

Release 6 CDR ASN.1 Format

PRINTOUT DESCRIPTION

Copyright

© Ericsson AB 2018. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

Trademark List

All trademarks mentioned herein are the property of their respective owners. These are shown in the document Trademark Information.



Contents

1	Introduction	1
2	ASN.1 Format	3





1 Introduction

This document presents the ASN.1 format for release 6 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

```
GgsnPgwR6Ber DEFINITIONS IMPLICIT TAGS ::= BEGIN
```

```
GPRSCallEventRecord ::= CHOICE
```

```
{
  ggsnPDPRecord [21] GGSNPDPRecord,
  egsnPDPRecord [28] EGSNPDPRecord
}
```

```
GGSNPDPRecord ::= SET
```

```
{
  recordType                [0] CallEventRecordType,
  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] CallEventRecordType,
  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  
CallEventRecordType ::= INTEGER  
{  
    ggsnPDPRecord (19),  
    egsnPDPRecord (70)  
}  
CauseForRecClosing ::= INTEGER  
{  
    normalRelease (0),  
    abnormalRelease (4),  
    volumeLimit (16),  
    timeLimit (17),  
    sGSNChange (18),  
    maxChangeCond (19),
```



```

    rATChange          (22),
    mSTimeZoneChange  (23),
    managementInitRelease (100),
    pLMNChange        (101),
    creditControlChange (102),
    creditControlInitRelease (104),
    policyControlInitRelease (105)
}
ChangeCondition ::= ENUMERATED
{
    qosSChange          (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
}
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
}
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
    FailureHandlingContinue ::= BOOLEAN
    FFDApendIndicator ::= 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] FFDApendIndicator 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),
    qCTExpiry                (7),
    configurationChange       (8),
    serviceStop              (9),
    timeThresholdReached     (10),
    volumeThresholdReached   (11),
    timeExhausted            (13),
    volumeExhausted          (14),
    timeout                  (15),
    returnRequested          (16),
    reauthorisationRequest   (17),
    continueOngoingSession   (18),
    retryAndTerminateOngoingSession (19),
    terminateOngoingSession  (20)
  }
  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
```