ERICSSON

Release 5 CDR ASN.1 Format

PRINTOUT DESCRIPTION

15/190 83-AXB 250 12-V3 Uen AG

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Contents

1 Introduction

This document presents the ASN.1 format for release 5 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

```
GgsnR5Ber DEFINITIONS IMPLICIT TAGS ::= BEGIN

CallEventRecord ::= CHOICE
{
  ggsnPDPRecord [21] GGSNPDPRecord
}

GGSNPDPRecord ::= SET
{
  recordType              [0] CallEventRecordType,
  servedIMSI              [3] IMSI,
  ggsnAddress             [4] GSNAddress,
  chargingID              [5] ChargingID,
  sgsnAddress             [6] SEQUENCE OF GSNAddress OPTIONAL,
  accessPointNameNI       [7] AccessPointNameNI OPTIONAL,
  pdpType                 [8] PDPType 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,
  sgsnPLMNIdentifier      [27] PLMN-Id OPTIONAL,
  servedIMEISV            [29] IMEI OPTIONAL,
  rATType                 [30] RATType 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)
}
CauseForRecClosing ::= INTEGER
{
  normalRelease            (0),
  abnormalRelease          (4),
  volumeLimit              (16),
  timeLimit                (17),
  sGSNChange               (18),
  maxChangeCond            (19),
  rATChange                (22),
  managementInitRelease    (100),
  pLMNChange               (101),
  creditControlChange      (102),
  creditControlInitRelease (104),
  policyControlInitRelease (105)
}
ChangeCondition ::= ENUMERATED
{
  qoSChange               (0),
  tariffTime              (1),
  recordClosure           (2)
}
ChangeOfCharCondition ::= SEQUENCE
{
  qosNegotiated          [2] QoSInformation OPTIONAL,
  dataVolumeGPRSUplink   [3] DataVolumeGPRS,
  dataVolumeGPRSDownlink [4] DataVolumeGPRS,
  changeCondition        [5] ChangeCondition,
  changeTime             [6] TimeStamp
}
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
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
NodeID ::= IA5String (SIZE(1..20))
PDPAddress ::= CHOICE
{
  iPAddress   [0] IPAddress,
  eTSIAddress [1] ETSIAddress
}
PDPType ::= OCTET STRING (SIZE(2))
PLMN-Id ::= OCTET STRING (SIZE(3))
QoSInformation ::= OCTET STRING (SIZE (4..15))
RATType ::= INTEGER (0..255)
TBCD-STRING ::= OCTET STRING
TimeStamp ::= OCTET STRING (SIZE(9))

GprsCdrExtensions ::= SET
{
  chargingContainers [1] SEQUENCE OF ChargingContainer OPTIONAL,
  creditControlInfo  [2] CreditControlInfo OPTIONAL,
  policyControlInfo  [3] PolicyControlInfo OPTIONAL,
  userCategory       [5] INTEGER OPTIONAL
}

BlockItem ::= SEQUENCE
{
  blocks        [0] INTEGER,
  blockRate     [1] RealUnit OPTIONAL,
  blockSize     [2] INTEGER,
  blockSizeType [3] BlockSizeType,
  startTime     [4] TimeStamp OPTIONAL,
```

```
  stopTime      [5] TimeStamp OPTIONAL
}
BlockSizeType ::= ENUMERATED
{
  seconds (0),
  bytes   (1)
}
ChargingContainer ::= SEQUENCE
{
  changeTime           [0] TimeStamp,
  listOfServices       [1] SEQUENCE OF ServiceItem OPTIONAL,
  listOfServiceClasses [2] SEQUENCE OF ServiceClassItem OPTIONAL,
  initialCharge        [3] RealUnit OPTIONAL,
  sessionPolicy        [4] SessionPolicy OPTIONAL,
  blockItem            [5] BlockItem OPTIONAL
}
CreditControlDiagnostics ::= ENUMERATED
{
  creditDenied           (0),
  creditControlFailure   (1),
  creditControlSuspended (2),
  creditControlResumed   (3)
}
CreditControlFailureAction ::= ENUMERATED
{
  release              (0),
  continue             (1),
  continueFreeServices (2)
}
CreditControlFailureReport ::= SEQUENCE
{
  requestType       [0] CreditRequestType,
