

LPWAN WG

WG Chairs:

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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.

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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)



Reminder:

Minutes are taken *

This meeting might be recorded **

Presence is logged ***

* Please contribute to the minutes at: <https://codimd.ietf.org/notes-ietf-interim-2021-lpwan-01-lpwan#>

** Recordings and Minutes are public and may be subject to discovery in the event of litigation.

*** From the Webex login

Agenda bashing

[16:05] Administrivia	[10min]
o Note-Well, Scribes, Agenda Bashing	
o WG Status	
o IETF 110: Do we meet?	
*	
[16:15] SCHC over LoRaWAN	[5min]
[16:20] CoAP over SCHC	[25min]
[16:45] Open Bar / AOB	[QS]

WG Status

Milestones

Date	Milestone	◆
Jul 2021	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 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	

Documents advancement



Document	Date	Status	IPR	AD / Shepherd
Active Internet-Drafts (5 hits)				
draft-ietf-lpwan-coap-static-context-hc-16 LPWAN Static Context Header Compression (SCHC) for CoAP	2020-10-20 31 pages	IESG Evaluation::AD Followup for 173 days Submitted to IESG for Publication: Proposed Standard Reviews: genart, iotdir, opsdire, secdire, tsvart		Éric Vyncke Pascal Thubert
draft-ietf-lpwan-schc-over-lorawan-13 Static Context Header Compression (SCHC) over LoRaWAN	2020-10-30 28 pages	Approved-announcement to be sent::Revised I-D Needed for 61 days Submitted to IESG for Publication: Proposed Standard Reviews: genart, iotdir, opsdire, secdire, tsvart	1	Éric Vyncke Dominique Barthel
draft-ietf-lpwan-schc-over-nbiot-03 SCHC over NB-IoT	2020-07-13 23 pages Expires soon	I-D Exists WG Document		Éric Vyncke
draft-ietf-lpwan-schc-over-sigfox-04 SCHC over Sigfox LPWAN	2020-11-02 14 pages	I-D Exists WG Document		Éric Vyncke
draft-ietf-lpwan-schc-yang-data-model-03 Data Model for Static Context Header Compression (SCHC)	2020-07-10 42 pages Expires soon	I-D Exists WG Document		Éric Vyncke
RFCs (2 hits)				
RFC 8376 (was draft-ietf-lpwan-overview) Low-Power Wide Area Network (LPWAN) Overview	2018-05 43 pages	Informational RFC		Suresh Krishnan Alexander Pelov
RFC 8724 (was draft-ietf-lpwan-ipv6-static-context-hc) SCHC: Generic Framework for Static Context Header Compression and Fragmentation	2020-04 71 pages	Proposed Standard RFC		Suresh Krishnan Pascal Thubert
Document	Date	Status	IPR	AD / Shepherd
Related Internet-Draft (1 hit)				
draft-barthel-lpwan-oam-schc-02 OAM for LPWAN using Static Context Header Compression (SCHC)	2020-11-02 14 pages	I-D Exists		

IETF 110

- Virtual CET time (Prague)
- Meeting request made

Group ↕	Length ↕	Size ↕	Requester ↕	AD ↕	Constraints ↕	Special requests ↕
lpwan	1:00	30	Pascal Thubert	Éric Vyncke	1) core detnet intarea netmod raw rift roll 2) 6lo 6man cbor lwig netconf suit 3) lake 4) Alexander Pelov, Éric Vyncke, Pascal Thubert	Please make it late in the day if possible

Status: draft-ietf-lpwan-schc-over-lorawan

Editors:

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draft-ietf-lpwan-coap-static-context-hc-16

Authors:

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Ricardo Andreasen

Thank you

draft-pelov-lpwan-architecture-00

Authors:

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Goal of document

- SCHC State of Art
 - RFC 8724 – the generic framework
 - Technology-specific documents
 - YANG Data model and OAM in the making
 - Other tools: PPP
- How these work together?
- How are contexts provisioned?
- Error handling?
- Actions / advanced features?

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Provide a reference architecture to handle these + potentially other questions.

