

# Interim meeting #2 2023

17 January 2023



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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)

16:00	Opening, agenda bashing (Chairs) <ul style="list-style-type: none"><li>• Note-Well, Scribes, Agenda Bashing</li><li>• Status of drafts / WG; need for rechartering</li><li>• Presenter: Alexander Pelov</li></ul>	10mn
16:10	Rechartering <ul style="list-style-type: none"><li>• Presenter: Pascal Thubert</li><li>• Topics: Review proposed work item</li></ul>	20mn
16:30	SCHC Data Model (new work for tools compatibility) <ul style="list-style-type: none"><li>• Presenter: Laurent Toutain</li><li>• Associated drafts: draft-ietf-lpwan-schc-yang-data-mode</li></ul>	10mn
16:40	Aproposal to manage access control on the rule <ul style="list-style-type: none"><li>• Presenter: Laurent Toutain</li></ul>	10mn
16:50	Architecture Next Steps <ul style="list-style-type: none"><li>• Presenter: Chairs, Ana Minaburo</li><li>• Associated drafts: draft-ietf-lpwan-architecture</li><li>• Topics: Ivan's comments</li></ul>	10mn
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# WG Status

Date	Milestone	Associated documents
Dec 2022	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 2022	Produce a Standards Track document for SCHC over NB-IoT	<a href="#">draft-ietf-lpwan-schc-over-nbiot</a>
Oct 2021	Produce a Standards Track document for SCHC over SigFox	<a href="#">draft-ietf-lpwan-schc-over-sigfox</a>
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's advancement



Document	Date	Status	IPR	AD/Shepherd
<b>Active Internet-Drafts (4 hits)</b>				
<a href="#">draft-ietf-lpwan-schc-compound-ack-09</a> SCHC Compound ACK	21 pages	2022-12-05	I-D Exists	Alexander Pelov
<a href="#">draft-ietf-lpwan-schc-over-nbiot-15</a> Static Context Header Compression over Narrowband Internet of Things	24 pages	2022-12-15	RFC Ed Queue : <a href="#">EDIT</a>	Éric Vyncke Pascal Thubert
<a href="#">draft-ietf-lpwan-schc-over-sigfox-20</a> SCHC over Sigfox LPWAN	39 pages	2023-01-02	IESG Evaluation::Revised I-D Needed Submitted to IESG for Publication : Proposed Standard Reviews: <a href="#">dnsdir</a> <a href="#">tsvart LC</a> <a href="#">lottedir LC</a> <a href="#">opsdir LC</a> <a href="#">secdir LC</a> Feb 2022	Éric Vyncke Pascal Thubert
<a href="#">draft-ietf-lpwan-schc-yang-data-model-21</a> Data Model for Static Context Header Compression (SCHC)	54 pages	2022-10-09	RFC Ed Queue : <a href="#">RFC-EDITOR</a> <a href="#">88</a> Submitted to IESG for Publication : Proposed Standard Reviews: <a href="#">genart LC</a> <a href="#">opsdir LC</a> <a href="#">tsvart LC</a> <a href="#">intdir LC</a> <a href="#">lottedir LC</a> <a href="#">opsdir LC</a> <a href="#">secdir LC</a> Oct 2021 Action Holders: <a href="#">Carles Gomez</a> , <a href="#">Juan-Carlos Zúñiga</a> , <a href="#">Éric Vyncke</a> , <a href="#">27</a> , <a href="#">Julien Boite</a> , <a href="#">Diego S. Wistuba La Torre</a> , <a href="#">Sandra Cespedes</a> , <a href="#">Laurent Ko</a>	Éric Vyncke Pascal Thubert
<b>Expired Internet-Draft (1 hit)</b>				
<a href="#">draft-ietf-lpwan-architecture-02</a> LPWAN Static Context Header Compression (SCHC) Architecture	14 pages	2022-06-30	Expired	
<b>RFCs (4 hits)</b>				
<a href="#">RFC 8376</a> (was draft-ietf-lpwan-overview) Low-Power Wide Area Network (LPWAN) Overview	43 pages	2018-05	Informational RFC	Suresh Krishnan Alexander Pelov
<a href="#">RFC 8724</a> (was draft-ietf-lpwan-ipv6-static-context-hc) SCHC: Generic Framework for Static Context Header Compression and Fragmentation	71 pages	2020-04	Proposed Standard RFC	Suresh Krishnan Pascal Thubert
<a href="#">RFC 8824</a> (was draft-ietf-lpwan-coap-static-context-hc) Static Context Header Compression (SCHC) for the Constrained Application Protocol (CoAP)	30 pages	2021-06	Proposed Standard RFC	Éric Vyncke Pascal Thubert
<a href="#">RFC 9011</a> (was draft-ietf-lpwan-schc-over-lorawan) Static Context Header Compression and Fragmentation (SCHC) over LoRaWAN	26 pages	2021-04	Proposed Standard RFC	1 Éric Vyncke Dominique Barthel
<b>Related Internet-Drafts (3 hits)</b>				
<a href="#">draft-aguilar-lpwan-schc-convergence-00</a> SCHC Convergence Profile	13 pages	2022-10-24	I-D Exists	
<a href="#">draft-barthel-lpwan-oam-schc-04</a> OAM for LPWAN using Static Context Header Compression (SCHC)	13 pages	2022-10-24	I-D Exists	
<a href="#">draft-lampin-lpwan-schc-considerations-00</a> SCHC design and implementation considerations	8 pages	2022-11-10	I-D Exists	



