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Command and Control Registry for SCHC  
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## Abstract

This document creates a registry for command and control rule values across technologies

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Internet-Draft

SCHC commands

March 2020

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[1.](#) Introduction

"Static Context Header Compression (SCHC) and fragmentation for LPWAN, application to UDP/IPv6" [[SCHC](#)] defines a generic compression and fragmentation protocol that is optimized for LPWAN networks.

SCHC needs to be instanciated to be applied to a particular networking technology. This is being done at the LPWAN WG for [[LoRaWAN](#)], [[Sigfox](#)], and [[NB-IOT](#)].

SCHC does not have to be limited to compression and fragmentation; it can be extended for other purposes, e.g., to transport commands and responses. The necessary commands appear to be very similar across technologies and it makes sense to create a shared IANA registry that is valid across technologies.

[2.](#) Terminology[2.1.](#) References[2.2.](#) [BCP 14](#)

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [BCP 14](#) [[RFC2119](#)][[RFC8174](#)] when, and only when, they appear in all capitals, as shown here.

[3.](#) Purpose of this document

This document creates a registry for command and control rule values across technologies. This does not mean that all technologies need to implement all the command and controls defined in the IANA registry that this document creates, either.

#### [4.](#) Security Considerations

This specification only creates a registry. There is no security consideration about the registry itself.

#### [5.](#) IANA Considerations

This specification creates a new Subregistry for the LPWAN command and control values for use within the [[SCHC](#)] protocol.

- \* Possible values are 8-bit unsigned integers (0..255).
- \* Registration procedure is "Standards Action" [[RFC8126](#)].
- \* Initial allocation is as indicated in Table 1:

+-----+-----+-----+
Value   Meaning   Reference
+=====+=====+=====+
0        Reset     RFC THIS
+-----+-----+-----+
1        Ack       RFC THIS
+-----+-----+-----+
2        Rekey     RFC THIS
+-----+-----+-----+

Table 1: Acceptance values  
of the RPL Status

#### [6.](#) Acknowledgments

TBD

#### [7.](#) Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate

Requirement Levels", [BCP 14](#), [RFC 2119](#),  
DOI 10.17487/RFC2119, March 1997,  
<<https://www.rfc-editor.org/info/rfc2119>>.

[RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in [RFC 2119](#) Key Words", [BCP 14](#), [RFC 8174](#), DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/info/rfc8174>>.

[RFC8126] Cotton, M., Leiba, B., and T. Narten, "Guidelines for Writing an IANA Considerations Section in RFCs", [BCP 26](#), [RFC 8126](#), DOI 10.17487/RFC8126, June 2017, <<https://www.rfc-editor.org/info/rfc8126>>.

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[SCHC] Minaburo, A., Toutain, L., Gomez, C., Barthel, D., and J. Zuniga, "Static Context Header Compression (SCHC) and fragmentation for LPWAN, application to UDP/IPv6", Work in Progress, Internet-Draft, [draft-ietf-lpwan-ipv6-static-context-hc-24](#), 5 December 2019, <<https://tools.ietf.org/html/draft-ietf-lpwan-ipv6-static-context-hc-24>>.

## [8](#). Informative References

[Sigfox] Zuniga, J., Gomez, C., and L. Toutain, "SCHC over Sigfox LPWAN", Work in Progress, Internet-Draft, [draft-ietf-lpwan-schc-over-sigfox-01](#), 4 November 2019, <<https://tools.ietf.org/html/draft-ietf-lpwan-schc-over-sigfox-01>>.

[NB-IOT] Ramos, E. and A. Minaburo, "SCHC over NB-IoT", Work in Progress, Internet-Draft, [draft-ietf-lpwan-schc-over-nbiot-01](#), 16 November 2019, <<https://tools.ietf.org/html/draft-ietf-lpwan-schc-over-nbiot-01>>.

[LoRaWAN] Gimenez, O. and I. Petrov, "Static Context Header Compression (SCHC) over LoRaWAN", Work in Progress, Internet-Draft, [draft-ietf-lpwan-schc-over-lorawan-05](#), 20 December 2019, <<https://tools.ietf.org/html/draft-ietf-lpwan-schc-over-lorawan-05>>.

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