

# Release 7 CDR ASN.1 Format

## PRINTOUT DESCRIPTION

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# 1 Introduction

This document presents the ASN.1 format for release 7 CDRs generated by the EPG.

For more information on CDRs, see [CDR Format for the GGSN and PGW](#) and [CDR Format for the SGW](#).





## 2 ASN.1 Format

GgsnPgwR7Ber DEFINITIONS IMPLICIT TAGS ::= BEGIN

GPRSRecord ::= CHOICE

```
{
  ggsnPDPRecord [21] GGSNPDPRecord,
  egsnPDPRecord [70] EGSNPDPRecord
}
```

GGSNPDPRecord ::= SET

```
{
  recordType                [0] RecordType,
  servedIMSI                [3] IMSI,
  ggsnAddress                [4] GSNAAddress,
  chargingID                 [5] ChargingID,
  sgsnAddress                [6] SEQUENCE OF GSNAAddress OPTIONAL,
  accessPointNameNI         [7] AccessPointNameNI OPTIONAL,
  pdpType                    [8] PDPTType OPTIONAL,
  servedPDPAddress           [9] PDPAddress OPTIONAL,
  dynamicAddressFlag         [11] DynamicAddressFlag OPTIONAL,
  listOfTrafficVolumes       [12] SEQUENCE OF ChangeOfCharCondition OPTIONAL,
  recordOpeningTime          [13] TimeStamp,
  duration                   [14] CallDuration,
  causeForRecClosing         [15] CauseForRecClosing,
  recordSequenceNumber       [17] INTEGER OPTIONAL,
  nodeID                     [18] NodeID OPTIONAL,
  recordExtensions           [19] ManagementExtensions OPTIONAL,
  localSequenceNumber        [20] LocalSequenceNumber OPTIONAL,
  apnSelectionMode          [21] APNSelectionMode OPTIONAL,
  servedMSISDN               [22] MSISDN OPTIONAL,
  chargingCharacteristics     [23] ChargingCharacteristics,
  chChSelectionMode          [24] ChChSelectionMode OPTIONAL,
  iMSSignalingContext        [25] NULL OPTIONAL,
  externalChargingID         [26] OCTET STRING OPTIONAL,
  sgsnPLMNIdentifier         [27] PLMN-Id OPTIONAL,
  servedIMEISV               [29] IMEI OPTIONAL,
  rATType                    [30] RATType OPTIONAL,
  mSTimeZone                 [31] MSTimeZone OPTIONAL,
  userLocationInformation     [32] OCTET STRING OPTIONAL
}
```