Goal of document

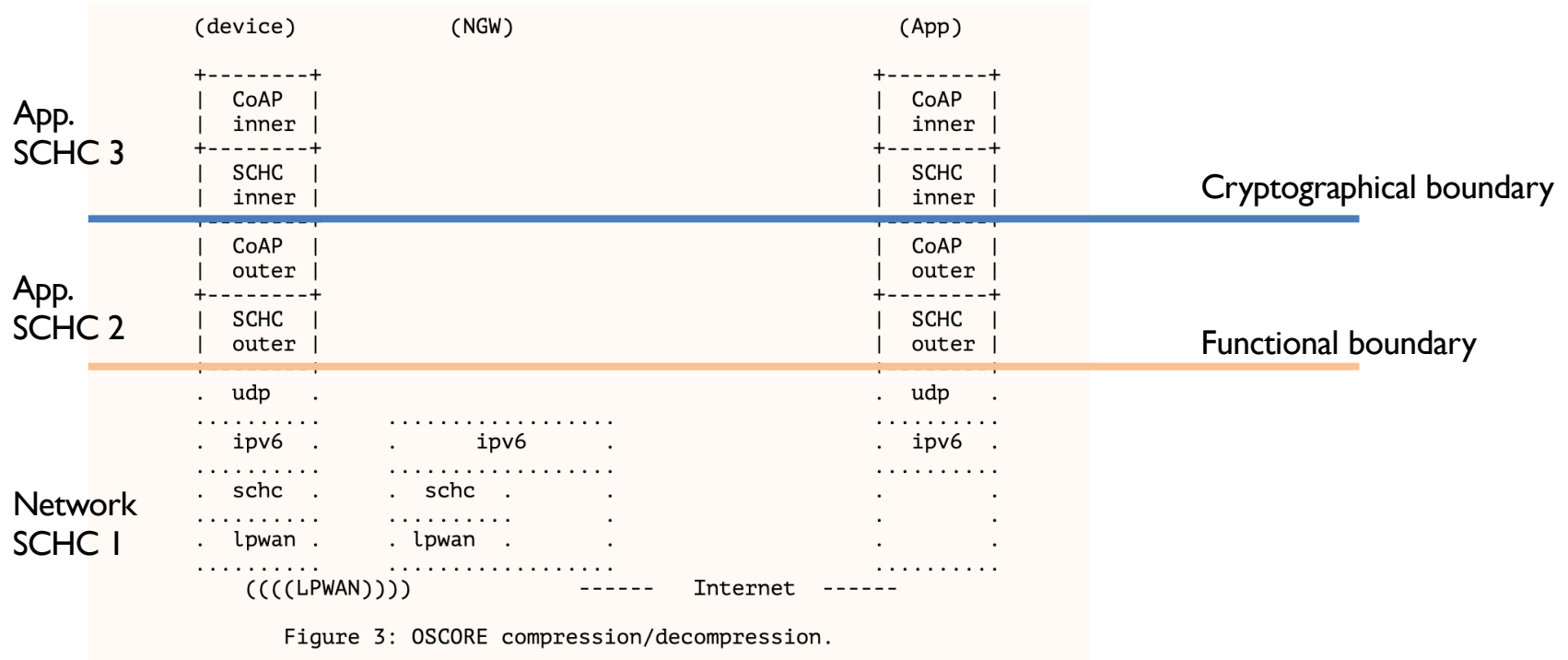
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First define the entities, interfaces and protocols, then message flows.

