CBOR and/or JSON

Format for Authorizatrion Server communication and token formats.

Current draft

- " COSE_Key or JWK"
- ...but all examples in in CBOR
- Missing a lof of defintions.
- Question to WG: What alternative is best?

The alternatives going forward

- Defines components and in what spec they should be standalized.
- Components needed:
  - CoAP resources needed on the AS (token and introspection)
  - Normative sections for CBOR and/or JSON.
  - Extensions to JWT and CWT for aif and cnf.
  - Extensions to introspection for aif and cnf.
  - Extensions to HTTP implementations to carry ACE information like csp.

The alternatives and the implications.

- Alternative 1: CBOR and JSON and all components to make CoAP work.
- Alternative 2: CBOR only and extend later on with JSON.
- Alternative 3: JSON only and extend in parallell with CBOR.
- Alternative 4: CBOR and JSON and support for both CoAP and HTTP.

Alternative 1: CBOR and JSON and all components to make CoAP work.

ACE Framework

CoAP token Resource	CoAP introspection Resource	
Normative CBOR definition	Normative JSON definition	aif in JWT
aif in CoAP introspection in JSON	aif in CoAP introspection in CBOR	aif in CWT
cnf in CoAP introspection in JSON	cnf in CoAP introspection in CBOR	cnf in CWT
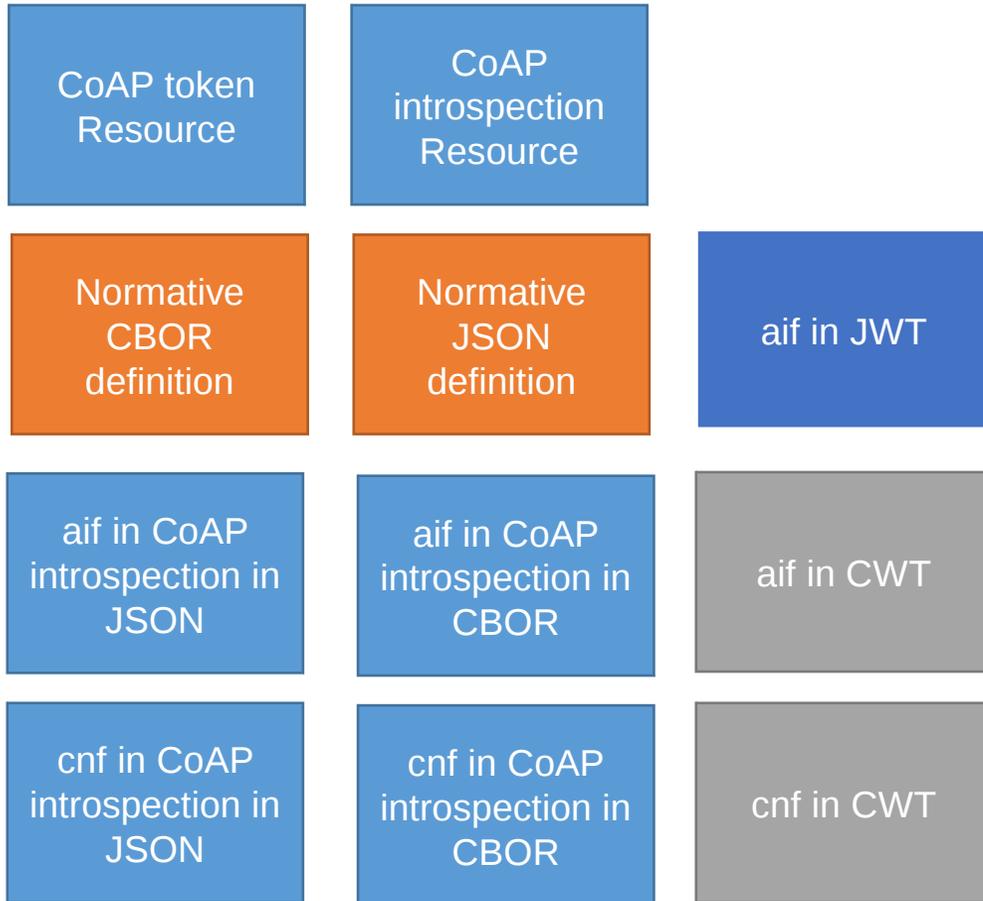
Future draft for constrained devices