EGSNPDPRecord ::= SET

```
{
  recordType                [0] RecordType,
  servedIMSI                [3] IMSI,
  ggsnAddress                [4] GSNAAddress,
  chargingID                 [5] ChargingID,
}
```



```
sgsnAddress [6] SEQUENCE OF GSNAddress OPTIONAL,  
accessPointNameNI [7] AccessPointNameNI OPTIONAL,  
pdpType [8] PDPTType OPTIONAL,  
servedPDPAddress [9] PDPAddress OPTIONAL,  
dynamicAddressFlag [11] DynamicAddressFlag OPTIONAL,  
listOfTrafficVolumes [12] SEQUENCE OF ChangeOfCharCondition OPTIONAL,  
recordOpeningTime [13] TimeStamp,  
duration [14] CallDuration,  
causeForRecClosing [15] CauseForRecClosing,  
recordSequenceNumber [17] INTEGER OPTIONAL,  
nodeID [18] NodeID OPTIONAL,  
recordExtensions [19] ManagementExtensions OPTIONAL,  
localSequenceNumber [20] LocalSequenceNumber OPTIONAL,  
apnSelectionMode [21] APNSelectionMode OPTIONAL,  
servedMSISDN [22] MSISDN OPTIONAL,  
chargingCharacteristics [23] ChargingCharacteristics,  
chChSelectionMode [24] ChChSelectionMode OPTIONAL,  
iMSSignalingContext [25] NULL OPTIONAL,  
externalChargingID [26] OCTET STRING OPTIONAL,  
sgsnPLMNIdentifier [27] PLMN-Id OPTIONAL,  
pSFurnishChargingInformation [28] PSFurnishChargingInformation OPTIONAL,  
servedIMEISV [29] IMEI OPTIONAL,  
rATType [30] RATType OPTIONAL,  
mSTimeZone [31] MSTimeZone OPTIONAL,  
userLocationInformation [32] OCTET STRING OPTIONAL,  
listOfServiceData [34] SEQUENCE OF ChangeOfServiceCondition OPTIONAL  
}
```

```
AccessPointNameNI ::= IA5String (SIZE(1..63))  
AddressString ::= OCTET STRING (SIZE (1..20))  
APNSelectionMode ::= ENUMERATED  
{  
    mSorNetworkProvidedSubscriptionVerified (0),  
    mSProvidedSubscriptionNotVerified (1),  
    networkProvidedSubscriptionNotVerified (2)  
}  
CallDuration ::= INTEGER  
RecordType ::= INTEGER  
{  
    ggsnPDPRecord (19),  
    egsnPDPRecord (70)  
}  
CauseForRecClosing ::= INTEGER  
{  
    normalRelease (0),  
    abnormalRelease (4),  
    volumeLimit (16),  
    timeLimit (17),  
    sGSNChange (18),  
    maxChangeCond (19),
```



```

    rATChange          (22),
    mSTimeZoneChange   (23),
    sGSNPLMNIDChange   (24),
    managementInitRelease (100),
    creditControlChange (102),
    creditControlInitRelease (104),
    policyControlInitRelease (105)
}
ChangeCondition ::= ENUMERATED
{
    qoSChange          (0),
    tariffTime         (1),
    recordClosure       (2),
    failureHandlingContinueOngoing (3),
    failureHandlingRetryandTerminateOngoing (4),
    failureHandlingTerminateOngoing (5)
}
ChangeOfCharCondition ::= SEQUENCE
{
    qosNegotiated      [2] QoSInformation OPTIONAL,
    dataVolumeGPRSUplink [3] DataVolumeGPRS,
    dataVolumeGPRSDownlink [4] DataVolumeGPRS,
    changeCondition     [5] ChangeCondition,
    changeTime          [6] TimeStamp,
    userLocationInformation [8] OCTET STRING OPTIONAL
}
ChangeOfServiceCondition ::= SEQUENCE
{
    ratingGroup          [1] RatingGroup,
    resultCode           [3] ResultCode OPTIONAL,
    localSequenceNumber [4] LocalSequenceNumber OPTIONAL,
    timeOfFirstUsage     [5] TimeStamp OPTIONAL,
    timeOfLastUsage      [6] TimeStamp OPTIONAL,
    timeUsage            [7] CallDuration OPTIONAL,
    serviceConditionChange [8] ServiceConditionChange,
    qosInformationNeg     [9] QoSInformation OPTIONAL,
    sgsn-Address         [10] GSNAddress OPTIONAL,
    sGSNPLMNIdentifier   [11] PLMN-Id OPTIONAL,
    datavolumeFBCUplink [12] DataVolumeGPRS OPTIONAL,
    datavolumeFBCDownlink [13] DataVolumeGPRS OPTIONAL,
    timeOfReport         [14] TimeStamp,
    rATType              [15] RATType OPTIONAL,
    failureHandlingContinue [16] FailureHandlingContinue OPTIONAL,
    serviceIdentifier     [17] ServiceIdentifier OPTIONAL,
    psFurnishChargingInformation [18] PSFurnishChargingInformation OPTIONAL,
    aFRecordInformation  [19] SEQUENCE OF OCTET STRING OPTIONAL,
    userLocationInformation [20] OCTET STRING OPTIONAL,
    eventBasedChargingInformation [21] EventBasedChargingInformation OPTIONAL
}
ChargingCharacteristics ::= OCTET STRING (SIZE (2))
ChargingID ::= INTEGER (0..4294967295)

