

Common Access Token

Chris Lemmons

CTA WAVE CAT WG for IETF CDNI WG

2022-06-16

Background

- ▶ CAT is the work of the:
 - ▶ Consumer Technology Association; and
 - ▶ Software Video Alliance
- ▶ Specifically, the Web Application Video Ecosystem
- ▶ Focus: Streaming Media
- ▶ Goal: Single token that covers all existing usage

Background (cont.)

- ▶ CWT-based
- ▶ Receivers **MUST** support most claims
- ▶ No built-in delegation support



What's New?



- ▶ More concrete list of claims
- ▶ Encrypted claims now in a generic composite claim
- ▶ Revamped renewal
- ▶ Still working on the if claim

Core Claims

- ▶ Issuer
- ▶ Subject
- ▶ Audience
- ▶ Expiration
- ▶ Not Before
- ▶ Issued At
- ▶ CWT ID



General CAT Claims

- ▶ Version
- ▶ Network
- ▶ URI Regex
- ▶ URI Hash
- ▶ Method
- ▶ ALPN
- ▶ Header Regexes
- ▶ Geographic Country
- ▶ Geographic Detail
- ▶ TLS Public Key



Composition Claims

These are documented as CAT Claims, but are fully generic.

- ▶ Critical: reference to other required claims
- ▶ Encrypted: COSE object with other claims inside
- ▶ And, Or, and Nor: list of claims for boolean logic

Minimum limits for implementations require four levels of nesting and fifty list elements, but token length maximums can kick in sooner.

Encryption Requirements

- ▶ Must be encrypted:
 - ▶ Network claims more than /24 or /56
 - ▶ Subject claims that identify people
 - ▶ Geographic Detail claims
- ▶ May not be encrypted:
 - ▶ Version claims
 - ▶ Critical claims

Action Claims

- ▶ Renewal: none, cookie, or header
 - ▶ Cookie renewal now has arbitrary parameters that can be specified
- ▶ if: control response when content is not served
 - ▶ Can be used to redirect or set specific error code
 - ▶ Still being worked on

Finishing up

- ▶ Needs restructuring, to make generic sections generic
 - ▶ Matching: Regexes and Hashes
 - ▶ Normalization
 - ▶ Composition
- ▶ Guidance sections
 - ▶ Security



This presentation, brought to you by Public Domain Cats.