



Diameter Routing Message Priority (DRMP) for S6b Interface

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Feature Information

Summary Data

Status	New Functionality
Introduced-In Release	21.2
Modified-In Release(s)	Not Applicable
Applicable Product(s)	All products using Diameter S6b interface
Applicable Platform(s)	ASR 5500
Default Setting	Disabled
Related CDETS ID(s)	CSCvc77714
Related Changes in This Release	Not Applicable
Related Documentation	AAA Interface Administration and Reference Command Line Interface Reference

Revision History



Important Revision history details are not provided for features introduced before release 21.2.

Revision Details	Release	Release Date
New in this release.	21.2	April 27, 2017

Feature Description

The Diameter nodes can pass overload information with the introduction of Diameter Overload Indication Conveyance (DOIC) specification. The current techniques used by the Diameter agents using S6b interface to prioritize the Diameter messages are based on static configuration in the agents. There are different use cases and needs that require a standard mechanism to choose which messages get throttled or discarded, when they go to act on the Overload information.

DRMP is a new AVP that signifies the relative priority of Diameter messages which can be used to make routing and throttling decisions. The DRMP (AVP code 301) is of type Enumerated. The value of the AVP indicates the routing message priority of the message.

How it Works

This feature allows sending of DRMP AVP in the Authentication/Authorization Request (AAR) and Session-Termination-Request (STR) messages in S6b interface through a configurable CLI command. The value to be sent in this AVP can be configured through the newly introduced CLI command, specifically and independently for below 3 types of messages:

1. AAR-Initial: The AAR message that is sent during PDN creation.
2. AAR-Interim: The AAR message that is sent during different types of Handovers and after expiry of Authorize lifetime timer, or any other AAR not sent as a part of PDN creation.
3. STR: The STR message that is sent during the PDN deletion.

When the CLI is not configured, there will not be any change in behavior and the DRMP AVP will not be sent in any message. In order to enable this feature and send DRMP AVP in the mentioned diameter messages, the CLI needs to be explicitly configured with either default or relevant values.

Standards Compliance

This feature complies with the following standard(s):

- 3GPP TS 29.273 - 3GPP EPS AAA interfaces

Configuring DRMP for S6b Interface

This section explains the configuration procedures required to enable or disable the feature.

Enabling or Disabling DRMP AVP in S6b Interface

Use the following configuration under the AAA Server Group Configuration Mode to enable or disable the inclusion of DRMP AVP in S6b communication and to configure DRMP value based on AAR-Initial, AAR-Interim and STR message types:

```
configure
  context <context_name>
    aaa group <group_name>
      diameter authentication drmp [ [ aar-initial <drmp-value> [ aar-interim
<drmp-value> [ str <drmp-value> ] ] ] | [ aar-initial <drmp-value> [ str
<drmp-value> [ aar-interim <drmp-value> ] ] ] | [ aar-interim <drmp-value> [
aar-initial <drmp-value> [ str <drmp-value> ] ] ] | [ aar-interim <drmp-value>
[ str <drmp-value> [ aar-initial <drmp-value> ] ] ] | [ str <drmp-value> [
aar-interim <drmp-value> [ aar-initial <drmp-value> ] ] ] | [ str
<drmp-value> [ aar-initial <drmp-value> [ aar-interim <drmp-value> ] ] ] ]
      end
```

Notes:

- **drmp:** Specifies the settings of Diameter Routing Message Priority.
- **aar-initial:** Includes the DRMP value in AAR-initial message. The default value is 10.
- **aar-interim:** Includes the DRMP value in AAR-interim message. The default value is 10.
- **str:** Includes the DRMP value in STR message. The default value is 10.
- *drmp-value:* Specifies the DRMP value and must be an integer from 0 through 15. Zero (0) has the highest priority and 15 has the lowest. That is, lower the value, higher the priority. The above command will individually configure DRMP values for the AAR-initial, AAR-interim and STR messages.
- If previously configured, use the **no diameter authentication drmp** command to prevent encoding of DRMP AVP in S6b messages. The **no diameter authentication drmp** command is the default configuration.
- If message type priority is not specified in the CLI, default value (10) will be used. The last configured CLI line will override all values previously configured, irrespective of how many priorities are explicitly configured.
- In case of configuring specific values for message types, each time the CLI is invoked, all the 3 values will be modified with the new values. If a value is not specified in CLI, it will be overwritten by default value, which is 10.

Monitoring and Troubleshooting

The following sections describe commands available to monitor the feature.

Show Commands and Outputs

This section provides information regarding show commands and their outputs for the DRMP for S6b feature.

show aaa group { name group_name | all }

The output of the above command has been enhanced to display the new (DRMP) parameter. The following sample display is only a portion of the output:

```

Group name:          default
Context:            pgw
Diameter config:
Authentication:
Strip-leading-digit user-name:  Disabled
DRMP: AAR-Initial 10 AAR-Interim 10 STR 10

```

where:

- **DRMP:** Displays the status as 'Disabled' if it's not configured through the CLI. When enabled, it displays the priority values for the corresponding messages.

show configuration [verbose]

The output of the above command has been enhanced to display the following new fields:

```
diameter authentication drmp aar-initial <value> aar-interim <value> str <value>
```

where:

- **drmp:** Indicates Diameter Routing Message Priority.
- **<value>:** Indicates the configured priority values for the corresponding messages.