



CommonData

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OpenAPI

OpenAPI Version: 3.0.0

Info

Version: '1.0.0'
Title: 'Common Data Types'
Description: 'Common Data Types for Service Based Interfaces '

Paths

Components

```
schemas:  
# Common Data Types for Generic usage definitions as defined in subclause 5.2  
# COMMON SIMPLE DATA TYPES  
  Binary:  
    format: binary  
    Type: string  
  BinaryRm:  
    format: binary  
    Type: string
```

```
    nullable: true
Bytes:
  format: byte
  Type: string
BytesRm:
  format: byte
  Type: string
  nullable: true
Date:
  format: date
  Type: string
DateRm:
  format: date
  Type: string
  nullable: true
DateTime:
  format: date-time
  Type: string
DateTimeRm:
  format: date-time
  Type: string
  nullable: true
DiameterIdentity:
  Type: string
  Pattern: '^[A-Za-z0-9]+(-[A-Za-z0-9]+)+[a-z]{2,}$'
DiameterIdentityRm:
  Type: string
  Pattern: '^[A-Za-z0-9]+(-[A-Za-z0-9]+)+[a-z]{2,}$'
  nullable: true
Double:
  format: double
  Type: number
DoubleRm:
  format: double
  Type: number
  nullable: true
DurationSec:
  Type: integer
DurationSecRm:
  Type: integer
  nullable: true
Float:
  format: float
  Type: number
FloatRm:
  format: float
  Type: number
  nullable: true
Int32:
  format: int32
  Type: integer
```

```

Int32Rm:
  format: int32
  Type: integer
  nullable: true
Int64:
  Type: integer
  format: int64
Int64Rm:
  format: int64
  Type: integer
  nullable: true
Ipv4Addr:
  Type: string
  Pattern:
'^(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])$'

  example: '198.51.100.1'
Ipv4AddrRm:
  Type: string
  Pattern:
'^(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])$'

  example: '198.51.100.1'
  nullable: true
Ipv6Addr:
  Type: string
  allOf:
  - pattern:
'^((:|(0?|([1-9a-f][0-9a-f]{0,3})))|((0?|([1-9a-f][0-9a-f]{0,3})):){0,6}(:|(0?|([1-9a-f][0-9a-f]{0,3})))$'

  - pattern: '^(((^[^:]+){7}([^[^:]+))|(((^[^:]+)*[^[^:]+)??:((^[^:]+)*[^[^:]+)?))$'
  example: '2001:db8:85a3::8a2e:370:7334'
Ipv6AddrRm:
  Type: string
  allOf:
  - pattern:
'^((:|(0?|([1-9a-f][0-9a-f]{0,3})))|((0?|([1-9a-f][0-9a-f]{0,3})):){0,6}(:|(0?|([1-9a-f][0-9a-f]{0,3})))$'

  - pattern: '^(((^[^:]+){7}([^[^:]+))|(((^[^:]+)*[^[^:]+)??:((^[^:]+)*[^[^:]+)?))$'
  example: '2001:db8:85a3::8a2e:370:7334'
  nullable: true
Ipv6Prefix:
  Type: string
  allOf:
  - pattern:
'^((:|(0?|([1-9a-f][0-9a-f]{0,3})))|((0?|([1-9a-f][0-9a-f]{0,3})):){0,6}(:|(0?|([1-9a-f][0-9a-f]{0,3})))\(\sqrt{((0-9)|((0-9){2})|(1[0-1][0-9])|(12[0-8]))}$'

  - pattern: '^(((^[^:]+){7}([^[^:]+))|(((^[^:]+)*[^[^:]+)??:((^[^:]+)*[^[^:]+)?))\(\./.\.$'
  example: '2001:db8:abcd:12::0/64'
Ipv6PrefixRm:
  Type: string
  allOf:
  - pattern:
'^((:|(0?|([1-9a-f][0-9a-f]{0,3})))|((0?|([1-9a-f][0-9a-f]{0,3})):){0,6}(:|(0?|([1-9a-f][0-9a-f]{0,3})))\(\sqrt{((0-9)|((0-9){2})|(1[0-1][0-9])|(12[0-8]))}$'