  requestStatus     [1] CreditRequestStatus,
  resultCode        [2] CreditResultCode OPTIONAL,
  recordNumber      [4] CreditRecordNumber OPTIONAL,
  startTime         [5] TimeStamp OPTIONAL,
  stopTime          [6] TimeStamp OPTIONAL,
  lastCreditGranted [7] RealUnit OPTIONAL,
  creditUsed        [8] RealUnit OPTIONAL
}
CreditControlInfo ::= SEQUENCE
{
  creditControlEnabled       [0] BOOLEAN,
  ccsAddress                 [1] IPAddress OPTIONAL,
  creditUnit                 [2] CreditUnit OPTIONAL,
  creditControlDiagnostics   [3] CreditControlDiagnostics OPTIONAL,
  creditDeniedAction         [4] CreditDeniedAction OPTIONAL,
  creditControlFailureAction [5] CreditControlFailureAction OPTIONAL,
  creditControlFailureReport [6] CreditControlFailureReport OPTIONAL,
  creditControlSessionId     [7] OCTET STRING (SIZE(1..255)) OPTIONAL
}
```

```
CreditDeniedAction ::= ENUMERATED
{
  release                    (0),
  continue                   (1),
  continueFreeServiceClasses  (2),
  continueLimitServiceClasses (3)
}
CreditRecordNumber ::= INTEGER(0..4294967295)
CreditRequestType ::= ENUMERATED
{
  start   (0),
  interim (1),
  stop    (2)
}
CreditRequestStatus ::= ENUMERATED
{
  unsent   (0),
  noAnswer (1),
  failure  (2)
}
CreditResultCode ::= INTEGER
CreditUnit ::= SEQUENCE
{
  unitType     [0] CreditUnitType,
  currencyCode [1] CurrencyCode OPTIONAL
}
CreditUnitType ::= ENUMERATED
{
  time   (0),
  volume (1),
  event  (2),
  money  (3)
}
CurrencyCode ::= INTEGER
PolicyControlDiagnostics ::= ENUMERATED
{
  policyControlFailure   (1),
  policyControlSuspended (2),
  policyControlResumed   (3)
}
PolicyControlFailureAction ::= ENUMERATED
{
  release               (0),
  continueDefaultPolicy (1)
}
PolicyControlFailureReport ::= SEQUENCE
{
  requestType   [0] PolicyRequestType,
  requestStatus [1] PolicyRequestStatus,
  resultCode    [2] PolicyResultCode OPTIONAL,
  sessionId     [3] OCTET STRING (SIZE(1..255)) OPTIONAL,
```

```
  startTime     [4] TimeStamp OPTIONAL,
  stopTime      [5] TimeStamp OPTIONAL
}
PolicyControlInfo ::= SEQUENCE
{
  policyControlEnabled       [0] BOOLEAN,
  pcsAddress                 [1] IPAddress OPTIONAL,
  policyControlDiagnostics   [2] PolicyControlDiagnostics OPTIONAL,
  policyControlFailureAction [3] PolicyControlFailureAction OPTIONAL,
  policyControlFailureReport [4] PolicyControlFailureReport OPTIONAL,
  currencyCode               [5] CurrencyCode
}
PolicyRequestType ::= ENUMERATED
{
  start   (0),
  interim (1),
  stop    (2)
}
PolicyRequestStatus ::= ENUMERATED
{
  unsent      (0),
  noAnswer    (1),
  failure     (2),
  pCRFRestart (3)
}
PolicyResultCode ::= INTEGER
RealUnit ::= SEQUENCE
{
  valueDigits [0] INTEGER,
  exponent    [1] INTEGER OPTIONAL
}
ServiceClass ::= INTEGER(0..4294967295)
ServiceClassItem ::= SEQUENCE
{
  serviceClass       [0] ServiceClass,
  volumeUplink       [1] INTEGER OPTIONAL,
  volumeDownlink     [2] INTEGER OPTIONAL,
  volumeRateUplink   [3] RealUnit OPTIONAL,
  volumeRateDownlink [4] RealUnit OPTIONAL,
  sessionPolicy      [5] SessionPolicy OPTIONAL,
  blockItem          [6] BlockItem OPTIONAL
}
ServiceIdentifier ::= INTEGER(0..4294967295)
ServiceItem ::= SEQUENCE
{
  serviceIdentifier [0] ServiceIdentifier,
  volumeUplink      [1] INTEGER,
  volumeDownlink    [2] INTEGER
}
SessionPolicy ::= SEQUENCE
{
```

```
  volumeLimitAction [0] UsageLimitAction OPTIONAL,
  blockLimitAction  [1] UsageLimitAction OPTIONAL
}
UsageLimitAction ::= ENUMERATED
{
  reset (1),
  add   (2)
}

END
```