aif in HTTP introspection

Future draft for unconstrained C talking to constrained RS

csp in HTTP token response

Future introspection extension

cnf in HTTP introspection

draft-ietf-oauth-proof-of-possession (editors que)

cnf in JWT

PRO:
- Matches industris current usage of both JSON and CBOR

CON:
- A lot to extend and specify.
- HTTP based ACE drafts are small and very detailed.

Alternative 2: CBOR only and extend later on with JSON.

ACE Framework

- CoAP token Resource
- CoAP introspection Resource
- Normative CBOR definition
- aif in CoAP introspection in CBOR
- aif in CWT
- cnf in CoAP introspection in CBOR
- cnf in CWT
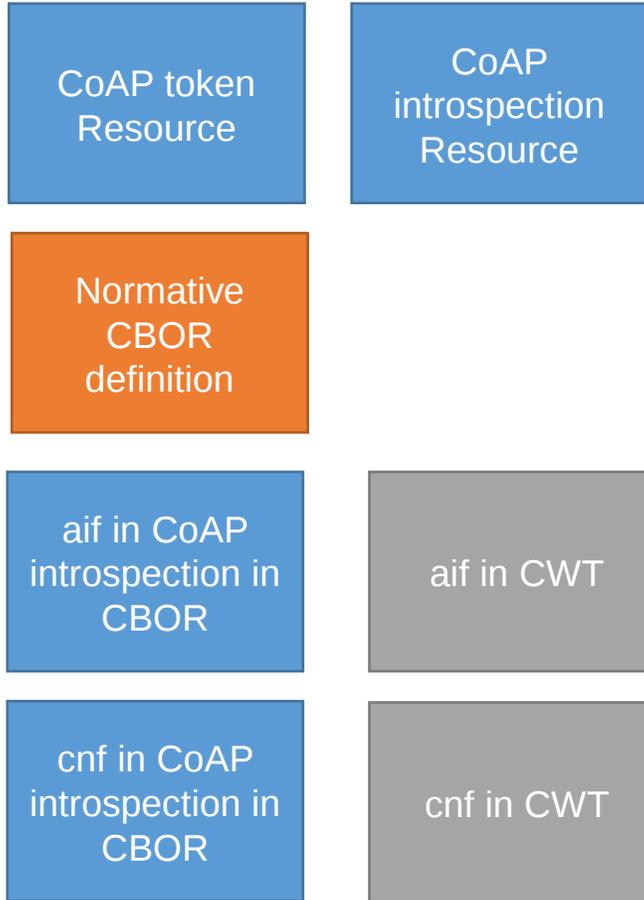
New draft for JSON in ACE Framework
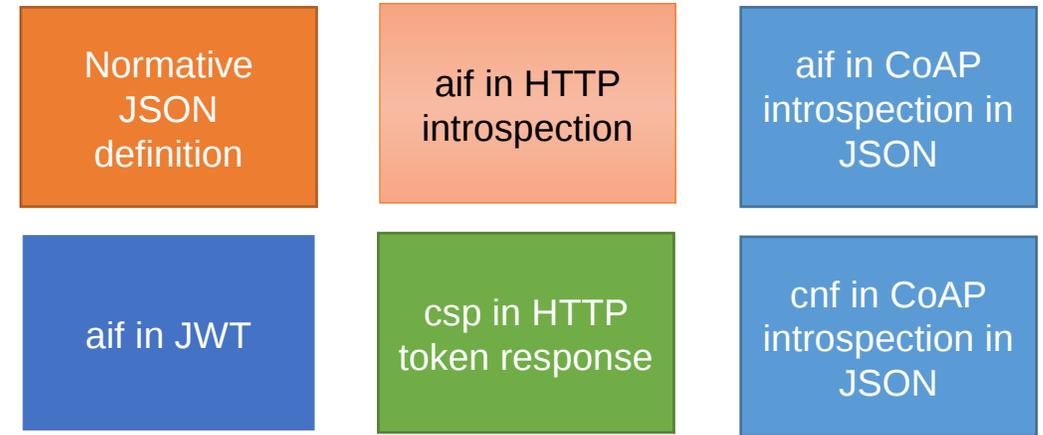
- Normative JSON definition
- aif in HTTP introspection
- aif in CoAP introspection in JSON
- aif in JWT
- csp in HTTP token response
- cnf in CoAP introspection in JSON

