Entity Attestation Token (EAT) Collection Type

draft-frost-rats-eat-collection-01

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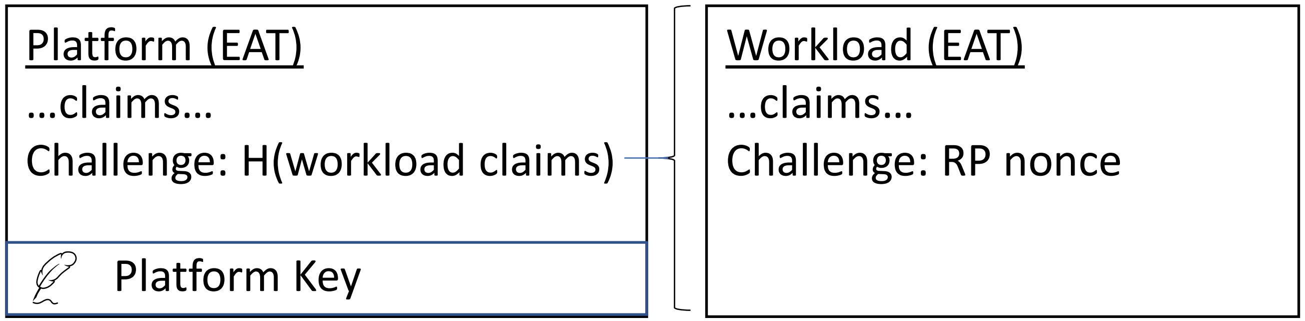
EAT Collections Draft Introduction

- Purpose: an extension for EAT top level object for use cases where there may be no top level signer
- Current EAT needs top level object to be CWT / JWT / DEB
  - exception is UCCS extension, but that is for tightly defined use case
- The Collection extension is used where the overall token is made up of multiple independent tokens with an internally defined integrity relationship
- In particular where the number of tokens present may change
  - or the definition of the leaf signer may vary by deployment
- e.g. migrating info currently defined as x.509 certificate chain to EAT
- e.g. platform / workload token parts from Arm CCA

CCA ‘Direct Sign’ model



Platform (EAT)

…claims…

Challenge: H(workload claims)

Platform Key

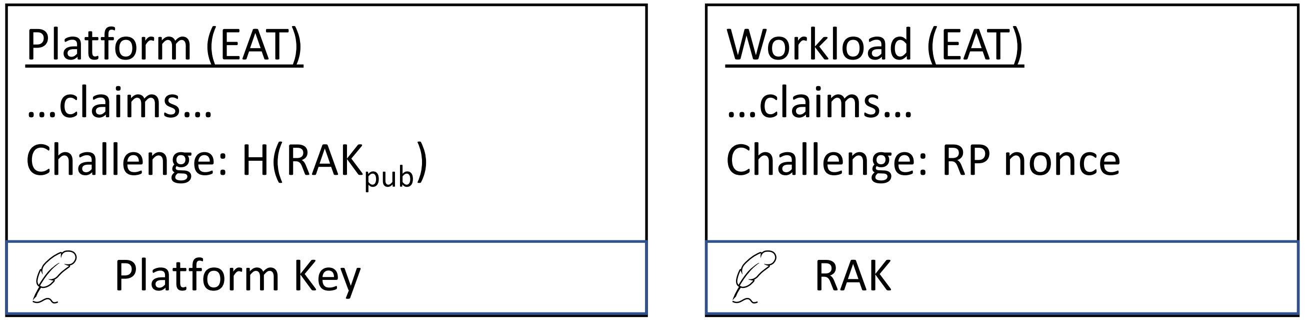
Workload (EAT)

…claims…

Challenge: RP nonce

Could format into single EAT DEB…

CCA ‘Delegated Sign’ model



Platform (EAT)

…claims…

Challenge: H(RAK_{pub})

Platform Key

Workload (EAT)

…claims…

Challenge: RP nonce

RAK

Could format into top level workload with Platform as submod

Future potential to add additional token(s)

TBD…

Significant format & (hence code) change for subtle differences by deployment

…instead, treat as Collection entries

EAT Collections Format

- Tagged Map containing:
- Collection Identifier (optional) -> EAT profile claim
- One or more entries consisting of CWT / JWT / DEB
  - Tags on map entries may be meaningful to the profile
- Each entry must have its own integrity and an integrity relationship to other entries
  - Custom (profile) defined
  - 1:1 or 1:n

EAT Collections Draft Status

- draft-00 released to WG
- draft-01 released addressing review comments from -00
  - CDDL embracing multiple formats for member tokens
  - CDDL allowing 1+ members rather than 2+
  - Greater emphasis on security considerations