- **YANG Data Model:** In editor's queue, being processed
- **NB IoT:** In editor's queue
- **Compound Ack:** Ready to submit (Shepherd?)
- **SCHC o' SigFox:** IESG Reviews mostly complete
- **OAM:** Still alive (Authors?)
- **Architecture:** Proposed structural changes
- **Convergence:** New work presented

- **SCHC o Foo:** Over PPP, over IP, (ask for SCHC Ethertype?), MAVLink
- **Bar o SCHC:** IPv4, ICMPv6-based protocols, TCP, DLMS, and others
- **FEC fragments:** Natural evolution of Bob's work (within current charter?)
- **SCHC Header:** How to convey SCHC Session Info over IP?
- **OAM:** How can OAM help?
- **YANG :** Optimizations for CoreConf
- **Session Setup:** Rule discovery, Installation and Instantiation
- **Secure Channel :** Securing SCHC Negotiation

# Background (to be removed) for IESG

The initial focus of the LPWAN Working Group was to enable IPv6 connectivity over the following selection of Low-Power Wide-Area (LPWA) technologies: SIGFOX, LoRa, WI-SUN and NB-IOT. As a result of the first round of chartering, the IETF has contributed to LPWA technologies by allowing IPv6 connectivity with to the SCHC deep compression protocol. SCHC is now becoming an accepted industry standard in that space and is being or was already adopted by major alliances.

The group produced documents providing an overview of the baseline LPWA technologies (RFC8376) as well as a document specifying a Generic Framework for Static Context Header Compression and Fragmentation (SCHC) [RFC8724], SCHC for CoAP [RFC8824], SCHC over LPWA technologies for LoRA, SigFox, and NB-IOT, and the SCHC data model specification. Though the LPWA technologies were used as the baseline technologies for the LPWAN SCHC standard , interest is now rising to employ SCHC in other, non-LPWA environments.



# New (proposed) Charter (1/3)

The group will extend its scope to enable the benefits of the SCHC technology over non-LPWA networks. To that effect, the group will provide specifications for the application of SCHC over Foo, where Foo includes but is not limited to UDP tunnels, IP, PPP, and Ethernet.

To extend SCHC over larger L2 and L3 networks with remote endpoints, there is a need in the data plane to signal the SCHC session and some operational values in the packets. For this, the INT-AREA WG is working on a SCHC protocol type for IP and a SCHC Ethertype (in coordination with IEEE) for Ethernet. The group will provide standard track specifications for a SCHC Header that conveys the SCHC Session Info over IP for the SCHC protocol type.

A complete SCHC solution also requires control plane technologies to secure the operations and manage the SCHC sessions, devices, and gateways. The group will provide specifications to identify the rule sets and negotiate the associated parameters between the pair of endpoints in a secure fashion. The group will also work on the installation of the rules, including the instantiation of generic rules to the nodes and networks in which they are applied.

The group will continue activities of the previous charter and take on new work as follows:



# New (proposed) Charter (2/3)

From the previous charter:

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- 1) Perform SCHC Maintenance, including enabling SCHC mechanisms for Upper layer Protocols, and providing additional reliability mechanisms such as FEC for fragments..
- 2) 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).

# New (proposed) Charter (3/3)

New work items for this charter:

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- 3) Produce Standard Track documents for SCHC over Foo and Bar over SCHC where Foo includes but is not limited to IP, PPP, and Ethernet and Bar may include IPv4, ICMPv6-based protocols, TCP, DLMS, and other protocols over CoAP such as LwM2M; define and maintain data models for the protocols supported by SCHC.
  - 4) Define the SCHC Protocol Header to convey SCHC Session Info over IP for the SCHC protocol type
  - 5) Produce Standard Track documents for SCHC Rule Discovery and Parameter Negotiation, including the specification of how work from the IETF Security Area is leveraged to secure these operations
  - 6) Produce Standard Track documents for SCHC Rule Installation, including the specification of generic SCHC rules that can be instantiated, e.g., to apply to a certain node or within a certain network.

The LPWAN WG will collaborate with INT Area WGs for the protocol type definition and possible Bar-over-SCHC activities. It will work with the relevant Security Area WGs to secure the SCHC session appropriately.