
<td>Area Name:</td>
<td>Internet Area</td>
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<tr>
<td>Number of Sessions Requested:</td>
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<tr>
<td>Length of Session 1:</td>
<td>2 Hours</td>
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<tr>
<td>Number of Attendees:</td>
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<td>Conflicts to Avoid:</td>
<td>First Priority: 6lo roll 6tisch core intarea</td>
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<tr>
<td></td>
<td>Second Priority: detnet netconf lwig suit ace</td>
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<tr>
<td></td>
<td>Third Priority: cbor 6man bier</td>
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<td>Other WGs that included IPv6 over Low Power Wide-Area Networks in their conflict list:</td>
<td>6lo, Intarea, lwig, cbor, 6tisch</td>
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<td>Resources requested:</td>
<td>None so far</td>
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<td>People who must be present:</td>
<td>Suresh Krishnan, Pascal Thubert, Alexander Pelov</td>
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<td>Special Requests:</td>
<td>The PAW BoF MUST be avoided as well</td>
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### Activities Log

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<th>Time</th>
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<td>Jan 16, 2019</td>
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<td>New session was requested</td>
<td>Pascal Thubert</td>
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IETF 104 (1/2)

- 2018-12-31 (Week of): IETF Online Registration Opens.
- 2019-02-08 (Friday): Cut-off date for BOF proposal requests to Area Directors at UTC 23:59. To request a BOF, please see instructions on Requesting a BOF.
- 2019-02-08 (Friday): Cut-off date for requests to schedule Working Group Meetings at UTC 23:59. To request a Working Group session, use the IETF Meeting Session Request Tool.
- 2019-02-15 (Friday): Cut-off date for Area Directors to approve BOFs at UTC 23:59.
- 2019-02-22 (Friday): Preliminary Agenda published for comment.
- 2019-03-01 (Friday): Final agenda to be published.
- 2019-03-11 (Monday): Internet Draft submission cut-off (for all drafts, including -00) by UTC 23:59. Upload using the ID Submission Tool.
SCHC IESG Review
WG Next steps
Tentative schedule

• February 15th
  – Recharter

• By IETF 104 cutoff:
  – All SCHC over foo docs refreshed
  – ICMP / management draft?
Recharter
Status

WG formed October 14\textsuperscript{th}, 2016

- Charter item #1  (Informational document)
  - Baseline technology description

- Charter item #2  (Standards track document)
  - Enable the compression and fragmentation of a CoAP/UDP/IPv6 packet over LPWA networks
Rechartering

• After submitting SCHC IP/UDP to IESG (before IETF 103)

• Charter item #2
  – Split in 3 charter items (Standards track documents)
    • SCHC for CoAP
    • Data model for context representation
    • Documents for each baseline technology
  – New charter item (Standards track document)
    • Operations, Administration and Maintenance (OAM) of LPWAN devices (incl. delayed proxied liveliness, Ping)
Charter 1

1. Produce an Informational document describing and relating some selected LPWA technologies. This work will document the common characteristics and highlight actual needs that the IETF could serve; but it is not intended to provide a competitive analysis. It is expected that the information contained therein originates from and is reviewed by people who work on the respective LPWA technologies.

2. Produce a Standards Track document to enable the compression and fragmentation of a CoAP/UDP/IPv6 packet over LPWA networks. This will be achieved through stateful mechanisms, specifically designed for star topology and severely constrained links. The work will include the definition of generic data models to describe the compression and fragmentation contexts. This work may also include to define technology-specific adaptations of the generic compression/fragmentation mechanism wherever necessary.
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1. Produce a Standards Track document to enable the compression and fragmentation of a CoAP/UDP/IPv6 packet messages over LPWA networks. This will be achieved through stateful mechanisms, specifically designed for star-topology and severely constrained links for a relevant subset of the possible CoAP interactions (TBD as part of the work).

2. Produce a Standards Track document to define the definition of generic data models to formalize describe the compression and fragmentation contexts.

3. Produce Standard Track documents to apply SCHC IPv6/UDP over the baseline technologies. This work may also include to define technology-specific adaptations of the generic compression/fragmentation mechanism wherever necessary.
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2. Produce a Standards Track document to define the generic data models to formalize the compression and fragmentation contexts.

3. Produce Standard Track documents to apply SCHC IPv6/UDP over the baseline technologies.

4. Produce a Standards Track document to enable operations, administration and maintenance (OAM) to the LPWAN device, including support for delayed or proxyed liveliness verification (Ping).

5. ? IPv4 ? Other ?
AOB ?