

Customized Interface Between MME/SGSN and GMPC

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Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	MME/SGSN
Applicable Platform(s)	• ASR 5000 • ASR 5500 • VPC-DI • VPC-SI
Feature Default	Disabled - Configuration Required
Related Changes in This Release	Not applicable
Related Documentation	• *AAA Interface Administration and Reference* • *Command Line Interface Reference* • *MME Administration Guide* • *Statistics and Counters Reference*

Table 1: Revision History

Revision Details	Release
First introduced	21.19

Feature Description

In the Customized Interface between MME/SGSN and Gateway Mobile Positioning Center (GMPC), reporting takes place in a new TCP based format to an external Gateway Mobile Positioning Center (GMPC).

The enhanced LBS services for LI enables control nodes to send all the subscriber information including subscription updates like Attach, Detach, Handover and so on, whenever an event gets triggered.

How it Works

In Customized Interface between MME/SGSN and GMPC, by implementing a new session manager event data process, it manages the MME and SGSN events in a similar fashion to that of the EDR/CDR feature, buffers them and transmits the event data through Conn-proxy to the GMPC server.

As per the new customization between Cisco MME/SGSNs and GMPC, the interface is TCP-based and the GMPC works as a server of the TCP connection and listens to a configurable TCP port. Cisco MME/SGSN then initiate the TCP connection to GMPC.

Note Cisco MME/SGSNs must be configured to send the TCP streams towards the LBS Load Balancer and VIP.

The following events take place to trigger Cisco MME/SGSN to send subscriber information:

- ATTACH
- RAU (SGSN RAU)
- ISRAU (Inter SGSN RAU)
- DEACTIVATE (PDP Deactivate)
- L_ATTACH (LTE Attach)
- L_DETACH (LTE Detach)
- L_HANDOVER (LTE Handover)
- L_TAU (LTE TAU)
- L_DEDICATED_BEARER_ACTIVATE (LTE Establish Bearer)
- L_DEDICATED_BEARER_DEACTIVATE (LTE Drop Bearer)
- L_PDN_CONNECT (LTE PDN Connect)
- L_PDN_DISCONNECT (LTE PDN Disconnect)

- L_SERVICE_REQUEST (LTE Service request)
- SERVICE_REQUEST (WCDMA Service Request)
- L_BEARER_MODIFY (LTE Modify Bearer)
- L_DEFAULT_BEARER_ACTIVATE (LTE Establish Default Bearer)
- L_DEFAULT_BEARER_DEACTIVATE (LTE Drop Default Bearer)
- UNKNOWN (SGSN UNKNOWN)

When any of the above events get triggered, MME sends subscriber information such as ECGI, SAI, IMSI, MSISDN, IMEI, Event ID and MME number to GMPC.

Similarly, SGSN also sends GPRS/UMTS based subscriber information such as (LAC/RAC/SAC)to GMPC.

Enabling GMPC Event-Report-Connection under Context

Use the following configuration to enable GMPC event-report-connection under context:

```
configure
  context context_name
    [ no ] event-report-conn event_report_conn_name
      gmpc-event-report { dest-addr { ipv4_address | ipv6_address } dest-port
port_number | src-addr { ipv4_address | ipv6_address } src-port port_number }
       end
```

Configuring GMPC Multiple/Single

Use the following configuration to configure the connproxy mode to either “Single” or “Multi” mode:

```
configure
  [ no ] require gmpc-event-report-tcp-proxy { multiple | single }
  end
```

Note Connproxy mode must be either single or multiple mode.

Enabling GMPC Event-Report-Connection under Call-Control-Profile

Use the following configuration to enable GMPC event-report-connection under call-control-profile:

```
configure
  call-control-profile call_control_profile
    [ remove ] reporting-action { event-stream{ event-report-conn
```

```
event_report_conn_name } | mme-event-record }
     end
```

Binding GMPC Server Interface

Use the following configuration to bind card and port number with the GMPC source interface:

```
configure
  port ethernet port_number
    vlan tag_id
    no shutdown
    bind interface gmpc_interface_name context_name
    end
```

Note Enter the card or port number details for the ethernet.

Show Commands and Outputs

show event-report-conn all

The output of this command displays the number of events connected between MME/SGSN and GMPC.

The output of this command includes the following fields:

- src-addr— Displays gmpc-event-report source ip-address.
- src-port—Displays source port address of gmpc-event-report connection.
- dest-addr—Displays gmpc-event-report destination ip-address.
- dest-port—Displays destination port address of gmpc-event-report connection.

show event-report-conn name <event_report_conn_name>

The output of this command includes the event report connection name to display the number of events connected between MME/SGSN and GMPC.

The output of this command includes the following fields:

- src-addr— Displays gmpc-event-report source ip-address.
- src-port—Displays source port address of gmpc-event-report connection.
- dest-addr—Displays gmpc-event-report destination ip-address.
- dest-port—Displays destination port address of gmpc-event-report connection.

show gmpc-event-report statistics event-report-conn all

The output of this command displays the statistics of gmpc-event-report connections between MME/SGSN and GMPC.

The output of this command includes the following fields:

- Total number of events—Displays the total number of gmpc-event-report connections.
- Number of events sent—Displays the total number of gmpc-event-report connections sent.
- Number of events dropped—Displays the total number of gmpc-event-report connections dropped.

show gmpc-event-report statistics event-report-conn name <event_report_conn_name>

The output of this command includes the event report connection name to display the statistics of gmpc-event-report connections between MME/SGSN and GMPC.

The output of this command includes the following fields:

- Total number of events—Displays the total number of gmpc-event-report connections.
- Number of events sent—Displays the total number of gmpc-event-report connections sent.
- Number of events dropped—Displays the total number of gmpc-event-report connections dropped.