```



```
ChChSelectionMode ::= ENUMERATED
{
    sGSNSupplied      (0),
    homeDefault       (3),
    roamingDefault    (4),
    visitingDefault   (5),
    radiusSupplied    (100)
}
DataVolumeGPRS ::= INTEGER
DynamicAddressFlag ::= BOOLEAN
ETSIAddress ::= AddressString
EventBasedChargingInformation ::= SEQUENCE
{
    numberOfEvents [1] INTEGER,
    eventTimeStamps [2] SEQUENCE OF TimeStamp OPTIONAL
}
FailureHandlingContinue ::= BOOLEAN
FFDAppendIndicator ::= BOOLEAN
FreeFormatData ::= OCTET STRING (SIZE (1..160))
GSNAddress ::= IPAddress
IMEI ::= TBCD-STRING (SIZE (8))
IMSI ::= TBCD-STRING (SIZE (3..8))
IPAddress ::= CHOICE
{
    ipBinaryAddress      IPBinaryAddress,
    ipTextRepresentedAddress IPTextRepresentedAddress
}
IPBinaryAddress ::= CHOICE
{
    ipBinV4Address [0] OCTET STRING (SIZE(4)),
    ipBinV6Address [1] OCTET STRING (SIZE(16))
}
IPTextRepresentedAddress ::= CHOICE
{
    ipTextV4Address [2] IA5String (SIZE(7..15)),
    ipTextV6Address [3] IA5String (SIZE(15..45))
}
ISDN-AddressString ::= AddressString (SIZE(1..9))
LocalSequenceNumber ::= INTEGER (0..4294967295)
ManagementExtensions ::= SET OF ManagementExtension
ManagementExtension ::= SEQUENCE
{
    identifier      OBJECT IDENTIFIER,
    significance [1] BOOLEAN DEFAULT TRUE,
    information [2] GprsCdrExtensions
}
MSISDN ::= ISDN-AddressString
MSTimeZone ::= OCTET STRING (SIZE (2))
NodeID ::= IA5String (SIZE(1..20))
PDPAddress ::= CHOICE
{
```



```

    ipAddress [0] IPAddress,
    etsiAddress [1] ETSIAddress
}
PDPTType ::= OCTET STRING (SIZE(2))
PLMN-Id ::= OCTET STRING (SIZE(3))
PSFurnishChargingInformation ::= SEQUENCE
{
    pSFreeFormatData [1] FreeFormatData,
    pSFFDAppendIndicator [2] FFDAAppendIndicator OPTIONAL
}
QoSInformation ::= OCTET STRING (SIZE (4..15))
RatingGroup ::= INTEGER
RATType ::= INTEGER (0..255)
ResultCode ::= INTEGER
ServiceConditionChange ::= BIT STRING
{
    qosChange (0),
    sGSNChange (1),
    sGSNPLMNIDChange (2),
    tariffTimeSwitch (3),
    pDPContextRelease (4),
    rATChange (5),
    serviceIdledOut (6),
    reserved (7),
    configurationChange (8),
    serviceStop (9),
    dCCATimeThresholdReached (10),
    dCCAVolumeThresholdReached (11),
    dCCAServiceSpecificUnitThresholdReached (12),
    dCCATimeExhausted (13),
    dCCAVolumeExhausted (14),
    dCCAValidityTimeout (15),
    dCCAReauthorisationRequest (17),
    dCCAContinueOngoingSession (18),
    dCCARetryAndTerminateOngoingSession (19),
    dCCATerminateOngoingSession (20),
    cGI-SAICChange (21),
    dCCAServiceSpecificUnitExhausted (23),
    recordClosure (24)
}
ServiceIdentifier ::= INTEGER (0..4294967295)
TBCD-STRING ::= OCTET STRING
TimeStamp ::= OCTET STRING (SIZE(9))

GprsCdrExtensions ::= SET
{
    creditControlInfo [2] CreditControlInfo OPTIONAL,
    policyControlInfo [3] PolicyControlInfo OPTIONAL,
    userCategory [5] INTEGER OPTIONAL,
    ruleSpaceId [6] IA5String OPTIONAL,
    serviceContainers [7] SEQUENCE OF ServiceContainer OPTIONAL,

