SGSN CDR Field Descriptions

This chapter describes the CDR fields supported by the system for use in SGSN.

Listed below are the types of CDRs supported by SGSN:

- SGSN CDRs (S-CDRs)
- Mobility CDRs (M-CDRs)
- Mobile originated SMS CDRs (S-SMO-CDRs)
- Mobile terminated SMS CDRs (S-SMT-CDRs)
- Mobile terminated location request CDRs (LCS-MT-CDRs)
- Mobile originated location request CDRs (LCS-MO-CDRs)

The following information is provided for each field:

- **Description:** The field's description.
- **Format:** The field's data format.
- **Length:** The field's size, in bytes.

Based on the following standards:

- 3GPP TS 32.298 V6.5.0 (2006-09): 3rd Generation Partnership Project; Technical Specification Group Service and System Aspects; Telecommunication management; Charging management; Charging Data Record (CDR) parameter description (Release 6)
- 3GPP TS 32.251 V6.10.0 (2007-06): 3rd Generation Partnership Project; Group Services and System Aspects; Telecommunication management; Charging management; Packet Switched (PS) domain charging (Release 6)

Also see the *SGSN CDR Field Reference* chapter for information on CDR fields supported in S-CDRs and M-CDRs.

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CDR Fields

Access Point Name Network Identifier

The network identifier (NI) portion of the access point name (APN). The APN typically corresponds to a registered Internet domain name and represents the external packet data network (PDN). It is sent to the SGSN by the MS (or determined locally by the HLR or configuration) and is relayed to the GGSN in the Create PDP Context Request message.

Format

The APN string may consist of 1 to 63 characters composed of alphanumerics (upper- and/or lowercase letters and digits 0-9), periods and dashes.

IA5 String

Length

1–63 Bytes

Access Point Name Operator Identifier

The operator identifier (OI) part of the APN. The OI is composed of three parts (<operator's MNC>.<operator's MCC>.gprs) and the first two combined uniquely identify the network operator's PLMN.

Format

IA5 String

Length

1–37 Bytes

APN Selection Mode

An index indicating how the APN was selected.

The following APN selection mode indexes are possible:

- 0: MS or network provided APN, subscribed verified
- 1: MS provided APN, subscription not verified
- 2: Network provided APN, subscription not verified

Format

Unsigned Integer

Enumerated for custom11 and custom33

Enumerated integer for custom41

Length

1 Byte

CAMEL Information

Set of CAMEL information related to PDP context. This field is present if CAMEL Charging Information is received by the HLR in ISD message.

This field is supported if Ge interface is supported. The CLI command "**gtpp attribute camel-info**" needs to be enabled to populate this field.

Format

Octet String

Length

1-n

Cause for Record Closing

The reason the record is closed and released from the SGSN.

Some of the possible reasons are:

- normalRelease (0): The PDP context was terminated normally through a PDP context release (end of context or SGSN change) or a GPRS detach.
- abnormalRelease (4): The PDP context was abnormally terminated.
- volumeLimit (16): The CDR is released due to exceeding volume limit.
- timeLimit (17): The CDR is released due to exceeding time limit.
- sGSNChange (18):
- maxChangeCond (19): The CDR is released due to exceeding the changed condition limit.
- managementIntervention (20): The record was closed due to an O&M; request.
- intraSGSNIntersystemChange (21): The CDR is released when MS moves from 3G<->2G and vice versa within the same SGSN.
- Partial Record Generation: A partial CDR was generated for reasons such as the reaching of data volume or time (duration) limits, or reaching the maximum number of charging condition changes, or intraSGSNIntersystemChange change.

Format

Integer

Length

1 Byte

Cell Identifier

For GSM, the Cell Identifier is defined as the Cell Id, reference 24.008. For UMTS, it is defined as the Service Area Code in TS 25.413. This field contains the CI (GSM) or the SAC (WCDMA) where the MS is located when the S-CDR is opened. The first partial or single S-CDR reports the value at PDP context activation. For any subsequent partial S-CDRs, the accuracy of the reported value is limited to the value at the last RA update reported by the MSCell identity for GSM or Service Area Code (SAC) for UMTS at "Record Opening Time".

