Adding Cause Code 38 to Bulkschema Counters

Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	MME
Applicable Platform(s)	• ASR 5500 • VPC-DI • VPC-SI
Feature Default	Disabled - Configuration Required
Related Changes in This Release	Not applicable
Related Documentation	• *Command Line Interface Reference* • *MME Administration Guide* • *Statistics and Counters Reference*

Revision History

Revision Details	Release
First introduced	21.21

Feature Description

EPS Session Management (ESM) network failures are caused by a rejection of P-GW/S-GW and this failure occurs during UE attachment process. The failure contributes to around 3% decrease in SR statistics calculations resulting in ESM Failure Cause Code 38 network failure.

As this failure is not added as a part of the EMM/ESM statistics, it is not used to exclude the failure during 4G attach SR statistic calculations. To overcome the decreasing calculation value in SR Statistics, a new schema MME Bulk statistics is implemented in EMM and ESM Failure Statistics.

It is done by isolating the Network Failure while performing the required SR calculations. These "Network Failure" is added in EMM, ESM, TAI, and PEER-ID statistics in MME-SERVICE.

Verifying the Added Bulk Statistics Network Failure in EMM and ESM MME-Service Statistics

Use the following command to display and verify the network failure fields in EMM and ESM MME-Service Statistics.

show mme-service statistics { { emm-only verbose } | { esm-only verbose } | { tai taidb *taidb_value* **mcc** *mcc_value***mnc** *mnc_value* **tac** *tac_value* **} | { peer-id** *id_value* **}}**

Monitoring and Troubleshooting

This section provides information regarding the show commands and bulk statistics network failure in emm and esm mme-service.

Show Commands and Outputs

show mme-service statistics emm-only verbose | tai taidb <taidb_value> mcc <mcc_value> mnc <mnc_value> tac <tac_value> | peer-id <peer_id>

The output of this command displays the total ESM failure in EMM control messages including the following newly introduced field:

• Network failure—Displays the total number of network failures during UE attachment with pdn process.

show mme-service statistics esm-only verbose | tai taidb <taidb_value> mcc <mcc_value> mnc <mnc_value> tac <tac_value> | peer-id <peer_id>

The output of this command displays the PDN Connectivity Reject fields in ESM control messages including the following newly introduced field under PDN connectivity reject:

• Network failure—Displays the total number of network failures during seperate PDN request after attach complete process.

Bulk Statistics

The following bulk statistics are added in the MME and TAI Schema:

emm-msgtx-attach-rej-38network-fail	Displays the total number of attach reject with cause code 38 in attach with PDN request.
esm-msgtx-pdncon-rej-38network-fail	Displays the total number of PDN request reject with cause code 38 in additional PDN request
tai-emm-msgtx-attach-rej-38network-fail	Displays the total number of attach reject with cause code 38 in attach with PDN request using mcc, mnc and tac value.
tai-esm-msgtx-pdncon-rej-38network-fail	Displays the total number of PDN request reject with cause code 38 in additional PDN request using mcc, mnc and tac value.