```

```

    - pattern: '^((([:]+){7}([:]+)|((([:]+)*[:]+)?::(([:]+)*[:]+?))(\./+)$'
  nullable: true
MacAddr48:
  Type: string
  Pattern: '^([0-9a-fA-F]{2})((-[0-9a-fA-F]{2}){5})$'
MacAddr48Rm:
  Type: string
  Pattern: '^([0-9a-fA-F]{2})((-[0-9a-fA-F]{2}){5})$'
  nullable: true
SupportedFeatures:
  Type: string
  Pattern: '^[A-Fa-f0-9]*$'
UInteger:
  Type: integer
  Minimum: 0
UIntegerRm:
  Type: integer
  Minimum: 0
  nullable: true
UInt16:
  Type: integer
  Minimum: 0
  Maximum: 65535
UInt16Rm:
  Type: integer
  Minimum: 0
  Maximum: 65535
  nullable: true
UInt32:
  format: int32
  Type: integer
  Minimum: 0
UInt32Rm:
  format: int32
  Type: integer
  Minimum: 0
  nullable: true
UInt64:
  format: int64
  Type: integer
  Minimum: 0
UInt64Rm:
  format: int64
  Type: integer
  Minimum: 0
  nullable: true
Uri:
  Type: string
UriRm:
  Type: string
  nullable: true
VarUeId:

```

```

    Type: string
    Pattern: '^(imsi-[0-9]{5,15}|nai-\.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+\.|.+)$'
VarUeIdRm:
    Type: string
    Pattern: '^(imsi-[0-9]{5,15}|nai-\.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+\.|.+)$'
    nullable: true
TimeZone:
    Type: string
TimeZoneRm:
    Type: string
    nullable: true
# COMMON ENUMERATED DATA TYPES
PatchOperation:
  anyOf:
    - type: string
      enum:
        - add
        - copy
        - move
        - remove
        - replace
        - test
    - type: string
UriScheme:
  anyOf:
    - type: string
      enum:
        - http
        - https
    - type: string
ChangeType:
  anyOf:
    - type: string
      enum:
        - ADD
        - MOVE
        - REMOVE
        - REPLACE
    - type: string
# COMMON STRUCTURED DATA TYPES
ProblemDetails:
  Type: object
  Properties:
    Type:
      Reference: '#/components/schemas/Uri'
    title:
      Type: string
    status:
      Type: integer
    detail:
      Type: string
    instance:
      Reference: '#/components/schemas/Uri'
    cause:
      Type: string

```

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    invalidParams:
      Type: array
      Items:
        Reference: '#/components/schemas/InvalidParam'
      minItems: 1
  Link:
    Type: object
    Properties:
      href:
        Reference: '#/components/schemas/Uri'
  LinkRm:
    Type: object
    Properties:
      href:
        Reference: '#/components/schemas/Uri'
    nullable: true
  PatchItem:
    Type: object
    Properties:
      op:
        Reference: '#/components/schemas/PatchOperation'
      path:
        Type: string
      from:
        Type: string
      value:
        nullable: true
    Required:
      - op
      - path
  LinksValueSchema:
    oneOf:
      - type: array
        Items:
          Reference: '#/components/schemas/Link'
        minItems: 1
      - $ref: '#/components/schemas/Link'
  SelfLink:
    Type: object
    Properties:
      self:
        Reference: '#/components/schemas/Link'
    Required:
      - self
  InvalidParam:
    Type: object
    Properties:
      param:
        Type: string
      reason:
        Type: string
    Required:
      - param

```

```
ChangeItem:
  Type: object
  Properties:
    op:
      Reference: '#/components/schemas/ChangeType'
    path:
      Type: string
    from:
      Type: string
    origValue: {}
    newValue: {}
  Required:
    - op
    - path
NotifyItem:
  Type: object
  Properties:
    resourceId:
      Reference: '#/components/schemas/Uri'
    changes:
      Type: array
      Items:
        Reference: '#/components/schemas/ChangeItem'
      minItems: 1
ComplexQuery:
  oneOf:
    - $ref: '#/components/schemas/Cnf'
    - $ref: '#/components/schemas/Dnf'
Cnf:
  Type: object
  Required:
    - cnfUnits
  Properties:
    cnfUnits:
      Type: array
      Items:
        Reference: '#/components/schemas/CnfUnit'
      minItems: 1
Dnf:
  Type: object
  Required:
    - dnfUnits
  Properties:
    dnfUnits:
      Type: array
      Items:
        Reference: '#/components/schemas/DnfUnit'
      minItems: 1
CnfUnit:
  Type: object
  Required:
    - cnfUnit
  Properties:
```