Format

Octet String

Length

2 Bytes

Change Condition

The Change Condition field is part of the ChangeOfCharCondition element in the List of Traffic Data Volumes.

Change Condition defines the reason for closing the container; supported values include:

- qoSChange
- tariffTime
- recordClosure

Format

Enumerated

Length

1 Byte

Change of Charging Characteristics

Lists the charging characteristics applied to the PDP context.

The SGSN can accept charging characteristics from the HLR or use its own. SGSN-configured charging characteristics are specified as part of the operator policy and are applied to subscriber PDP contexts through SGSN-Operator-Policy templates.

Format

Hex Value Octet String

Length

2 Bytes

Change of Charging Condition

Each traffic volume container contains details related to a charging condition as described in the following subsections. A new container is usually created for a QoS change and for tariff changes.

Format

Sequence

Length

Variable

Change Time

The Change Time field is part of the ChangeOfCharCondition element in the List of Traffic Volumes. Change Time identifies the local time when a change condition occurred and the container was closed. The contents of this field are a compact form of the UTC Time format containing local time plus an offset to universal time. Binary coded decimal encoding is employed for the digits to reduce the storage and transmission overhead, for example: e.g. YYMMDDhhmmssShhmm.

Format

BCD encoded octet string

Length

6 Bytes

Charging Characteristics

Lists the charging characteristics (CC) applied to the PDP context by the SGSN. The SGSN can accept charging characteristics from the HLR, default values, or use its own configured values.

Format

Octet string

Length

2 Bytes

Charging Characteristics Selection Mode

The charging characteristic (CC) type that the SGSN applied to the CDR. The following values for this field are supplied:

- homeDefault: SGSN configured charging characteristics for home subscribers are used. Home subscribers are those that belong to the same PLMN as the one on which the GGSN is located.
- visitingDefault: SGSN configured charging characteristics for visiting subscribers are used. Visiting subscribers are those that belong to a different PLMN than the one on which the GGSN is located.
- roamingDefault: SGSN configured charging characteristics for roaming subscribers are used. Roaming subscribers are those that are serviced by an SGSN belonging to a different PLMN than the one on which the GGSN is located.
- subscriptionSpecific: This CC will be applied to S-CDR only if aPNSpecific CC is absent.
- aPNSpecific: For S-CDR priority will be given to aPNSpecific Charging Characteristics Selection mode. The aPNSpecific mode is from HLR (ISD Message).

Format

Enumerated Integer

Length

1 Byte

Charging ID

This field specifies the charging identifier, which can be used together with the GGSN address to identify all records involved in a single PDP context. The charging ID is generated by the GGSN at PDP context activation and is transferred to the SGSN requesting the context. At an inter-SGSN routing area update (ISRAU) the charging ID is transferred to the new SGSN as part of each active PDP context. Each GGSN allocates the charging ID independently and may allocate the same number prefix, so the charging ID must always be combined with the GGSN address to form a unique identifier for the PDP context.

Format

Integer (0..4294967295)

Octet string for custom11 and custom41

Length

1–4 Bytes / 1-5 Bytes (custom33 only)

Data Volume GPRS Downlink

The Data Volume GPRS Downlink field is a part of the ChangeOfCharCondition element in the List of Traffic Volumes. It includes the number of octets transmitted in the downlink direction during the timeframe specified by the container. For each new container, the counter is reset and does not accumulate. The data volume tabulated by the SGSN covers the amount of user data transferred in the SNDCP PDUs (GSM) and GTP-U T-PDUs (WCDMA). Data volumes retransmitted by RLC or LLC, due to poor radio link conditions, are not tabulated. The data counted includes the IP PDP bearer protocols, i.e. IP or PPP.

