              Diameter Command Code Registration for the
Third Generation Partnership Project (3GPP) Evolved Packet System (EPS)

Status of This Memo

Copyright Notice

Abstract

   This document registers a set of IANA Diameter Command Codes to be
   used in new vendor-specific Diameter applications defined for the
   Third Generation Partnership Project (3GPP) Evolved Packet System
   (EPS). These new Diameter applications are defined for Mobile
   Management Entity (MME)- and Serving GPRS (General Packet Radio
   Service) Support Node (SGSN)-related interfaces in in the
   architecture for the Evolved 3GPP Packet Switched Domain, which is
   also known as the Evolved Packet System (EPS).

Table of Contents

1. Introduction

   The Third Generation Partnership Project (3GPP) is defining the
   Evolved 3GPP Packet Switched Domain - also known as the Evolved
   Packet System (EPS). As part of this architecture, the interfaces
   based on the Diameter protocol [RFC3588] require the definition of
   two new Diameter applications.

   As defined in [TS29.272], the 3GPP S6a/S6d application (vendor-
   specific application id: 16777251) enables the transfer of
   subscriber-related data between the Mobile Management Entity (MME)
   and the Home Subscriber Server (HSS) on the S6a interface and between
   the Serving GPRS Support Node (SGSN) and the Home Subscriber Server
   (HSS) on the S6d interface.

   Also defined in [TS29.272], the 3GPP S13/S13' application (vendor-
   specific application id: 16777252) enables the Mobile Equipment
   Identity check procedure between the Mobile Management Entity (MME)
   and the Equipment Identity Register (EIR) on the S13 interface and
   between the Serving GPRS Support Node (SGSN) and the Equipment
   Identity Register (EIR) on the S13' interface.

   Both Diameter applications are defined under the 3GPP vendor-id
   "10415". This document defines the assigned values of the command
   codes used in these applications.

2. Terminology

   The base Diameter specification (Section 1.3 of [RFC3588]) defines
   most of the terminology used in this document. Additionally, the
   terms and acronyms defined in [TS29.272] are used in this document.

3. Command Codes

   The 3GPP S6a/S6d application described in Section 5 of [TS29.272]
   requires the allocation of command code values for the following
   command pairs:

   o 3GPP-Update-Location-Request/Answer (ULR/ULA)

   o 3GPP-Cancel-Location-Request/Answer (CLR/CLA)

   o 3GPP-Authentication-Information-Request/ Answer (AIR/AIA)

   o 3GPP-Insert-Subscriber-Data-Request/Answer (IDR/IDA)

   o 3GPP-Delete-Subscriber-Data-Request/Answer (DSR/DSA)

   o 3GPP-Purge-UE-Request/Answer (PUR/PUA)

   o 3GPP-Reset-Request/Answer (RSR/RSA)

   o 3GPP-Notify-Request/Answer (NOR/NOA)

   The 3GPP S13/S13 application described in Section 6 of [TS29.272]
   requires the allocation of a command code value for the following
   command pair:

   o 3GPP-ME-Identity-Check-Request/Answer (ECR/ECA)

4. IANA Considerations

   This section provides guidance to the Internet Assigned Numbers
   Authority (IANA) regarding registration of values related to the
   Diameter protocol, in accordance with BCP 26 [RFC5226].

   This document defines values in the namespace that has been defined
   in the Diameter base specification [RFC3588]. Section 11 of
   [RFC3588] (that document's IANA Considerations) details the
   assignment criteria. IANA allocated the following command code
   values:

```
+---------------------------------------------------------------------+
| Code  Command Name                          Abbrev.   Defined in    |
+---------------------------------------------------------------------+
| 316   3GPP-Update-Location-Request          ULR       3GPP TS 29.272 |
| 316   3GPP-Update-Location-Answer           ULA       3GPP TS 29.272 |
| 317   3GPP-Cancel-Location-Request          CLR       3GPP TS 29.272 |
| 317   3GPP-Cancel-Location-Answer           CLA       3GPP TS 29.272 |
| 318   3GPP-Authentication-Information-Request AIR      3GPP TS 29.272 |
| 318   3GPP-Authentication-Information-Answer  AIA      3GPP TS 29.272 |
| 319   3GPP-Insert-Subscriber-Data-Request   IDR       3GPP TS 29.272 |
| 319   3GPP-Insert-Subscriber-Data-Answer    IDA       3GPP TS 29.272 |
| 320   3GPP-Delete-Subscriber-Data-Request   DSR       3GPP TS 29.272 |
| 320   3GPP-Delete-Subscriber-Data-Answer    DSA       3GPP TS 29.272 |
| 321   3GPP-Purge-UE-Request                 PUR       3GPP TS 29.272 |
| 321   3GPP-Purge-UE-Answer                  PUA       3GPP TS 29.272 |
| 322   3GPP-Reset-Request                    RSR       3GPP TS 29.272 |
| 322   3GPP-Reset-Answer                     RSA       3GPP TS 29.272 |
| 323   3GPP-Notify-Request                   NOR       3GPP TS 29.272 |
| 323   3GPP-Notify-Answer                    NOA       3GPP TS 29.272 |
| 324   3GPP-ME-Identity-Check-Request        ECR       3GPP TS 29.272 |
| 324   3GPP-ME-Identity-Check-Answer         ECA       3GPP TS 29.272 |
+---------------------------------------------------------------------+
```

5. Security Considerations

    This document describes command codes used in applications that build
    on top of the Diameter base protocol and the same security
    considerations described in [RFC3588] are applicable to this
    document. No further extensions are required beyond the security
    mechanisms offered by [RFC3588].

6. Acknowledgements

    We would like to thank the 3GPP CT4 delegates, Victor Fajardo, and
    Glen Zorn for their review and comments. We would also like to thank
    Dan Romascanu for volunteering to be AD sponsor and Hannes Tschofenig
    for volunteering to be Document Shepherd.

7. References

7.1. Normative References

   [RFC3588]   Calhoun, P., Loughney, J., Guttman, E., Zorn, G., and J.
                Arkko, "Diameter Base Protocol", RFC 3588,
                September 2003.

   [TS29.272]   3rd Generation Partnership Project, "3GPP TS 29.272;
                Technical Specification Group Core Network and Terminals;
                Evolved Packet System; Mobility Management Entity (MME)
                and Serving GPRS Support Node (SGSN) Related Interfaces
                Based on Diameter Protocol",
                http://www.3gpp.org/ftp/Specs/html-info/29272.htm.

7.2. Informative References

   [RFC5226]   Narten, T. and H. Alvestrand, "Guidelines for Writing an
                IANA Considerations Section in RFCs", BCP 26, RFC 5226,
                May 2008.

Authors' Addresses

   Mark Jones
   Bridgewater Systems

   EMail: mark.jones@bridgewatersystems.com

   Lionel Morand
   Orange Labs

   EMail: lionel.morand@orange-ftgroup.com