ePDG Modify Bearer Command Support

The Modify Bearer Command (MBC) is sent on the S2b interface by ePDG to PGW as part of the HSS Initiated Subscribed QoS Modification procedure. ePDG receives the modified QoS from 3gpp-AAA in Authorization-Authentication-Answer (AAA) message during AAA/ePDG initiated re-authorization procedure. If QCI and/or ARP and/or subscribed APN-AMBR changes, MBC is triggered. Please note that it is sent only for default bearer. Upon receiving it, PGW will send Update Bearer Request. Handling of update bearer request on ePDG will not be changed. If QoS modification fails on PGW, it will send Modify Bearer Failure Indication to ePDG. The ePDG will not take any action on it. ePDG will generate LI event regarding failure indication.

Description

Modify Bearer Command (MBC) to PGW

1. MBC is sent on S2b interface by the ePDG to the PGW as part of the HSS Initiated Subscribed QoS Modification procedure.

2. It is done as part of 3GPP-AAA or ePDG initiated Re-authorization procedure.

3. In Authorization Authenticate Answer message, if result is DIAMETER_SUCCESS, AAA sends APN-Configuration AVP which will contain AMBR and EPS-Subscribed-QoS Profile.

4. If ambr or QoS value is changed, then MBC is sent to PGW, to start Update Bearer Request procedure.

Modify Bearer Failure Indication from PGW (MBC) to PGW

1. MBC is sent on S2b interface by the ePDG to the PGW as part of the HSS Initiated Subscribed QoS Modification procedure.

2. It is done as part of 3GPP-AAA or ePDG initiated Re-authorization procedure.

3. In Authorization Authenticate Answer message, if result is DIAMETER_SUCCESS, AAA sends APN-Configuration AVP which will contain AMBR and EPS-Subscribed-QoS Profile.

4. If ambr or QoS value is changed, then MBC is sent to PGW, to start Update Bearer Request procedure.

5. If PGW is not able to update AMBR or QoS (may be due to PCC infra), then it will send Modify Bearer Failure Indication to ePDG.

6. Currently there is no action defined if ePDG receives Modify Bearer Failure Indication.

Scope and Assumptions

- MBC is sent only for default bearer update for apn-ambr or qci or arp update.

- This feature is enabled by default.

- Currently there is no failure handling needed for Modify Bearer Failure Indication received if PGW is not able to update QoS profile.

- There is no change required to current implementation of Update Bearer Request and Update Bearer Response procedure handling on ePDG.

- There is no change required to current implementation of RAR/RAA and AAR/AAA message handling on ePDG.

- No SR / ICSR changes is required, as the final outcome for this feature is Update Beare Req/Rsp, which is already supported.

ePDG Modify Bearer Command Support Configuration

As part of ePDG Modify Bearer Command Support feature below show commands output used: **show egtpc statistics interfae epdg-egress**

Modify Barer Command

- Total TX

- Total RX

- Initial TX

- Initial RX

- Retrans TX

- Retrans RX

- Discarded

- No Rsp RX

Modify Bearer Failure Indication:

- Total TX

- Total RX

- Initial TX

- Initial RX

- Retrans TX

- Discarded

As part of ePDG Modify Bearer Command Support feature below stat is added in ePDG and ePDG APN Schema:

- sess-disconnect-s2b-context-not-found

As part of ePDG Modify Bearer Command Support feature below disconnect reason is added:

- Gtpv2-context-not-found(627)