```

    cnfUnit:
      Type: array
      Items:
        Reference: '#/components/schemas/Atom'
      minItems: 1
  DnfUnit:
    Type: object
    Required:
      - dnfUnit
    Properties:
      dnfUnit:
        Type: array
        Items:
          Reference: '#/components/schemas/Atom'
        minItems: 1
  Atom:
    Type: object
    Required:
      - attr
      - value
    Properties:
      attr:
        Type: string
      value: {}
      negative:
        Type: boolean
# Data Types related to Subscription, Identification and Numbering as defined in subclause
5.3
# SIMPLE DATA TYPES
  Dnn:
    Type: string
  DnnRm:
    Type: string
    nullable: true
  Gpsi:
    Type: string
    Pattern: '^ (msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+) $'
  GpsiRm:
    Type: string
    Pattern: '^ (msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|.+) $'
    nullable: true
  GroupId:
    Type: string
    Pattern: '^ [A-Fa-f0-9]{8}-[0-9]{3}-[0-9]{2,3}-([A-Fa-f0-9][A-Fa-f0-9]){1,10} $'
  GroupIdRm:
    Type: string
    Pattern: '^ [A-Fa-f0-9]{8}-[0-9]{3}-[0-9]{2,3}-([A-Fa-f0-9][A-Fa-f0-9]){1,10} $'
    nullable: true
  Pei:
    Type: string
    Pattern: '^ (imei-[0-9]{15}|imeisv-[0-9]{16}|.+) $'
  PeiRm:
    Type: string

```



```

    Pattern: '^(imei-[0-9]{15}|imeisv-[0-9]{16}|.+)$'
    nullable: true
Supi:
  Type: string
  Pattern: '^(imsi-[0-9]{5,15}|nai-.+|.+) $'
SupiRm:
  Type: string
  Pattern: '^(imsi-[0-9]{5,15}|nai-.+|.+) $'
  nullable: true
NfInstanceId:
  Type: string
  format: uuid
AmfId:
  Type: string
  Pattern: '^[A-Fa-f0-9]{6}$'
RfspIndex:
  Type: integer
  Minimum: 1
  Maximum: 256
RfspIndexRm:
  Type: integer
  Minimum: 1
  Maximum: 256
  nullable: true
NfGroupId:
  Type: string
# STRUCTURED DATA TYPES
Guami:
  Type: object
  Properties:
    plmnId:
      Reference: '#/components/schemas/PlmnId'
    amfId:
      Reference: '#/components/schemas/AmfId'
  Required:
    - plmnId
    - amfId
GuamiRm:
  Type: object
  Properties:
    plmnId:
      Reference: '#/components/schemas/PlmnId'
    amfId:
      Reference: '#/components/schemas/AmfId'
  Required:
    - plmnId
    - amfId
  nullable: true
NetworkId:
  Type: object
  Properties:
    mnc:

```

```

        Reference: '#/components/schemas/Mnc'
    mcc:
        Reference: '#/components/schemas/Mcc'
# Data Types related to 5G Network as defined in subclause 5.4
# SIMPLE DATA TYPES
ApplicationId:
    Type: string
ApplicationIdRm:
    Type: string
    nullable: true
PduSessionId:
    Type: integer
    Minimum: 0
    Maximum: 255
Mcc:
    Type: string
    Pattern: '^\\d{3}$'
MccRm:
    Type: string
    Pattern: '^\\d{3}$'
    nullable: true
Mnc:
    Type: string
    Pattern: '^\\d{2,3}$'
MncRm:
    Type: string
    Pattern: '^\\d{2,3}$'
    nullable: true
Tac:
    Type: string
    Pattern: '^[A-Fa-f0-9]{4}$|^[A-Fa-f0-9]{6}$'
TacRm:
    Type: string
    Pattern: '^[A-Fa-f0-9]{4}$|^[A-Fa-f0-9]{6}$'
    nullable: true
EutraCellId:
    Type: string
    Pattern: '^[A-Fa-f0-9]{7}$'
EutraCellIdRm:
    Type: string
    Pattern: '^[A-Fa-f0-9]{7}$'
    nullable: true
NrCellId:
    Type: string
    Pattern: '^[A-Fa-f0-9]{9}$'
NrCellIdRm:
    Type: string
    Pattern: '^[A-Fa-f0-9]{9}$'
    nullable: true
Dnai:
    Type: string
DnaiRm:

```

