Key Management for OSCORE Groups in ACE

draft-ietf-ace-key-groupcomm-oscore-08

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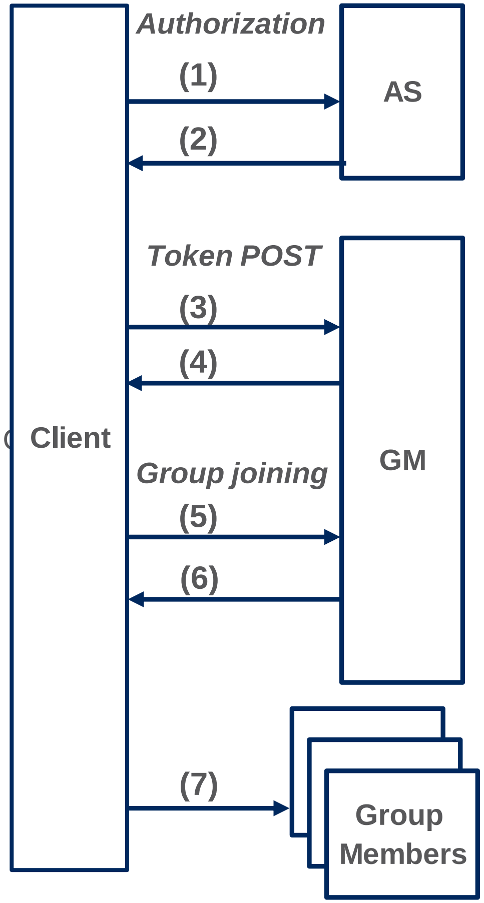
Recap

- Message content and exchanges for:
  - Provisioning keying material to joining nodes and groups (rekeying)
  - Joining an OSCORE group through its Group Manager (GM)
  - More operations for current members at the GM

- Builds on *draf-ietf-ace-key-groupcomm*
  - Agnostic of the ACE transport profile used by C and GM

- Out of Scope:
  - Authorizing access to resources at group members
    - *draft-tiloca-ace-group-oscore-profile*
  - Actual secure communication in the OSCORE group
    - *draft-ietf-core-oscore-groupcomm*



Updates in v -08

- Closed open point on role combinations
  - Now checked by the Group Manager when getting the Joining Request

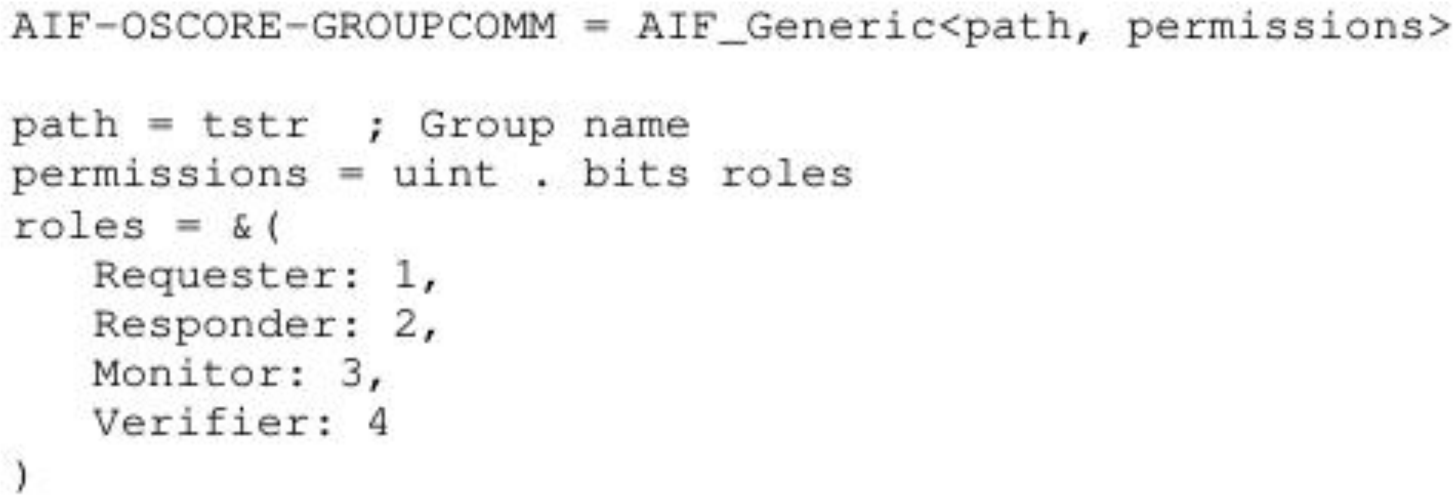
- Parameters ‘cs_alg’, ‘cs_params’, ‘cs_key_params’, ‘cs_key_enc’
  - Default values moved here from *draft-tiloca-ace-oscore-gm-admin*

- The format of ‘scope’ is now based on AIF
  - New AIF specific data model “AIF-OSCORE-GROUPCOMM”
  - AIF-Generic<Toid, Tperm> = [* [Toid, Tperm]]
  - AIF-OSCORE-GROUPCOMM = AIF_Generic<path, permissions>

- Resulting scope format, using AIF-OSCORE-GROUPCOMM
  - scope entry: [Toid, Tperm]
  - scope: << [* [Toid, Tperm]] >>

Updates in v -08

- AIF-OSCORE-GROUPCOMM = AIF_Generic<path, permissions>
  - path → Toid: text string, specifying the group name
  - permissions → Tperm: unsigned integer, encoding the roles for that group



```
AIF-OSCORE-GROUPCOMM = AIF_Generic<path, permissions>

path = tstr   ; Group name
permissions = uint . bits roles
roles = &(
   Requester: 1,
   Responder: 2,
   Monitor: 3,
   Verifier: 4
)
```

- Registered AIF Toid, Tperm, Media Type and Content Format

- Created new registry for Group OSCORE roles

Updates in v -08

- New common format for requesting public keys
  - [[role_combinations], [node_names]]
  - ‘get_pub_keys’ in the Joining Request (the second array is empty)
  - FETCH payload of the request to GROUPNAME/pub-key

- Default values for the group policies
  - Sequence Number Synchronization Method: 1 (“Best Effort”)
  - Key Update Check Interval: 3600
  - Expiration Delta: 0
  - Group OSCORE Pairwise Mode Support: False

Next steps

- Open point
  - ‘clientID’ in the Joining Response is the Sender ID of the joining node
  - It is not related to being exactly client in the group → clarify in next version

- Resource type rt=core.osc.mbr
  - Move registration here from *draft-tiloca-core-oscore-discovery* ?
    - Based on pending decision about Resource Type in *ace-key-groupcomm*
  - If so, different name? E.g., “grp.osc.mbr”

- Interop tests

- Then ready for WGLC (?)

Thank you!

Comments/questions?

https://github.com/ace-wg/ace-key-groupcomm-oscore

Backup slides

Old open point

- Legitimate role combinations
  - Removed role combination [“Requester”, “Monitor”]
  - It doesn’t make sense inside a group. But, **when** should this be checked?

- OLD: the AS checks that, when getting a Token Request:
  - [“Requester”, “Responder”] is valid
  - [“Requester”, “Monitor”] is not valid
  - A node wanting to join first as Requester, then as Monitor needs 2 tokens
  - This should be rather checked by the GM when getting a Joining Request

- NEW: Distinguish ‘scope’ in Token Request and in Joining Request
  - Token Request: any combination of any admitted role is fine
  - Joining Request: any legitimate combination of roles in the token is fine