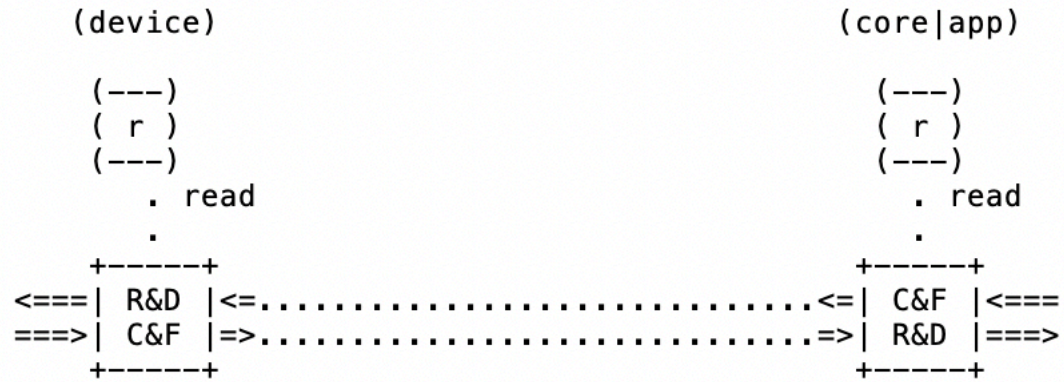
What we learned from SCHC OSCORE



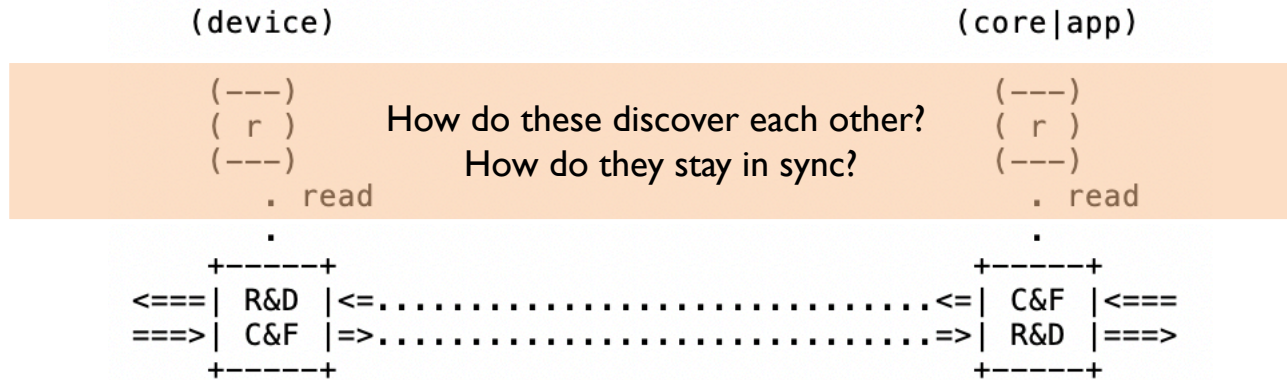
SCHC instances

- Encapsulation of SCHC packets
- Boundaries are not the OSI layers
 - SCHC 1 : compress IPv6 and UDP + Fragmentation
 - SCHC 2 : OSCORE outer
 - SCHC 3 : OSCORE inner
- Each of them has a set of rules
 - Managed by different entities
 - SCHC 1 : network
 - SCHC 2 & 3 : application

