



MME Support for Service Impacting KPI Bulk Statistics

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Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	MME
Applicable Platform(s)	<ul style="list-style-type: none">• ASR 5500• VPC-DI• VPC-SI
Default Setting	Enabled - Always On
Related Changes in This Release	Not Applicable
Related Documentation	<ul style="list-style-type: none">• <i>MME Administration Guide</i>• <i>Statistics and Counters Reference</i>

Revision History

Revision Details	Release
Introduced to 21.12 release.	21.12.12
First introduced.	21.11.3

Feature Description

New Counters under show command outputs and bulk statistics are introduced to improve debugging and health monitoring.

Monitoring and Troubleshooting

This section provides information regarding show commands available to monitor and troubleshoot the MME Support for Service impacting KPI Bulk Statistics.

Show Commands and Outputs

show mme-service statistics recovered-values

The output of this command includes the following fields:

EMM Control Messages:

- Congestion
- Protocol Errors
- Svc Opt Tmp OutOfOrder
- Authentication Fail
- Authentication Failed
- Insufficient Resource
- Severe Network Failure
- Network Failure
- Rejected By PGW/SGW
- Activation Rejected

Procedure Failure Reasons:

- Max retx auth req
- Max retx sec mode cmd
- Max retx attach accept
- Setup timeout expiry
- SCTP/S1-failure
- Internal guard timeout
- Max retx ESM info req

Bulk Statistics

The following bulk statistics variables are added in the mme-bk schema:

Bulk Statistics	Description
recovered-emm-msgtx-attach-reject-congestion	The total number of EMM Attach Reject messages sent with cause code 22.
recovered-emm-msgtx-attach-rej-protocol-error	The total number of EMM Attach Reject messages sent due to an ESM procedure failure with any of the following Protocol Error cause codes 95-101, or 111.
recovered-emm-msgtx-attach-rej-svc-temp-out-of-order	The total number of EMM Attach Reject messages sent due to an ESM procedure failure with cause code 34 - Service Option Temporarily Out of Order.
recovered-emm-msgtx-attach-auth-failed	The total number of authentication failed and an Attach Accept or Reject message is not sent.
recovered-attach-proc-fail-max-retx-auth-req	The total number of attach-triggered authentication procedures failed due to maximum retransmissions of authentication request.
recovered-attach-proc-fail-max-retx-sec-mode-cmd	The total number of attach-triggered authentication procedures failed due to maximum retransmissions of security mode command.
recovered-attach-proc-fail-max-retx-attach-accept	The total number of attach procedures failed due to maximum retransmissions of attach accept.
recovered-attach-proc-fail-setup-timeout-exp	The total number of attach procedure cleared due to expiry of setup-timeout.
recovered-attach-proc-fail-sctp-fail	The total number of attach procedures cleared due to SCTP down.
recovered-attach-proc-fail-guard-timeout-exp	The total number of attach procedures cleared due to expiry of internal guard timer. This also includes internal guard timeout of authentication procedure. If authentication procedure is called, and authentication procedure aborts due to its guard timer, the counter will be accounted for in attach procedure.
recovered-attach-proc-fail-max-retx-esm-info-req	The total number of attach procedures failed due to maximum retransmissions of ESM info request.
recovered-emm-msgtx-attach-rej-gw-auth-failed	The total number of EMM Attach Reject messages sent due to an ESM procedure failure with cause code 29 - User Authentication Failed.
recovered-emm-msgtx-attach-rej-insuff-resources	The total number of EMM Attach Reject messages sent due to an ESM procedure failure with cause code 26 - Insufficient Resources.

Bulk Statistics	Description
recovered-emmm-msgtx-attach-reject-severe-network-failure	The total number of EMM Attach Reject messages sent with cause 42 - Severe Network Failure.
recovered-emmm-msgtx-network-failure	The total number of EMM Attach Reject messages sent with the cause code 17 - Network Failure.
recovered-emmm-msgtx-attach-rej-gw-reject	The total number of EMM Attach Reject messages sent due to an ESM procedure failure with cause code 30 - Rejected by SGW or P-GW.
recovered-emmm-msgtx-attach-rej-activation-reject	The total number of EMM Attach Reject messages sent due to an ESM procedure failure with cause code 31- Request rejected, unspecified.
recovered-emmm-msgtx-tau-network-fail	The total number of TAU Reject messages sent (for either an Inter-node or Intra-MME TAU request), with a cause code of 17 - Network failure.