

Title: LS on use of the Auth-Application-Id AVP
Release: Release 6
Work Item: CH-FBC, QoS1, MBMS

Source: CT3
To: CT4
Cc: SA5, CT

Contact Person:

Name: J. Javier Pastor
E-mail Address: [j.javier.pastor\(AT\)ericsson\(DOT\)com](mailto:j.javier.pastor(AT)ericsson(DOT)com)

Name: Javier Gonzalez Gallego
E-mail Address: [ggfj\(AT\)nortel\(DOT\)com](mailto:gjfj(AT)nortel(DOT)com)

1. Overall Description:

CT3 wants to inform that it has detected some problems in several Diameter commands defined within the IETF. These changes affect to the following CT3 interfaces: Gx, Gmb, Rx and Gq. This problem may also affect other interfaces for what CT3 is not responsible.

The issue is related to the design of the ABNF of some Diameter commands. There are some commands that include a mandatory AVP called Auth-Application-Id. According to the rules stated in Diameter Base Protocol (RFC-3588), all the commands should only contain one of the application identifiers defined (Auth-Application-Id, Acc-Application-Id or Vendor-Specific-Application-Id). The presence of a mandatory Auth-Application-Id AVP avoids the possibility to add the needed Vendor-Specific-Application-Id AVP to carry the vendor application identifiers assigned by IANA to the 3GPP proprietary applications.

To solve this issue, there have been deep discussions within CT3 and with the IETF AAA delegates of the companies involved. Finally there was an agreement to on the solution. The agreement includes the following:

- For the Capabilities-Exchange commands (CER, CEA) there is no issue, and the normal procedure should be applied using the Vendor-Specific-Application-Id AVP.
- For other commands (CCR, CCA, RAR, STR, ASR, AAR, AAA) it has been agreed to use the mandatory Auth-Application-Id AVP to carry the vendor application identifiers assigned by IANA to 3GPP.
This solution allows keeping the mandatory AVPs included in the IETF command ABNF definition unchanged and therefore conserving the assigned command code

The reasons for this agreement can be summarized as follows:

- Diameter Base Protocol (DBP) states that only one AVP including the application identifier can be used at the same time.
- Commands used in DBP, NASREQ application and Credit Control application have the "Auth-Application-Id" AVP as a mandatory AVP, and does not include the "Vendor-Specific-Application-Id" AVP. However, there is a contradictory recommendation that a vendor specific application identifier should use the "Vendor-Specific-Application-Id" AVP in DBP.

- According to IETF policies, the standard Diameter commands must have their mandatory parameters unmodified and always being included in the message. Therefore it is only feasible to add optional AVPs to the already defined AVPs to keep the command code unchanged. Optional AVPs can be added by all the applications that use a particular standard command.
- Changing command codes has a significant cost and requires IETF consensus.
- The numbering space used for the assignment of the application identifiers is shared amongst Auth-Application-Id AVP, Acct-Application-Id AVP and Vendor-Specific-Application-Id AVP and therefore a collision between them is not possible. Then, the reuse of Auth-Application-Id to contain the 3GPP vendor specific application identifiers is feasible.

2. Actions:

To CT4 group.

ACTION:

- CT3 kindly recommends CT4 group to consider the solution agreed in CT3.
- CT3 kindly asks CT4 group to contact IETF to formally state the contradictions and problems described above and for IETF to consider it in their future work with Diameter protocol and applications.

To SA5 group.

ACTION: CT3 kindly recommends SA5 group to consider whether the issues apply to SA5 and if so to take into account the solution agreed in CT3.

3. Date of Next CT3 Meetings:

CT3_37 29th August - 2th September 2005 London