Important In the CDRs, the data volume usage field is defined with a maximum size of 4 bytes. If the volume triggers are disabled and the volume usage goes beyond 4GB, then the CDRs will not be generated and the data stats will be reset to zero after the max usage.

Important This attribute will not be sent for Direct Tunnel (DT) sessions.

Format

Integer

Length

1–5 Bytes

1–4 Bytes for custom11

Data Volume GPRS Uplink

The Data Volume GPRS Uplink field is a part of the ChangeOfCharCondition element in the List of Traffic Volumes. It includes the number of octets received in the uplink direction during the timeframe specified by the container. For each new container, the counter is reset and does not accumulate. The data volume tabulated by the SGSN covers the amount of user data transferred in the SNDCP PDUs (GSM) and GTP-U T-PDUs (WCDMA). Data volumes retransmitted by RLC or LLC, due to poor radio link conditions, are not tabulated. The data counted includes the IP PDP bearer protocols, i.e. IP or PPP.

Important In the CDRs, the data volume usage field is defined with a maximum size of 4 bytes. If the volume triggers are disabled and the volume usage goes beyond 4GB, then the CDRs will not be generated and the data stats will be reset to zero after the max usage.

Important This attribute will not be sent for Direct Tunnel (DT) sessions.

Format

Integer

Length

1–5 Bytes

1–4 Bytes for custom11

Default Transaction/SMS Handling

This field indicates whether or not a CAMEL encountered default GPRS- or SMS-handling. This field is present only if default call handling has been applied. Parameter is defined in HLR as part of CAMEL subscription information.

Format

Enumerated integer

Diagnostics

This field is included in the CDR when the PDP context is released and when the option "**gtpp attribute diagnostics**" is configured. This field is supported in G-CDRs but not for eG-CDRs.

It will contain one of the following values:

- 36: If the SGSN sends Delete PDP Context request
- 38: If the SGSN sends Delete PDP Context request due to GTP-C/U echo timeout with SGSN
- 26: If the SGSN sends Delete PDP Context request for any other reason

Format

Integer

Length

1 Byte

Duration

This field contains the duration for the record in seconds. For partial records, only the interval described by the recordOpeningTime and the last ChangeTime in the ListOfTrafficVolumes is counted. The Duration value is reset for each new partial CDR. This value is converted from the internal representation in milliseconds to an integer value representing only seconds. The mechanism for this conversion (ceiling, floor, round-off) can be configured.

Format

Integer

Length

1–5 Bytes

1–3 Bytes for custom11

Dynamic Address Flag

The presence of this field indicates that the PDP Address was dynamically allocated for that particular PDP context during context activation. This field is missing if the address is static (part of the PDP context subscription).

Format

Boolean

Length

1 Byte

Event Time Stamp

These fields contain the event time stamps relevant for each of the individual record types. For LCS-MT-CDRs and LCS-MO-CDRs, this field indicates the time at which the Perform_Location_Request is sent by the SGSN.

Format

All time-stamps include a minimum of date, hour, minute and second.

GGSN Address

This field provides the IP address for the control plane of the current serving GGSN, which is equivalent to the configured ggsn-service address on the GGSN. The standard 3GPP 32.298 offers a choice for the encoding of the address to be either in binary or text format. The SGSN encodes the address in binary format and includes the Octet String.

Format

Hex Value Octet String

Length

4-6 Bytes

IP Address

The IP address format is used by multiple fields in the CDR, such as the GGSN address or the Served PDP address. This entry is included here to avoid duplication. For the IP address, both the binary and text format and both IPv4 and IPv6 are specified in 3GPP 32.298.

For custom33 only, served PDP IP address will be in IPV4 or IPV6. The SGSN and GGSN transport interfaces should be IPV4 encoded.

