

Static Context Header Compression (SCHC) for the Constrained Application Protocol (CoAP)

draft-ietf-schc-8824-update-09

Marco Tiloca, RISE
Laurent Toutain, IMT Atlantique
Ivan Martínez, IRISA
Ana Minaburo

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Recap

- › **Document goal: obsolete RFC 8824**

- › **Document scope: same as RFC 8824, plus:**

- Clarified and amended text originally from RFC 8824, also based on filed Errata
- Clarified use of the FL in Field Descriptors for variable-length header fields
- Generalized Token Length field, Token field, and "tkl" function to comply with RFC 8974
- SCHC compression of CoAP options
 - › Clarified both in general and for specific CoAP options
 - › Defined for the Hop-Limit Option and for other recent options
 - › Updated for the OSCORE Option (extended by a CoRE document)
- Clarified SCHC compression for the CoAP payload marker
- Spelled out SCHC compression in the presence of proxies, with examples provided
- New IANA registry “SCHC Compression of CoAP Fields” for seamless extensibility
- YANG data model extending the one defined in RFC 9363 ➔ **TO BE REMOVED**

Recent developments

- › **Latest presentation: version -06 at IETF 124 (November 2025)**
- › **We had a WG Last Call, now completed**
 - Positive feedback from WG participants – Thanks!
 - Review from Alexander Pelov [1] – Thanks!
- › **Received a Yang Doctor early review [2]**
- › **Recent activities**
 - Addressing [1] and [2], plus two narrowly scoped fixes [3]
 - PR #4 from Laurent, adding values of FL in the example Rules

[1] <https://mailarchive.ietf.org/arch/msg/schc/1WufzPEaik4bEBso0hle5ACi9Xc/>

[2] <https://mailarchive.ietf.org/arch/msg/schc/otF2zxf2yetfeYNbNjPd12zicF4/>

[3] <https://mailarchive.ietf.org/arch/msg/schc/uQ9E77-g0dsHsjbXWI63yaV8tdg/>

Alexander's review [1]

- › **Addressed in PR #1 → In version -09 → Replied to the review**
 - PR #1: <https://github.com/ietf-wg-schc/draft-ietf-schc-8824-update/pull/1>
- › **Editorial fixes, including a SCHC subfield name: s/kid_context/kid_ctx**
- › **Section 1 - Summary of updates from RFC 8824:**
 - Explicit mentioning of the CoAP options ETag, If-Match, and If-None-Match
- › **Section 3.1 - Clarified use of "var" and "var_X" in the FL of a Field Descriptor**
 - With an inline example for the new function "var_bit"

[1] <https://mailarchive.ietf.org/arch/msg/schc/1WufzPEaik4bEBso0hle5ACi9Xc/>

Alexander's review [1]

- › **Converted Editor's notes into final text about the YANG data model**
- › **Appendix A - YANG data model:**
 - Updated copyright disclaimer and other metadata
 - Consistent use of placeholders for RFC numbers
 - Added the identity fl-variable-bit corresponding to the function var_bit
- › **The content above is planned to be removed due to the Yang Doctor review**
 - More details in a following slide ...

[1] <https://mailarchive.ietf.org/arch/msg/schc/1WufzPEaik4bEBso0hle5ACi9Xc/>

Narrowly scoped fixes

- › **Addressed in PR #2 → No objections from the WG [3] → In version -09**
 - PR #2: <https://github.com/ietf-wg-schc/draft-ietf-schc-8824-update/pull/2>
- › **Section 5.1 – Explicit mentioning that:**
 - A single Field Descriptor MAY pertain to multiple adjacent instances of the same CoAP option that are treated as grouped together (e.g., see Section 5.4).
- › **Section 5.4.1 – Corrected what best can be done with certain CoAP options**
 - Handling a variable number of path segments and query parameters simply requires different SCHC Rules to cover the different possibilities

[3] <https://mailarchive.ietf.org/arch/msg/schc/uQ9E77-g0dsHsjbXWl63yaV8tdg/>

Yang Doctor early review [2]

- › **Detailed comments on the YANG module ietf-schc-coap in itself**
 - Fixes incorporated in version -09 (on top of those from Alexander's review)
- › **Main concern of the review – Not addressed in version -09**
 - This document obsoletes RFC 8824. Why is the incremental YANG module ietf-schc-coap in this document, instead of in a separate document that obsoletes RFC 9363 and updates its original YANG module ietf-schc?
 - Note: RFC 8824 did not define a YANG module.
The YANG module ietf-schc came only later in RFC 9363

[2] <https://mailarchive.ietf.org/arch/msg/schc/otF2zxf2yetfeYNbNjPd12zicF4/>

Yang Doctor early review [2]

› Created PR #3 → Summarized to the WG [4]

– <https://github.com/ietf-wg-schc/draft-ietf-schc-8824-update/pull/3>

› PR #3 removes from the Internet Draft:

- Appendix A with the YANG module ietf-schc-coap
- Text related to the YANG module ietf-schc-coap (Sect. 12.2.1, 13.1, 13.2; text from Sect. 13.4.2)
- Text related to the YANG module ietf-schc defined in RFC 9363 (Sect. 4.3 and 4.6 of this draft)
- References that are not used anymore: RFC 9363, RFC 3688, RFC 6020, and RFC 8407.

› ietf-schc-coap@2026-06-30.yang is archived on the GitHub

- Useful when obsoleting RFC 9363 and updating its original YANG module ietf-schc

[2] <https://mailarchive.ietf.org/arch/msg/schc/otF2zxf2yetfeYNbNjPd12zicF4/>

[4] <https://mailarchive.ietf.org/arch/msg/schc/54MYag7EtSGL19VdWTpAgACT2qU/>

PR #4 from Laurent [5]

- › **Created after the IETF 126 cut-off deadline**
- › **Adding values of FL in example Rules**
 - For Field Descriptors where CDA is “not-sent” or “mapping-sent”
 - OLD: FL is not set
 - NEW: FL is the well-known fixed size in bits, or otherwise a function (e.g., “var”)
- › **For consistency, two fixes are also needed in the draft**
 - In Section 3.1 → FL is set also when CDA is “not-sent” or “mapping-sent”
 - › When FL is “var”, the unit plays no role, because no residue value’s size is sent
 - In Section 6.4 → Clarify a corner case for the function “osc.piv”
 - › *If the value n is not available ..., then the “osc.piv” function returns the value 0*

[5] <https://github.com/ietf-wg-schc/draft-ietf-schc-8824-update/pull/4>

Next steps

› Submit a new version -10 after:

- Merging PR #3 about removing the YANG module ietf-schc-coap
 - › <https://github.com/ietf-wg-schc/draft-ietf-schc-8824-update/pull/3>
- Merging PR #4 about adding the FL values in the example rules, plus related fixes
 - › <https://github.com/ietf-wg-schc/draft-ietf-schc-8824-update/pull/4>
- Aligning the wording with that of *draft-ietf-schc-architecture*

› Version -10 should be ready to be sent to the IESG

Thank you!

Comments/questions?

<https://github.com/ietf-wg-schc/draft-ietf-schc-8824-update>