

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

draft-tiloca-schc-8824-update-02

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Recap (1/2)

- › **Document started in March 2023 (in LPWAN, then moved to SCHC)**
 - Building on RFC 8824 – SCHC compression of CoAP headers (June 2021)

- › **The original intent was updating RFC 8824, especially for:**
 - Defining the compression of recent CoAP options
 - Clarifying the compression of the CoAP payload marker 0xFF
 - Clarifying the CoAP header compression in the presence of CoAP proxies

- › **This was the case until the previous version -01**

Recap (2/2)

- › **Almost immediate suggestion: consider switching to a bis document**
 - More clarity, since all the content is in one place
 - Clean, streamlined way to update/fix/clarify the content of RFC 8824

- › **First suggested at IETF 116 by Éric Vyncke. Since then:**
 - No objections
 - IETF 116 (March 2023): support from John P. Mattsson
 - Interim meeting (June 2023): Pascal referred to this as a good prospect
 - IETF 117 (July 2023): in-room consensus for a bis document [1]
 - › 15 hands up out of 15 participants
 - › Resolution: please prepare for a bis document

Status update

- › **Submitted version -02 as a major revision**
 - The current, reflected intent is to obsolete RFC 8824

- › **Changed title: same as for RFC 8824**

- › **Overhauled content organization and presentation**
 - The draft is now written as a bis document
 - Merged what is covered in RFC 8824 with what version -01 was adding
 - Made minor fixes and an overall editorial revision

New document structure (1/4)

› Section 1 “Introduction”

- First part: content from RFC 8824
- Second part: new text, highlighting how RFC 8824 is being obsoleted

› Section 2 “SCHC Applicability to CoAP” (also in RFC 8824)

- Content from RFC 8824

› Section 3 “CoAP Headers compressed with SCHC” (also in RFC 8824)

- Content from RFC 8824

› Section 4 “Compression of CoAP Header Fields” (also in RFC 8824)

- Content from RFC 8824

New document structure (2/4)

› Section 5 “Compression of CoAP Options” (also in RFC 8824)

- Content-Format and Accept
- Max-Age, Uri-Host, Uri-Port
- Uri-Path and Uri-Query
- Size1, Size2, Proxy-Uri, Proxy-Scheme
 - › Including updated text from v -01 of this document
- ETag, If-Match, If-None-Match, Location-Path, Location-Query
- Hop-Limit
- Echo
- Request-Tag
- EDHOC

Content from
RFC 8824

Content from v -01

New document structure (3/4)

- › **Section 6 “Compression of CoAP Extensions” (also in RFC 8824)**

- Block
- Observe
- No-Response
- OSCORE

- › Including updated text from v -01 of this document (*)

Content from
RFC 8824

- › **Section 7 “Compression of CoAP Payload Marker” (NEW section)**

Content from v -01

- › **Section 8 “Example of CoAP Header Compression” (also in RFC 8824)**

Content from
RFC 8824

* Further updated in v -02, based on progress
in *draft-ietf-core-oscore-key-update*

New document structure (4/4)

- › **Section 9 “CoAP Header Compression with Proxies” (NEW section)**
- › **Section 10 “Example of CoAP Header Compression with Proxies” (NEW section)**
- › **Section 11 “Security Considerations” (also in RFC 8824)**
 - Merged together content from RFC 8824 and from v -01 of this document
- › **After that:**
 - “IANA considerations” (Still no actions for IANA)
 - “References”
 - Appendix “YANG Data Model” (currently a placeholder)

}
From
v -01

Summary and next steps

- › **Version -02 is written as a bis document of RFC 8824. Still same additions:**
 - Compression of CoAP options recently defined or extended
 - Clarifications on SCHC handling of the CoAP payload marker 0xFF
 - SCHC compression in the presence of CoAP proxies (with or without OSCORE)
- › **The way forward includes:**
 - One defines/revise a CoAP option → One defines/revise its SCHC processing
 - Consider possible, further improvements when compressing some CoAP options
 - Revising and adding the YANG data model for compression of new CoAP options
 - › <https://gitlab.com/crimson84/draft-tiloca-schc-8824-update/-/blob/main/ietf-schc-coap@2023-03-07.yang>
- › **The authors believe that version -02 is ready for a WG Adoption Call**

Thank you!

Comments/questions?

<https://gitlab.com/crimson84/draft-tiloca-schc-8824-update>