- iPBinV4Address -- [0] -- OCTET STRING -- (SIZE(4))
- iPBinV6Address -- [1] -- OCTET STRING -- (SIZE(16))
- iPTextV4Address -- [2] -- IA5String -- (SIZE(7..15))

- iPTextV6Address -- [3] -- IA5String -- (SIZE(15..45))

Format

Hex Value Octet String

Length

4-6 Bytes

IPv4 Binary Address

This field contains an IPv4 address in hexadecimal format. Depending on where the field is used in the sequence of the CDR, it may contain either an SGSN or GGSN address or the PDP IP address of the mobile subscriber. Note the difference between how the GSN address and the PDP address are encoded. Currently, only IPv4 support is provided.

Format

Hex Value Octet String

Length

Varies for GSN address or PDP address

IPv6 Binary Address

This field contains an IPv6 address in hexadecimal format. Depending on where the field is used in the sequence of the CDR, it may contain either an SGSN or GGSN address or the PDP IP address of the mobile subscriber. Note: Note the difference between how the GSN address and the PDP address are encoded. Currently, only IPv4 support is provided.

Format

Hex Value Octet String

Length

Varies for GSN address or PDP address

LCS Cause

This provides the reason for an unsuccessful location request.

Format

Octet String

Length

1 Byte

LCS Client Identity

This field contains additional information on the LCS Client Identity.

The additional information of the LCS client identity include:

- Client External ID
- Client Dialed by MS ID
- Client Internal ID

Important ExtensionContainer sub-field in LCS Client external ID is not supported.

Format

Sequence

Length

Variable

LCS Client Type

This field contains the type of the LCS Client.

Format

Enumerated

Length

1 Byte

LCS Priority

This field defines the priority of the location request.

Format

Octet String

Length

1 Byte

LCS QoS

This field defines the Quality of Service for a location request.

Format

Octet String

Length

4 Bytes

Level of CAMEL services

This field describes the complexity of CAMEL invocation. Categories are the same as in circuit switched services and measure of resource usage in VPLMN requested by HPLMN.

- Basic: The CAMEL feature is invoked only during the PDP context activation phase. (For example, to modify APN_NI/APN_OI).
- Call duration supervision: The PDP context duration or volume supervision is applied in the gprsSSF of the VPLMN (Apply Charging message is received from the gsmSCF).

Format

Octet String

List of Traffic Data Volumes

A list of the changes that occurred in the charging conditions for this PDP context.

The list will include one or more containers each including the following fields:

- QoS negotiated: Quality of service (QoS) has been negotiated. The initial and final corresponding data values are listed. This is only added for the first container and the container after a QoS change.
- Uplink volume: The number of octets (uncompressed) received from the MS. The initial and final corresponding data values are listed.
- Downlink volume: The number of octets (uncompressed) transmitted to the MS.The initial and final corresponding data values are listed.
- Change Condition: Identifies the reason that the container was closed such as tariff time change, QoS change, or closing of the CDR.
- Change Time: A timestamp identifying the time at which the volume container or the CDR closed.

For GPRS, data volumes are in octets above the GTP layer and are separated for uplink and downlink traffic. In UMTS, data volumes are in octets above the GTP-U layer and are separated for uplink and downlink traffic.

Format

- QoS negotiated: Octet String
- Uplink volume: Integer
- Downlink volume: Integer
- Change Condition: Integer

- Change Time: BCD Encoded Octet String

Length

- QoS negotiated: 12 Bytes
- Uplink volume: 4 Bytes
- Downlink volume: 4 Bytes
- Change Condition: 1 Byte
- Change Time: 9 Bytes

List of Traffic Volumes

This list includes one or more Traffic Volume containers related to a "Change of Charging Condition". The maximum number of containers is configurable.

This list includes containers that include the following fields:

- QoS requested (optional)
- QoS negotiated (optional)
- data volume uplink
- data volume downlink
- change condition
- change time

Format

Sequence

Length

Variable

Local Record Sequence Number

This field contains a unique sequence number associated with the NodeId field and independent of the PDP context. Unless the LRSN rewrite feature is used on the HDD, the SGSN will generate multiple NodeIds (one for each internal process generating CDRs), each with its own sequence number. The number, allocated sequentially and including all CDR types, is unique within one physical node, which is identified either by field Node ID or by record-dependent node address (SGSN address, GGSN address, Record Entity). The local sequence number will be restarted at 0 when, for example, the node is reloaded.