Future introspection extension

- cnf in HTTP introspection

draft-ietf-oauth-proof-of-possession (CONtors que)

- cnf in JWT

PRO:
- Small spec but harder to map to existing IAM

CON:
- Usage of inmature components linstead of existing once.

Alternative 3: JSON only and extend in parallell with CBOR.

ACE Framework

CoAP token Resource	CoAP introspection Resource
Normative JSON definition	csp in HTTP token response
aif in CoAP introspection in JSON	aif in HTTP introspection
cnf in CoAP introspection in JSON	aif in JWT
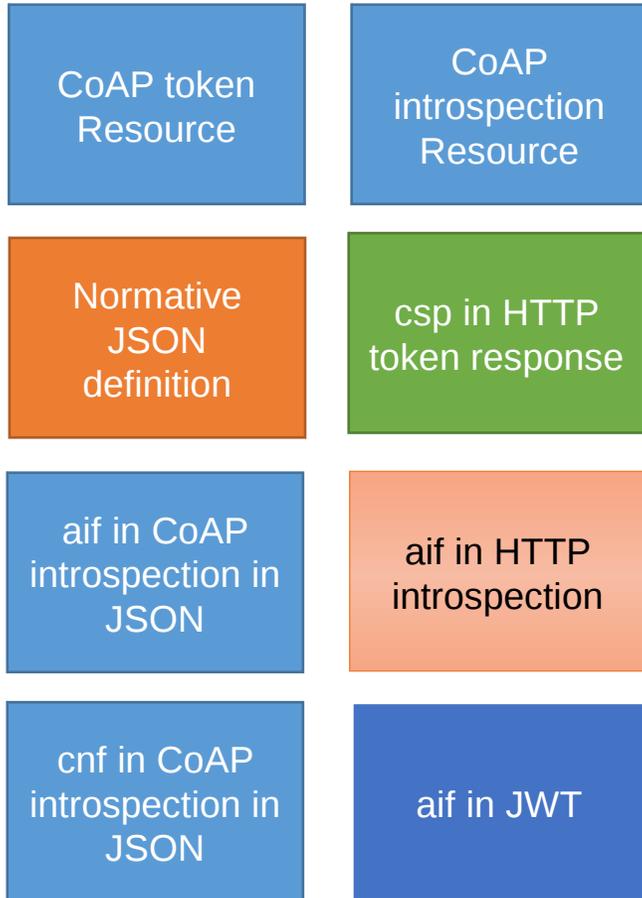
New draft for CBOR in ACE Framework

Normative CBOR definition	aif in CWT	aif CoAP introspection in CBOR
	cnf in CWT	cnf in CoAP introspection in CBOR

Future Introspection extension

cnf in HTTP introspection

draft-ietf-oauth-proof-of-possession (editors que)

cnf in JWT

PRO:
- Small spec using existing tech.

CON:
- Is payloads small enough?

Alternative 4: CBOR and JSON and support for both CoAP and HTTP.