```



```
    timeReports          [8] SEQUENCE OF TimeReport OPTIONAL
  }

ActiveTimeMethod ::= ENUMERATED
{
  duration              (1),
  inactivityIncluded (2),
  inactivity            (3),
  activePeriods        (4)
}

CreditControlFailureReport ::= SEQUENCE
{
  requestType           [0] CreditRequestType,
  requestStatus         [1] CreditRequestStatus,
  resultCode            [2] CreditResultCode OPTIONAL,
  ccRequestNumber       [12] INTEGER OPTIONAL
}

CreditControlInfo ::= SEQUENCE
{
  creditControlFailureReport [6] CreditControlFailureReport OPTIONAL,
  creditControlSessionId    [7] OCTET STRING (SIZE(1..255)) OPTIONAL,
  ccsRealm                   [8] OCTET STRING (SIZE(1..255)) OPTIONAL
}

CreditRequestType ::= ENUMERATED
{
  start   (0),
  interim (1),
  stop    (2)
}

CreditRequestStatus ::= ENUMERATED
{
  unsent      (0),
  noAnswer   (1),
  failure     (2),
  oCSRestart (3)
}

CreditResultCode ::= INTEGER

PolicyControlFailureReport ::= SEQUENCE
{
  requestType   [0] PolicyRequestType,
  requestStatus [1] PolicyRequestStatus,
  resultCode    [2] PolicyResultCode OPTIONAL,
  stopTime     [5] TimeStamp OPTIONAL
}

PolicyControlInfo ::= SEQUENCE
{
  policyControlFailureReport [4] PolicyControlFailureReport OPTIONAL,
  pcsRealm                   [6] OCTET STRING (SIZE(1..255)) OPTIONAL,
  policyControlSessionId    [7] OCTET STRING (SIZE(1..255)) OPTIONAL
}

PolicyRequestType ::= ENUMERATED
```



```

{
  start      (0),
  interim   (1),
  stop      (2)
}
PolicyRequestStatus ::= ENUMERATED
{
  unsent      (0),
  noAnswer    (1),
  failure     (2),
  pCRFRestart (3)
}
PolicyResultCode ::= INTEGER
ServiceContainer ::= SEQUENCE
{
  ratingGroup           [1] RatingGroup,
  serviceIdentifier     [2] ServiceIdentifier OPTIONAL,
  localSequenceNumber  [3] LocalSequenceNumber OPTIONAL,
  method               [4] ActiveTimeMethod OPTIONAL,
  inactivity           [5] INTEGER OPTIONAL,
  resolution            [6] INTEGER OPTIONAL,
  ccRequestNumber      [7] INTEGER OPTIONAL,
  serviceSpecificUnits [8] INTEGER OPTIONAL,
  listOfURI            [9] SEQUENCE OF URI OPTIONAL
}
TimeReport ::= SEQUENCE
{
  ratingGroup           [1] RatingGroup,
  startTime             [2] TimeStamp,
  endTime              [3] TimeStamp,
  dataVolumeUplink     [4] DataVolumeGPRS OPTIONAL,
  dataVolumeDownlink   [5] DataVolumeGPRS OPTIONAL
}
URI ::= SEQUENCE
{
  count                [1] INTEGER OPTIONAL,
  uri                  [2] IA5String OPTIONAL,
  uriIdentifier        [3] INTEGER OPTIONAL,
  uriDataVolumeUplink [4] INTEGER OPTIONAL,
  uriDataVolumeDownlink [5] INTEGER OPTIONAL,
  listOfUriTimeStamps [6] SEQUENCE OF TimeStamp OPTIONAL
}
END

```