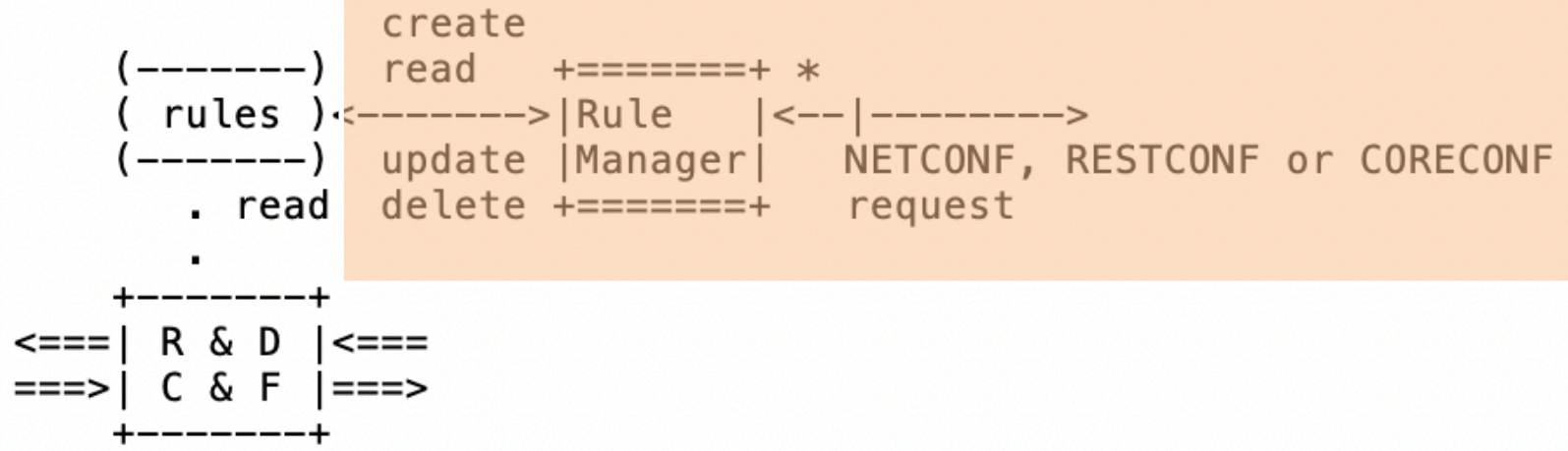
Entities



Entities & interfaces



Entities & Interfaces – zoom in



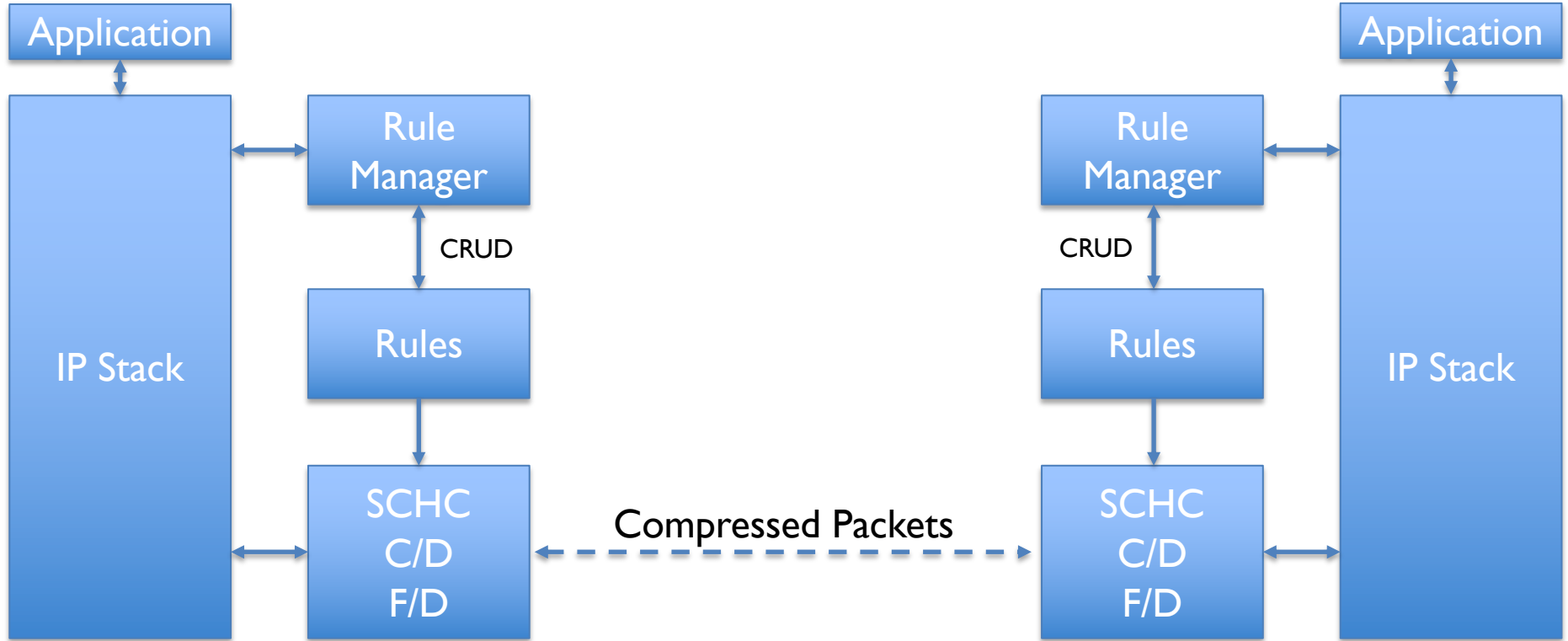
Rule manager

- SCHC RM (Rule Managers) work in pairs
- Rule Manager Interfaces
 - YANG Data Model
 - Protocols: NETCONF, RESTCONF, CORECONF are YANG Native
 - Could be others, e.g. in PPP
 - CORECONF by default (YANG, CoAP and CBOR - native)

Rule manager

