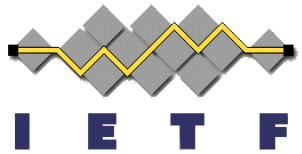
Diameter Group Signaling



Friday, April 8th, 2016

draft-ietf-diameter-group-signaling-06

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IETF 95
Buenos Aires, Argentina

Status

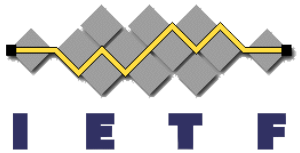
- Version 5 has expired in January 2016..
- Version 6 with minor update published before IETF95
- Comments received

RFC2119 consistency

- Comment from Steve: ”Use of RFC 2119 is not consistent. There are a number of places where lower case must is used, for instance. It would be better to either make those upper case, if that is appropriate, or use a different word.”

- Review complete protocol operation section and fix key words

Server rejection of group assignment



> If the Diameter server receives a command request from a Diameter client and the command comprises at least one Session-Group-Info AVP having the SESSION_GROUP_ALLOCATION_ACTION flag set in the Session-Group-Control-Vector AVP set, the server can accept or reject the request for group assignment. Reasons for rejection may be e.g. lack of resources for managing additional groups. When rejected, the session must not be assigned to any session group but be treated as single session.

- Comment from Steve: “Should we say the client SHOULD retry the request without the session-group AVPs?”

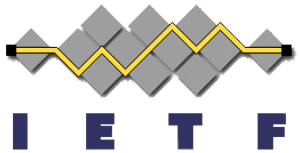
- Currently solved by server response with Session-Group-Control-Vector AVP having the SESSION_ALLOCATION_ACTION cleared. Session survives.
- If acceptable, add clarifying text.

Server partial success of session group assignment

If the Diameter server accepts the client's request for a group assignment, the server **must** assign the new session to each of the one or multiple identified session groups when present in the Session-Group-Info AVP. In case one or multiple identified session groups are not already stored by the server, the server must store the new identified group(s) to its local list of known session groups. When sending the response to the client, e.g. a service-specific auth response as per NASREQ AA-Answer [RFC4005], the server must include all Session-Group-Info AVPs as received in the client's request.

- Comment from Steve: “What if one of a set of session group addition commands fails at the server? Is it all or nothing, meaning that if the server can't add the session to all requested session groups then it must reject the request?”
- “Also, should the first must in the paragraph be MUST?”

Client failure at server's session group assignment

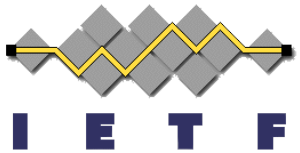


> If the Diameter client receives a response to its previously issued request from the server and the response comprises at least one Session-Group-Info AVP having the SESSION_GROUP_ALLOCATION_ACTION flag of the associated Session-Group-Control-Vector AVP set, the client MUST add the new session to all session groups as identified in the one or multiple Session-Group-Info AVPs.

- Comment from Steve: "What if the a session group addition fails at the client? Should the client terminate the session at that point for force the session-group state in sync?"

- Current: Server does not assign a session to a group if the Client's request does not comprise a Session-Group-Info AVP. Assumes client can handle group.
- Still, in case client fails to handle group, session termination is a solution (rare)

“Hard” server rejection of grouping



A Diameter client, which sent a request for session initiation to a Diameter server and appended a single or multiple Session-Group-Id AVPs but cannot find any Session-Group-Info AVP in the associated response from the Diameter server proceeds as if the request was processed for a single session.

- Comment from Steve: “Does the client continue to include Session-Group AVPs or should the client explicitly remove the session from the session group?”

- For this session the client does not retry to perform/request group assignment
- For other sessions, the client MAY try again (simplistic operation though)
- Clarifying text needed about reason and client action

- Need for rejection cause and associated client action?

Use of Group-Response-Action AVP

The Group-Response-Action AVP (AVP Code TBD4) is of type Unsigned32 and contains a 32-bit address space representing values indicating how the node SHOULD issue follow up exchanges in response to a command which impacts multiple sessions.

ALL_GROUPS (1) Follow up exchanges should be performed with a single message exchange for all impacted groups.
PER_GROUP (2) Follow up exchanges should be performed with a message exchange for each impacted group.
PER_SESSION (3) Follow up exchanges should be performed with a message exchange for each impacted session.

- Comment from Steve: “The use of the Group-Response-Action AVP is not clear. Why would a node put a session in a group and then request it to be treated separately?” “It would help to have some motivational text for why this is needed.”
- Re-authentication must be performed per session.
- Application-specific group re-authentication to be defined (flexibility maintained)

Client action after receiving LIMITED_SUCCESS

When a Diameter node receives a request to process a command for one or more session groups and the result of processing the command succeeds for some sessions identified in one or multiple session groups, but fails for one or more sessions, the Result-Code AVP in the response message SHOULD indicate DIAMETER_LIMITED_SUCCESS as per Section 7.1.2 of [RFC6733]. In case of limited success, the sessions, for which the processing of the group command failed, MUST be identified using a Failed-AVP AVP as per Session 7.5 of [RFC6733].

- Comment from Steve: “What happens to the groups that were successfully set up? Should the client fall back to single session in this case as well?”

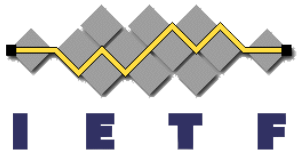
- Client to treat identified sessions, for which the command failed, as single-session commands. Re-try per session?
- Text needed!

Sec. 5: Operation with Proxy Agents

Comment from Steve:

- I'm not convinced that the signaling, as defined is complete enough to ensure that a proxy can be guaranteed to have accurate session-group state.
- For the same reason, it also feels like clients and servers can end up with different views of session-group state.

Next



- Cross-check RFC 2119 consistency and implement key words accordingly
- Resolve and address spotted issues in protocol operation
- Update soon after IETF95 (incl. minor editorial nits)