ACE Framework
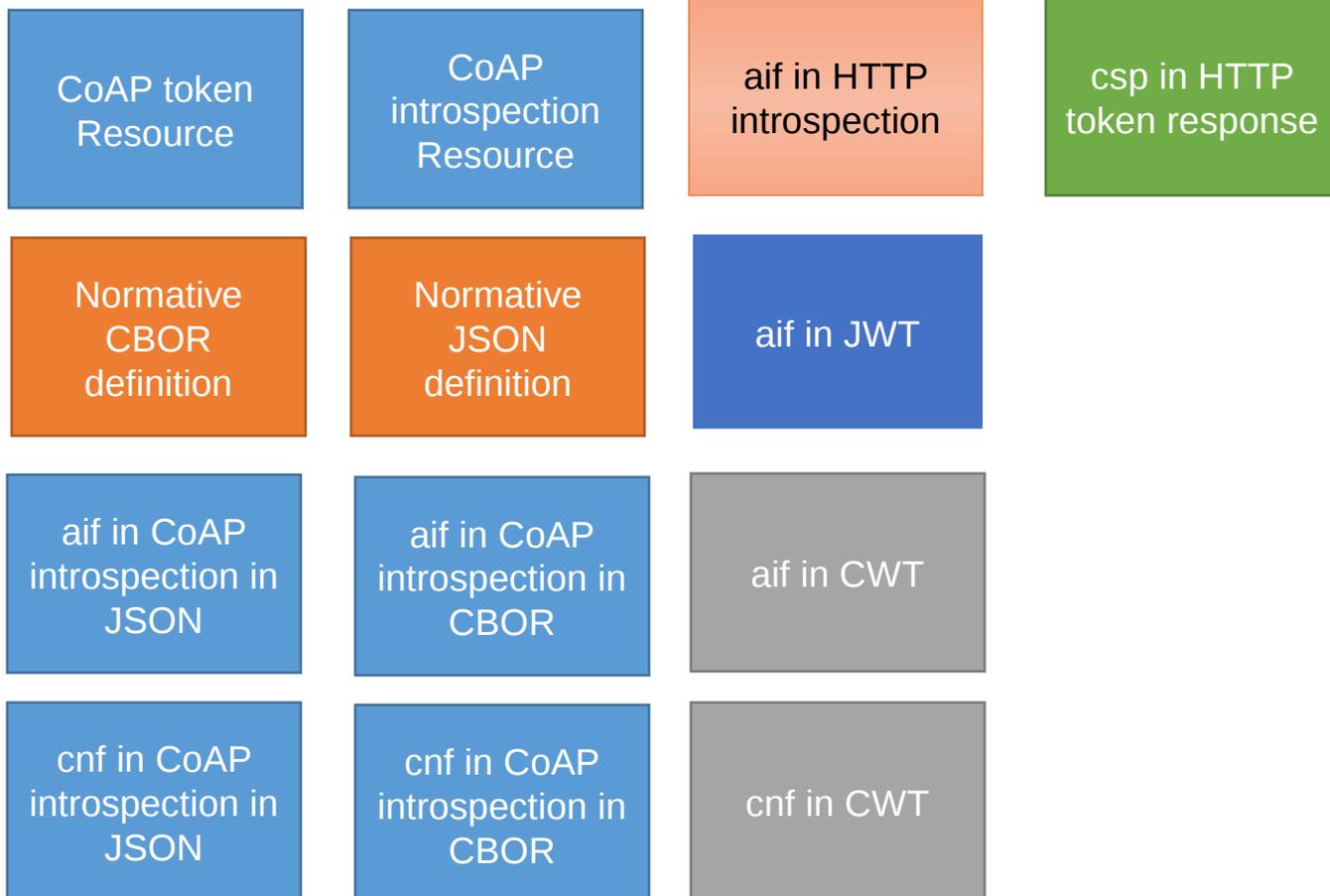
CoAP token Resource	CoAP introspection Resource	aif in HTTP introspection	csp in HTTP token response
Normative CBOR definition	Normative JSON definition	aif in JWT	
aif in CoAP introspection in JSON	aif in CoAP introspection in CBOR	aif in CWT	
cnf in CoAP introspection in JSON	cnf in CoAP introspection in CBOR	cnf in CWT	

Future introspection extension

cnf in HTTP introspection

draft-ietf-oauth-proof-of-possession (editors que)

cnf in JWT

PRO:
- Everything in one spec.

CON:
-    Potential interop problems.

Question to WG: What alternative is best?

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- Alternative 4: CBOR and JSON and support for both CoAP and HTTP.