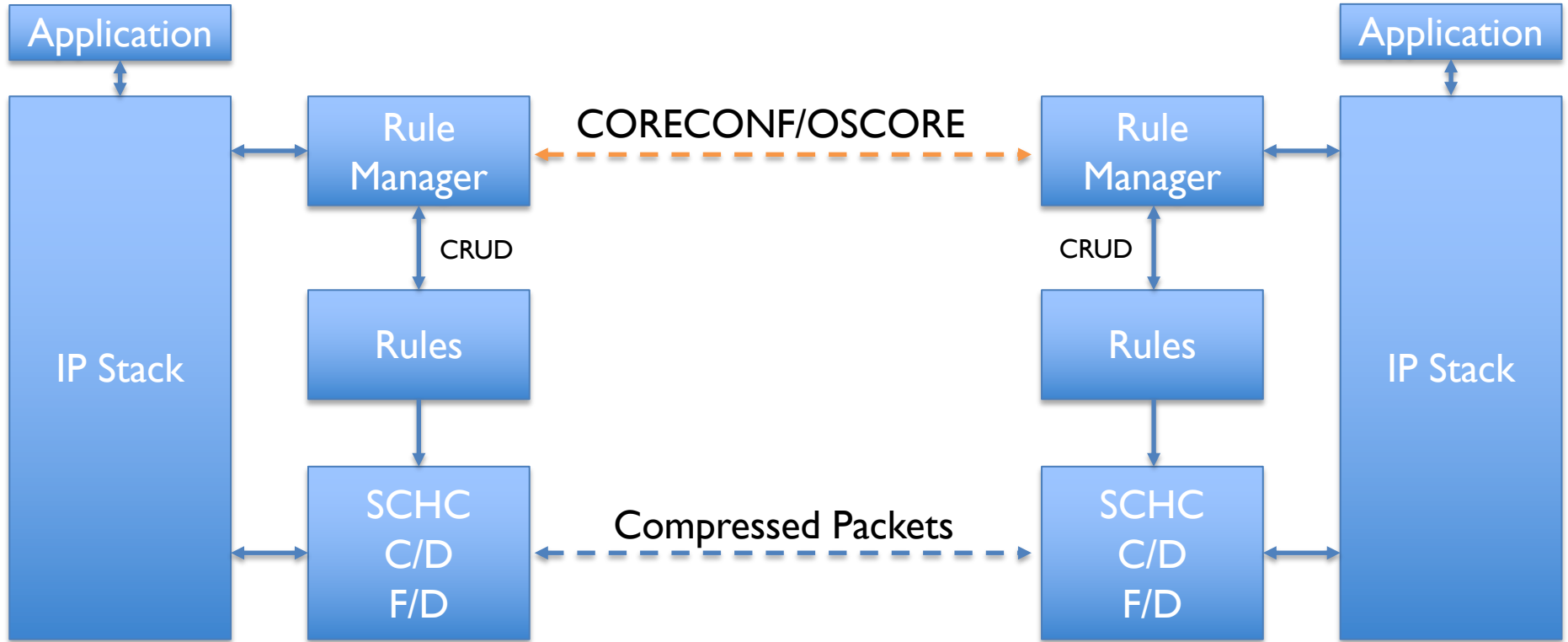
- RMs identification and reachability
 - Link-local IPv6 addresses for network-level SCHC
 - Global IPv6 address for application-level SCHC
 - Also, could reuse application-level protocol, e.g. if CoAP
- RMs security:
 - L2 encryption for network-level SCHC, if sufficient
 - End-to-end encryption for application SCHC
- RM protocol goes through the SCHC C/D with CoAP/OSCORE