Note: Since node-id is unique centralized LRSN feature must be enabled.

Format

Unsigned Integer (0..4294967295)

Octet string for custom11

Length

1–4 Bytes / 1-5 Bytes (custom33)

4 Bytes for custom11

Location

The location field contains a combination of the Location Area Code (LAC), Cell Identity (CI) and MCC+MNC of the cell in which the served party is currently located.

Format

Sequence

Length

Variable

Location Area Code (LAC)

This field contains the location area code (LAC) identifying the location area in which the served party is currently located. The LAC is coded according to 3GPP TS 24.008.

Format

Octet String

Length

2 Bytes

Location Estimate

The geographic location estimate of the subscriber, if the subscriber is contained in a geographic position and the location request was successful.

Format

Octet String

Length

1- 20 Bytes

Location Type

This field contains the type of the estimated location.

Format

Sequence

Length

Variable

Low Access Priority Indicator

This field indicates if the PDN connection has a low priority, i.e. for Machine Type Communication.

Important This attribute field is currently available only in custom24 GTPP dictionary for SGSN-CDRs when the CLI command "**gtpp attribute lapi**" is configured in GTPP Server Group Configuration mode.

Format

Null

Length

0 Byte

Measurement Duration

This field contains the duration for the section of the location measurement corresponding to the Perform_Location_Request and Perform_Location_Response by the SGSN.

MLC Number

This parameter refers to the ISDN (E.164) number of the requesting GMLC.

Format

Address

Length

ISDN (E.164) number

MS Network Capability

This field identifies the mobile station network capability value or information element for the served MS at PDP Context Activation or at GPRS Attach as defined in 3GPP TS 24.008.

Format

Octet String

Length

1–8 Bytes

Network Initiated PDP Context

The presence of this field indicates that the PDP context was initiated by the network.

Format

Boolean

Length

1 Byte

Node ID

The identifier string for the SGSN that had generated the CDR. Node ID, along with local record sequence number, uniquely identifies a CDR.

On the ASR 5500 SGSN, this NodeID field is a printable string of the ndddSTRING format:

- n: The first digit is the Sessmgr restart counter having a value between 0 and 7.
- ddd: The number of the sessmgr instance generating the CDR
- STRING: This is a configured Node-ID-Suffix having any string between 1 to16 characters, defined using the gtpp attribute node-id command.

If this node-id-suffix is not configured, the SGSN uses the GTPP context name as the Node-id-suffix (truncated to 16 characters).

This field is only included when the option "**gtpp attribute local-record-sequence-number**" is configured.

Format

IA5string

Length

5-20 Bytes

Notification To MS User

This field contains the privacy notification to MS user that was applicable when the Location Request was invoked.

Format

Enumerated

Length

1 Byte

Number of DPs encountered

The number of armed CAMEL detection points (TDP and EDP) encountered and complements the "Level of CAMEL service" field.

Note: Bits 5-8 of octet 2 contain third MNC digit, or 1111 used as filler when MNC has only two digits.

Format

Integer

PDP Type

The PDP context type. The PDP types supported by the SGSN are IP or PPP (including IHOSS:OSP).

Format

Hex Value Octet String

Enumeration (Integer) (custom41 only)

Length

2 Bytes

For custom41 dictionary:

- Value "0" : PDP type IPv4
- Value "1": PDP type IPv6
- Value "2": PDP type IPv4v6

pLMNIdentifier

This field defines the PLMN identity (MCC and MNC) as part of the location information. It is present only if the option to include PLMN identity has been set by the operator.

Note: Bits 5-8 of octet 2 contain third MNC digit, or 1111 used as filler when MNC has only two digits.

Format

Octet String

Length

3 Bytes

Positioning Data

This information element provides positioning data associated with a successful or unsuccessful location attempt for a target MS.

