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Diameter Policy Processing Application

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Abstract

This document describes the need for a new IANA Diameter Command Code to be used in a vendor-specific new application for invocation of Policy Processing (Policy Evaluation, or Evaluation and Enforcement). This application is needed as one of the implementations of the Open Mobile Alliance (OMA) Policy Evaluation, Enforcement and Management (PEEM) enabler, namely for the PEM-1 interface used to send a request/response for Policy Processing.

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1. Introduction

This document summarizes the use of Diameter codes in a newly defined realization of a specification for invocation of policy processing. A new Command Code has been assigned by IANA. The document summarizes the uses of newly defined Diameter codes (a Command Code, an AVP, and a vendor-specific application id). When combined with the Diameter Base protocol, this application's specification satisfies the Open Mobile Alliance (OMA) Policy Evaluation, Enforcement, and Management (PEEM) requirements for sending a request for policy processing and receiving a response with the policy processing result. See [PEM-1-TS] for the normative use of Diameter. PEEM requirements are documented in [PEEM-RD] and PEEM Architecture is documented in [PEEM-AD].

The Diameter realization of this application assumes the use of the Diameter Base protocol, as per RFC 3588, and extends it only for a specific application using a vendor-id (PEN), a vendor-specific application ID, a new Command Code (314), and a new AVP defined in the vendor-specific namespace. Input to policy processing are being passed through a new AVP, and policy results are being passed through a combination of the same new AVP, and the Experimental-Result AVP.

2. Terminology

The base Diameter specification (Section 1.4 of [RFC3588]) defines most of the terminology used in this document. Additionally, the terms and acronyms defined in [PEM-1-TS] are used in this document.

3. Diameter Policy Processing Application

A detailed description of the Diameter Policy Processing Application can be found in Section 5.4.1 of the Policy Evaluation, Enforcement and Management Callable Interface (PEM-1) Technical Specification [PEM-1-TS].

4. Security Considerations

This document describes the Diameter Policy Processing Application. It builds on top of the Diameter Base protocol and the same security considerations described in RFC 3588 [RFC3588] are applicable to this document. No further extensions are required beyond the security mechanisms offered by RFC 3588.

5. 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 [RFC2434].

This document defines values in the namespaces that have been created and defined in the Diameter Base [RFC3588]. The IANA Considerations section of that document details the assignment criteria. Values assigned in this document, or by future IANA action, must be coordinated within this shared namespace.

5.1. Command Codes

This specification assigns the value 314 from the Command Code namespace defined in [RFC3588]. See Section 5.4.1.3.1 of [PEM-1-TS] to see how the command code is used.

IANA has made the following assignment in the "Authentication, Authorization, and Accounting (AAA) Parameters" registry, in the sub-registry "Command Codes".

Code Value	Name	Reference
314	PDR / PDA	[RFC5224]

5.2. AVP Codes

This specification uses the value 1 for the Policy-Data AVP, in the OMA Vendor-ID (PEN) AVP namespace. See Section 5.4.1.3.3 of [PEM-1-TS] for the assignment of the namespace in this specification.

5.3. Application Identifier

This specification uses the value 16777243 in the Application Identifier namespace as registered in IANA for the Policy Processing Application. See Section 5.4.1.3 of [PEM-1-TS] for more information.

6. Acknowledgements

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Finally, the author would like to thank Alcatel-Lucent, as most of the effort put into this document was done while he was in their employ.

7. References

7.1. Normative References

[PEM-1-TS] Open Mobile Alliance, "Policy Evaluation, Enforcement and Management Callable Interface (PEM-1) Technical Specification, Draft Version 1.0, available at http://www.openmobilealliance.org/ftp/Public_documents/ARCH/Permanent_documents/OMA-TS-PEEM_PEM1-V1_0-20080325-D.zip", December 2007.

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

7.2. Informative References

[PEEM-AD] Open Mobile Alliance, "Policy Evaluation, Enforcement and Management Architecture, Draft Version 1.0, available at http://www.openmobilealliance.org/ftp/Public_documents/ARCH/Permanent_documents/OMA-AD-Policy_Evaluation_Enforcement_Management-V1_0_0-20060625-D.zip", June 2006.

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[RFC2434] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP 26, RFC 2434, October 1998.

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