Example of Network-level SCHC

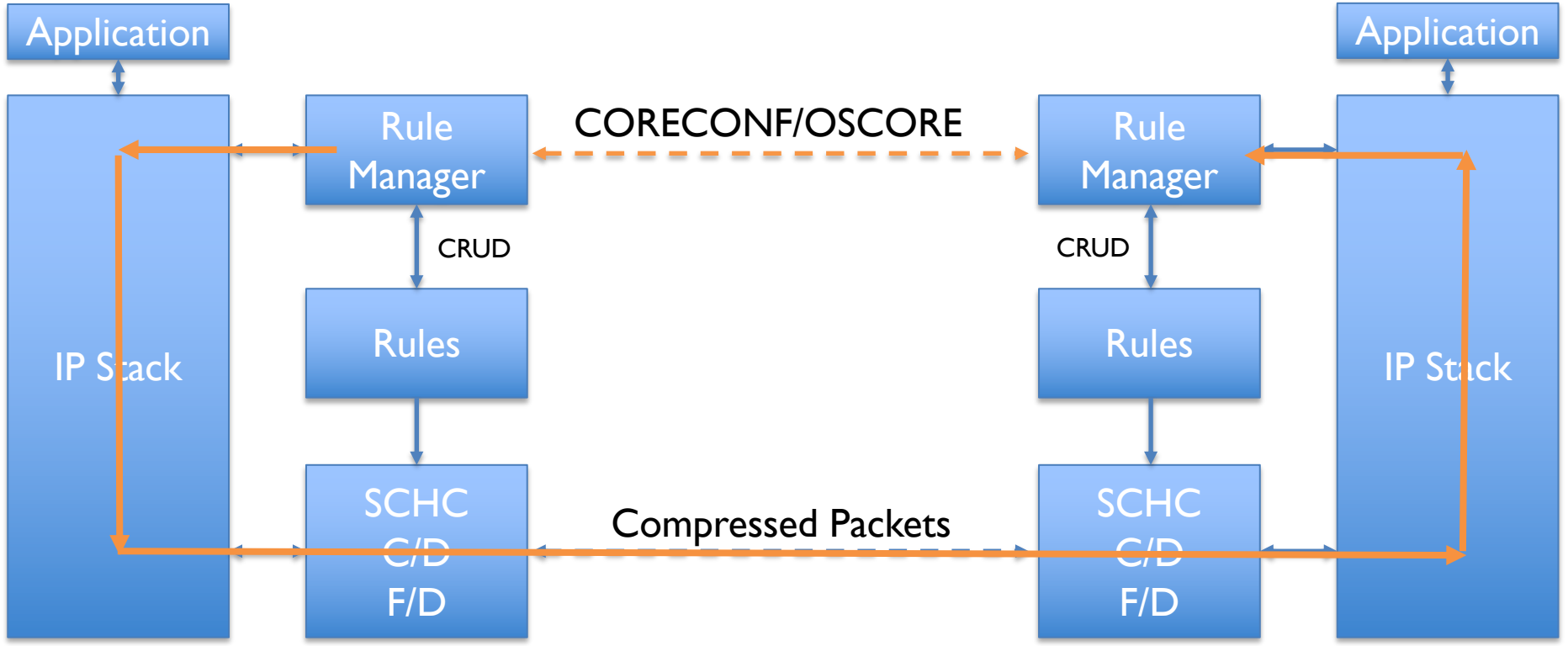


Example of Network-level SCHC

LPWAN



Example of Network-level SCHC



Next

- Use-case covered
- Message flows
- Other?

AOB ?