Format

Octet String

Length

1- 33 Bytes

Privacy Override

This parameter indicates if the LCS client overrides MS privacy when the GMLC and SGSN for an MT-LR are in the same country.

Format

Null attribute

QoS Negotiated

QoS Negotiated indicates the applied QoS accepted by the network.

Note:

- If a pre-release '99-capable terminal is served, only octets 1 to 4 are included.
- The field is defined with a maximum size of 12 bytes.
- This field is present in first container of all CDRs.
- In next container this field is present if there is QOS change.
- The mediation system should be capable of handling QoS values up to 255 bytes. In Rel. 9, the maximum QoS length is 17 bytes and the minimum length is 4 bytes. To support the QoS length of 17 bytes, the CLI command "**gtpp attribute qos max-length**" should be enabled. Otherwise, the QoS length will be restricted to 15 bytes.

Format

Octet String

Length

4-17 Bytes

QoS Requested

The Quality of Service Requested field contains the QoS desired by the MS at PDP context activation.

Note:

- If a pre-release '99-capable terminal is served, only octets 1 to4 are included.
- The field is defined with a maximum size of 12 bytes.
- This field is present in first container of all CDRs.
- In next container this field is present if there is QoS change. QoS Requested field may be absent if QoS change is initiated by network (GGSN/HLR).
- The mediation system should be capable of handling QoS values up to 255 bytes. In Rel. 9, the maximum QoS length is 17 bytes and the minimum length is 4 bytes. To support the QoS length of 17 bytes, the CLI command "**gtpp attribute qos max-length**" should be enabled. Otherwise, the QoS length will be restricted to 15 bytes.

Format

Octet String

Length

4-17 Bytes

Radio Access Technology (RAT) Type

The SGSN may include the RAT Type IE along with User Location Information IE, and MS Time Zone IE if they are available. The RAT Type IE is not included for the MS-initiated PDP Context Modification procedure.

Format

Integer (1-255).

Length

1 Byte

Record Extensions

A set of network operator or manufacturer specific extensions that may be added to the record if provided. It is used for reporting flows and volumes consumed, and also for passing key information about the session into the downstream charging systems.

Important This field is customer specific.

Record Opening Time

The timestamp at which the PDP context was activated on the SGSN or when a subsequent record is opened after a partial record. The timestamp is determined based on the internal timer which has an accuracy of 10ms.

Depending on the configured mechanism (ceiling, floor, round-off) this is translated into the timestamp which only shows the full seconds.

In the case of custom11 dictionary, this field does not support the offset to the UTC in the string and is limited to 6 bytes.

Format

BCD Encoded Octet String

Length

9 Bytes

6 Bytes for custom11

Record Sequence Number

A running sequence number used to link partial records generated by the SGSN for a specific PDP context (characterized with the same Charging ID and SGSN address pair). This field is only present in case of partial records or if the first record is also the final record.

Format

Unsigned Integer

Length

1–5 Bytes

1–3 Bytes for custom11

Record Type

Indicates type of the record: S-CDR(sgsnPDPRecord) >>> 18 (0x12).

Format

Integer

Length

1 Byte

Recording Entity

This field contains the ITU-T E.164 number assigned to the SGSN.

Format

ITU-T E.164 number

RNC Unsent Downlink Volume

This field contains the unsent downlink (from RNC to MS) data volume in bytes. The value is measured within the RNC and a correction of the already counted downlink volume within the 3G-SGSN. The value is sent from the RNC to the 3G-SGSN on request during the PDP context or at RAB release. This field is absent in case of 2G SGSN.

Format

Integer

Length

For custom10 and custom11 dictionaries: 1–4 Bytes

For other custom dictionaries: 1–5 Bytes

Routing Area Code (RAC)

This field contains the Routing Area Code (RAC) of the routing area in which the served party is currently located when the (partial) record is opened. The RAC is coded according to 3GPP TS 24.008.

