The Little Picture (NoSec mode)
The Little Picture (NoSec with proxy)
RFC7252: CoAP-over-DTLS PSK
RFC8180: Minimal 6TiSCH, and IEEE 802.15.4
The Big Picture I

Dev. OSCORE CoAP 6TISCH

Border Router

CoAP OSCORE App.
RFC9031: Constrained Join Protocol for 6TiSCH
draft-ietf-ace-oscore-profile
Excursion: COSE

- RFC8152: COSE – CBOR Object Signing and Encryption
- RFC8392: CWT – CBOR Web Token
- RFC9019: SUIT – A Firmware Update Architecture for Internet of Things
The Big Picture II

ACE-OSC.

OSCORE

CoAP

6TISCH

CoJP

OSCORE

CoJP

6TISCH

Authorization Server (AS)

Join Registrar / Coordinator (JRC)

ACE-OSC.

CoAP

OSCORE

App.
draft-ietf-lake-edhoc

with optimizations for single round trip before OSCORE in draft-ietf-core-oscore-edhoc
draft-ietf-ace-wg-coap-eap

EAP-CoAP
RFC7252: CoAP-over-DTLS (other modes)
RFC8995: BRSKI

with CoAP mapping from draft-ietf-ace-coap-est
with just two messages before payload is exchanged
The Big Picture III

- Application
- Authorization Server (AS)
- CoAP
- OSCORE
- 6TISCH

Join Registrar / Coordinator (JRC)

- ACE
- OSCORE
- EDHOC

ACE-OSC.

- AKE-AUTHZ

- CoAP
- OSCORE
- 6TISCH

CoJP

- OSCORE
- CoJP
- AKE-AUTHZ

ACE-OSC.

- EDHOC

CWT
The Big Picture – with RIOT in 2022?
Thanks for having me here

Slides and more links on
http://christian.amsuess.com/presentations/2021/summit-core/