



Send User location info to PGW

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Feature Description

This feature enables 3gpp-user-location-info AVP from SWm interface for constructing ULI and MCCC/MNC of Serving-Network IEs on S2b.

Assumptions and Limitations

- If ULI configuration is enabled and 3GPP-User-Location-Info is not received from AAA, ePDG will not send the same in S2b CSR
- If the MCC/MNC on ServingNetwork is enabled using only CLI, on receiving 3GPP-User-Location-Info, MCC/MNC of Serving Network will be updated and sent on S2b CSR

On receiving 3gpp-user-location-info AVP on SWm interface, ePDG provides ULI IE with TAI or ECGI or TAI-ECGI information on CreateSession Request on S2b

3GPP-User-Location-Info Support on SWm Interface

SWm is existing interface between AAA Server and ePDG which is used to authenticate and authorize UE. There are various procedures between AAA server and ePDG which are used to provide many existing information to two entities.

3GPP-User-Location-Info AVP will be provided to ePDG in DEA/AAA messages at the time Session establishment.

Authenticate and Authorize Procedure: DER/DEA

This information is provided to ePDG first during Authentication and Authorization request procedure i.e DER/DEA or AAR/AAA(for non UICC) exchange which happens during session establishment.

AVP info in Authenticate and Authorization Answer procedure.

Information Element Name	Mapping to Diameter AVP	Cat	Description	Procedure exchange
User Location Information	3GPP-User-Location-Info	O	If present, this IE will contain the location information of the TAI/ECGI/TAI-ECGI info	DEA/AAA
Serving Network	3GPP-User-Location-Info	C	This IE will contain MCC and MNC received on 3GPP-User-Location-Info	DEA/AAA

AAA behavior: If 3GPP-User-Location-Info (that contains last attached LTE location of UE) is present on AAA, it will be provided to ePDG over SWm interface during session establishment in both UICC and non-UICC case.

ePDG Behaviour: On receiving 3GPP-User-Location-Info ePDG stores this information and sends TAI/ECGI/TAI-ECGI information on ULI IE and MCC/MNC information on Serving Network IE over S2b. In case absence of this AVP, ULI will not sent and MCC/MNC values on Serving Network IE will be populated as earlier.

Support on S2b Interface

Information on 3GPP-User-Location-Info received by ePDG will be sent by ePDG to PGW on ULI and Serving Network IE. This feature is CLI controlled under "*call-control-profile*".

Information Element Name	P	Condition / Comment	IE Type	Ins.
User Location Information (ULI)	CO	The ePDG includes this IE on the S2b interface if the 3GPP-User-Location-Info AVP is available.	ULI	0
Serving Network	CO	The ePDG shall include MCC/MNC on this IE, derived from ULI	Serving Network	0

Configuring Use MCC MNC Value Provided by Network

Use the following configuration to configure Use MCC MNC Value Provided by Network.

```

config
    call-control-profile  ccp1
        [ remove ] epdg-s2b-gtpv2 send serving-network value uli
    end
config
    call-control-profile  ccp1

```

```
[ remove ] epdg-s2b-gtpv2 send uli
end
```

Performance Indicator Changes

Below are the show commands outputs added as part of this feature to support MCC MNC Value Provided by Network show

call-control-profile full

ePDG S2b GTPv2 IE Options:

- Sending ULI
- Sending ServingNetwork[Value ULI]

show configuration:

- epdg-s2b-gtpv2 send uli
- epdg-s2b-gtpv2 send serving-network value uli

show configuration verbose:

- remove epdg-s2b-gtpv2 send uli
- remove epdg-s2b-gtpv2 send serving-network value uli

