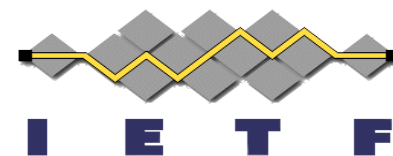


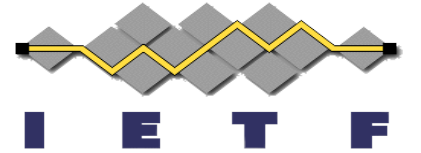
COSE "typ" (type) Header Parameter

[draft-jones-cose-typ-header-parameter](#)

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IETF 117, San Francisco
July 24, 2023

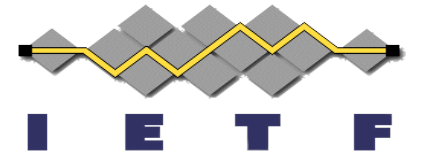


What Does It Do?



- Adds the `typ` to COSE Protected Header
 - Enables typing the entire COSE structure using registered media types
 - While COSE included “content type” paralleling the JOSE “cty”, it failed to include the equivalent of “typ”.

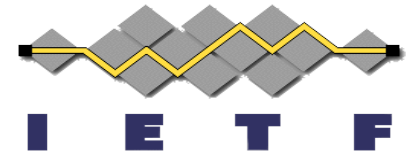
Why Do It?



- Enable explicit typing, in parallel with the [JWT BCP](#)
- Consistently distinguishing “envelope” and “payload” media types, as [discussed on the list](#):
 - `typ: application/foo+yaml+jose`
 - `cty: application/yaml`

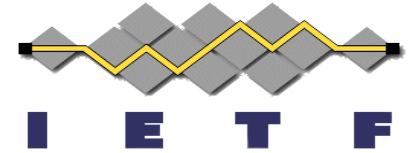
 - `typ: application/foo+json+cose`
 - `content_type: application/json`

Why not just use CBOR tags?



- CBOR tags prefix the COSE structure and are not part of it
 - Therefore, they're not integrity-protected and might be omitted
- “typ” (typ) parallels COSE “content type” and JOSE “typ”
 - Uses CoAP Content-Formats numbers and Media Type strings

Application Examples ([SCITT Receipt](#) & [W3C Verifiable Credentials](#))



```
# COSE_Sign1
18([

# Protected Header
h'a2012...43833633531',
# {
#   "alg" : "ES256",
#   1 : -7,
#   "typ" : "receipt+cose",
#   TBD (requested 14) : h'a2012...43833633531',
#   ... additional application specific headers ...
# }

# Unprotected Header
{
  ....
},

# Protected Payload
...

# Signature
h'486...7f77ea'
])
```

```
# COSE_Sign1
18([

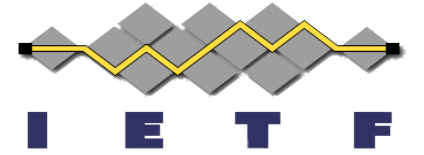
# Protected Header
h'a2012...43833633531',
# {
#   "alg" : "ES384",
#   1 : -35,
#   "typ" : "application/cwt",
#   TBD (requested 14) : 61,
#   ... additional application specific headers ...
# }

# Unprotected Header
{
  ....
},

# Protected Payload
...

# Signature
h'486...7f77ea'
])
```

Status



- Recently published -00
- Need to add CDDL examples

Next Steps

- Review by working group members
- Then consider for working group adoption?