Format

Octet String

Length

1 Byte

SCF Address

This field identifies the CAMEL server serving the subscriber. Address is defined in HLR as part of CAMEL subscription information.

Format

Address

Served IMEI

This field contains the international mobile equipment identity (IMEI) of the equipment served. If IMEISV (IMEI software version) is available, then IMEISV shall be sent in the CDR. The structure of the IMEI is defined in TS 23.003.

The IMEI is composed of the following elements:

- Type Allocation Code (TAC) with a length of 8 digits
- Serial Number (SNR) is an individual serial number uniquely identifying each equipment within each TAC. Its length is 6 digits
- Spare digit: this digit shall be zero, when transmitted by the MS

A filler digit "f" is added after the spare digit to fill up the last byte.

Important In the case of custom31 GTPP dictionary, if IMEISV or IMEI is present, then IMEI will be sent.

Format

BCD Encoded Octet String

Length

8 Bytes

Served IMSI

The International Mobile Subscriber Identity (IMS) of the MS. The IMSI is formatted in accordance with 3GPP TS 23.003. This will be present if the Anonymous Access Indicator is FALSE or not supplied.

Format

BCD Encoded Octet String

Length

3–8 Bytes

Served PDP Address

The binary-represented IP address associated with the PDP context of the served IMSI for the CDR. This address could be either static or dynamically assigned. The standard 3GPP TS32.298 allows a choice of either IPAddress or ETSIAddress - a binary IPv4 address (iPBINV4Address) or IPv6 address (iPBinV6Address).

Format

Choice

Length

4 bytes for IPv4 address

16 bytes for IPv6 address

Served PDP PDN Address Extension

This field contains the IPv4 address for the PDN connection (PDP context, IP-CAN bearer) when dual-stack IPv4v6 is used, and the IPv6 address is included in Served PDP Address or Served PDP PDN Address.

This field is not included if the PDP/PDN address is IPv4 or IPv6. By default, this field is not sent, even if the PDP Type is IPv4v6; this field must be enabled using the **gtpp attribute served-pdp-pdn-address-extension** CLI command.

Important Note that this field is not part of the 3GPP 32.298 Release 6 and 7 specifications. This field is an Rel.9 attribute and it can be present in Rel.7 or Rel.8 dictionary if enabled through the **gtpp attribute served-pdp-pdn-address-extension** CLI command.

Format

Octet string

Length

8 bytes

PDP IP Address

This field contains the IP address for the PDP context.

Format

IP address

Length

The length can vary based on whether the encoded IP address is IPv4 or IPv6.

PDP IPv4 Binary Address

The octet string included in the field described above includes the IPv4 address of the P-GW in binary coding.

Format

Octet string

Length

4 bytes

Served MSISDN

The primary Mobile Station (MS) ISDN number (MSISDN) of the subscriber.

Format

BCD Encoded Octet String

Length

1–9 Bytes

Service Key

This field identifies the CAMEL service logic applied. Service key is defined in HLR as part of CAMEL subscription information.

Format

Integer

SGSN Address

The SGSN IPv4 addresses (binary-represented) used over the duration of the CDR. The address(es) can be either user or control-plane addresses.

Format

Hex Value Octet String

Length

4 Bytes per address, field max is 30 Bytes

SGSN Change

Present if this is first record after SGSN change. Note that this attribute will not be present in S-CDRs for PDPs activated after the SGSN change. Only PDPs that were present in the older SGSN when the SGSN change happened should have this attribute when S-CDR is generated.

Format

Boolean

Length

1 Byte

SGSN 2G Downlink Dropped Bytes

This is an optional field, present only in the S-CDR to indicate the number of downlink 2G bytes dropped by the SGSN. This is not a CLI controlled feature. This field is provided also for partial CDRs generated with gtpp interim, volume trigger, time tarrif, etc.

Important This field is introduced only in custom33 GTPP dictionary to address the SGSN and GGSN CDR packet count mismatch issue occurred due to paging failure and queue full in 2G scenario.

Format

Integer

Length

1-5 Bytes