Dime WG
IETF 86

Diameter Group Signaling
draft-ietf-diameter-group-signaling-00

Wednesday, March 13th, 2013

Lionel Morand
Motivations

- Reduce signaling in those use cases that require many Diameter sessions to be modified or terminated at the same time
- Add group signaling to existing Diameter applications with minimal impact and ambiguity
- Describe the problem space in an application neutral fashion (best practices?) to aid other SDOs in tackling this problem
Two Problem Aspects

1. Managing group assignments
   - How to add or remove sessions from groups
   - Guidelines for modifying group assignments

2. Manipulating groups of sessions
   - Defines new formatting of commands for group operations
   - Defines rules how group operations can be applied to session state machines
Document history & work item status

- draft-ietf-dime-group-signaling-00 published in June 2012 (Expired)
- Needs revision to reflect the WG's common view on how bulk signaling and operations can be accomplished
- Discussion and evaluation of formatting options
- Next: Progress draft towards stable state
Brief Recap

- 2 approaches presented @IETF84
  - dedicated Group Commands
  - single Bulk Operations command
- 3rd approach proposed during the meeting
  - re-using existing Diameter messages and command codes, with additional AVPs.
    - Group-Session-ID AVP, Group-Session-Action AVP
  - WG preferred approach
Reusing Existing Commands: Overview

- Working Assumptions:
  - Minimal impacts on existing implementations
  - Rely on command extensibility capability provided by the Diameter Base protocol.
  - Reuse of existing commands will ease adoption

- Existing command CCF are enhanced with optional [AVPs] providing support of group management
  - e.g. Session-Group-Id AVP, Session-Group-Action AVP

- When included in a command, it is up to the protocol designers to set or clear the M-bit.
Managing group assignments

- Session-Group-Id AVP (M-bit cleared) included in AAR, used to:
  - indicate that the group management feature is supported by the NAS
    - NAS not supporting the capability will not include the AVPs
  - indicate the group Id assigned by the NAS to the session

- Session-Group-Id AVP (M-bit cleared) included in AAA, used to:
  - indicate that the group management feature is supported by the server
    - server not supporting the new AVPs will ignore those received in the request and not include these AVPs in the answer
  - indicate the group Id assigned by the server to the session
Server initiated group re-auth/session abortion:
- Session-Group-Id and Session-Group-Action AVPs (M-bit cleared) included in RAR/ASR in addition to the session-id assigned to one of the user in the group
- the NAS performs the required action for the given session-id and the same action for the other user identified by the Session-Group-Id AVP

Client initiated group session termination
- Session-Group-Id and Session-Group-Action AVPs (M-bit cleared) included in STR
- the server performs the required action for the given session-id and the same action for the other user identified by the Session-Group-Id AVP
Next Steps

- Discussion initiated on the mailing list
  - Setting of the M-bit?
  - Use of the Session-Id AVP?
  - Advertizing support of Group management?
  - Link with Overload Control

- Next Steps:
  - Confirm interest for this work!!!
  - Agree on working assumptions
  - Produce a new version of the draft based on the agreed working assumptions