



P-GW CDR in CUPS

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Revision History



Note Revision history details are not provided for features introduced before release 21.24.

Revision Details	Release
First introduced	Pre 21.24

Feature Description

In CUPS architecture, support is added for P-GW CDR generation for custom24 GTPP dictionary. The P-GW CDR is generated for following procedure or scenario:

- Default Bearer:
 - Volume/Time Limit
 - PCRF initiated Rule Base change
 - S-GW/PLMN change due to S1 Handover
 - ULI/Time Zone change
 - QoS change
 - UE/Network initiated session deletion
 - RAN-NAS cause code
 - Maximum change condition trigger

- Dedicated Bearer:
 - Volume/Time Limit
 - QoS change
 - Handover Procedure
 - ULI/Time Zone change
 - PCRF rule base change
 - UE/Network initiated Dedicated Bearer Deletion Procedure
 - RAN-NAS cause code

Limitations

The aFRecordInformation is not supported in CUPS architecture.

User Location Information in P-GW CDR

The P-GW CDR contains the User Location Information (ULI) in the following two attribute fields:

- User Location Information (32)
- User Location Information (34-0-20)

As per the current behavior above two fields contain the “User Location information” in P-GW CDR. These fields are getting updated only when ULI-change trigger is enabled. If ULI-change trigger is not configured, the P-GW CDRs keeps the user location as it was reported in the initial CDR, even after the “Radio Access Technology” gets changed.

To overcome this issue, this feature was introduced, that even if “ULI-change trigger” is disabled, Every CDR contains the latest “User Location Information”. Functionality overview of this feature is as follows:

- This feature allows the P-GW CDRs to update User Location Information (32) and User Location Information (34-0-20) attributes with the latest User Location Information provided by the MME and S-GW.
- The implementation of the feature is through the different filler function specific to feature.
- To use this feature, customer/user requires to make the software changes at two places. First one is to update the CDR custom/customer’s dictionary ULI fields with the newly implemented filler functions. Current implementation is in the custom dictionary 38, as per requirement. Parallely, the support for the same dictionary need to be added under the MACRO:
“ACS_CHK_DICT_SUPPORT_FOR_LATEST_ULI”.

If the dictionary with the new filler functions are used, it packs the latest ULI in case of the following events:

Events to send/generate partial PGW-CDR for a subscriber:

- When the number of QoS changes or tariff time changes reaches the configured maximum number of charging condition changes.

- Before this, service containers are added to the CDR for every change.
- Every x seconds configured using "interval x".
- Every x octets configured using "volume x" (up/down/total).
- Command gtpm interim now active-charging egcdr.
- Transferring the context to a new S-GW/SGSN (serving Node Change).
- Changing the access type within the same P-GW (RAT Change).

Events to send or generate the final P-GW CDR for a subscriber:

- Detach Request received from UE
- Delete bearer context request received from S-GW.
- Manual subscriber clearing
- Abnormal Releases such as path failures.

Sample Configuration

Following are the sample configurations:

```
Customer dictionary: custom38
Customer running configuration:
gtpm group pgwhdd
  gtpm attribute local-record-sequence-number
  gtpm attribute node-id-suffix PGW11
  no gtpm attribute twanuli
  gtpm dictionary custom38
  no gtpm trigger dcca
  no gtpm trigger service-idle-out
  no gtpm trigger serving-node-change-limit
  no gtpm trigger inter-plmn-sgsn-change
  no gtpm trigger qos-change
  no gtpm trigger ms-timezone-change
  gtpm trigger egcdr max-losdv
  no gtpm trigger uli-change
  gtpm egcdr lotdv-max-containers 1
  gtpm egcdr losdv-max-containers 1
  gtpm suppress-cdrs zero-volume-and-duration gcdrs egcdrs
  gtpm egcdr service-data-flow threshold interval 43200
  gtpm egcdr service-data-flow threshold volume total 104857600
  gtpm storage-server mode local
gtpm storage-server local file purge-processed-files file-name-pattern

      ACQ* purge-interval 2880
gtpm storage-server local file format custom3
gtpm storage-server local file rotation volume mb 30
gtpm storage-server local file rotation cdr-count 65000
gtpm storage-server local file rotation time-interval 600
gtpm storage-server local file name prefix PGW11_Laca
#exit.
```