```

    Type: string
    nullable: true
  5GmCause:
    Reference: '#/components/schemas/UInteger'
  AmfName:
    Type: string
  AreaCode:
    Type: string
  AreaCodeRm:
    Type: string
    nullable: true
  N3IwfId:
    Type: string
  NgeNbId:
    Type: string
  Pattern:
    '^(\MacroNgeNB-[A-Fa-f0-9]{5}|LMacroNgeNB-[A-Fa-f0-9]{6}|SMacroNgeNB-[A-Fa-f0-9]{5})$'
# ENUMERATED DATA TYPES
  AccessType:
    Type: string
    enum:
      - 3GPP_ACCESS
      - NON_3GPP_ACCESS
  AccessTypeRm:
    Type: string
    enum:
      - 3GPP_ACCESS
      - NON_3GPP_ACCESS
    nullable: true
  RatType:
    anyOf:
      - type: string
        enum:
          - NR
          - EUTRA
          - WLAN
          - VIRTUAL
      - type: string
  RatTypeRm:
    anyOf:
      - type: string
        enum:
          - NR
          - EUTRA
          - WLAN
          - VIRTUAL
      - type: string
    nullable: true
  PduSessionType:
    anyOf:
      - type: string
        enum:
          - IPV4
          - IPV6
          - IPV4V6
          - UNSTRUCTURED

```

```
- ETHERNET
- type: string
PduSessionTypeRm:
anyOf:
- type: string
enum:
- IPV4
- IPV6
- IPV4V6
- UNSTRUCTURED
- ETHERNET
- type: string
nullable: true
UpIntegrity:
anyOf:
- type: string
enum:
- REQUIRED
- PREFERRED
- NOT_NEEDED
- type: string
UpIntegrityRm:
anyOf:
- type: string
enum:
- REQUIRED
- PREFERRED
- NOT_NEEDED
- type: string
nullable: true
UpConfidentiality:
anyOf:
- type: string
enum:
- REQUIRED
- PREFERRED
- NOT_NEEDED
- type: string
UpConfidentialityRm:
anyOf:
- type: string
enum:
- REQUIRED
- PREFERRED
- NOT_NEEDED
- type: string
nullable: true
SscMode:
anyOf:
- type: string
enum:
- SSC_MODE_1
- SSC_MODE_2
- SSC_MODE_3
- type: string
SscModeRm:
anyOf:
- type: string
```

```

    enum:
      - SSC_MODE_1
      - SSC_MODE_2
      - SSC_MODE_3
    - type: string
  nullable: true
DnaiChangeType:
  anyOf:
    - type: string
    enum:
      - EARLY
      - EARLY_LATE
      - LATE
    - type: string
  Description:
    This string provides forward-compatibility with future
    extensions to the enumeration but is not used to encode
    content defined in the present version of this API.
  Description:
    Possible values are
    - EARLY: Early notification of UP path reconfiguration.
    - EARLY_LATE: Early and late notification of UP path reconfiguration. This value shall
    only be present in the subscription to the DNAI change event.
    - LATE: Late notification of UP path reconfiguration.
DnaiChangeTypeRm:
  anyOf:
    - type: string
    enum:
      - EARLY
      - EARLY_LATE
      - LATE
    - type: string
  nullable: true
RestrictionType:
  anyOf:
    - type: string
    enum:
      - ALLOWED_AREAS
      - NOT_ALLOWED_AREAS
    - type: string
RestrictionTypeRm:
  anyOf:
    - type: string
    enum:
      - ALLOWED_AREAS
      - NOT_ALLOWED_AREAS
    - type: string
  nullable: true
CoreNetworkType:
  anyOf:
    - type: string
    enum:
      - 5GC
      - EPC
    - type: string
CoreNetworkTypeRm:
  anyOf:
    - type: string

```

```

        enum:
          - 5GC
          - EPC
        - type: string
    nullable: true
  PresenceState:
    anyOf:
      - type: string
        enum:
          - IN_AREA
          - OUT_OF_AREA
          - UNKNOWN
          - INACTIVE
      - type: string
# STRUCTURED DATA TYPES
Sns sai:
  Type: object
  Properties:
    sst:
      Type: integer
      Minimum: 0
      Maximum: 255
    sd:
      Type: string
      Pattern: '^[A-Za-f0-9]{6}$'
  Required:
    - sst
PlmnId:
  Type: object
  Properties:
    mcc:
      Reference: '#/components/schemas/Mcc'
    mnc:
      Reference: '#/components/schemas/Mnc'
  Required:
    - mcc
    - mnc
PlmnIdRm:
  Type: object
  Properties:
    mcc:
      Reference: '#/components/schemas/Mcc'
    mnc:
      Reference: '#/components/schemas/Mnc'
  Required:
    - mcc
    - mnc
  nullable: true
Tai:
  Type: object
  Properties:
    plmnId:
      Reference: '#/components/schemas/PlmnId'
    tac:

```

```
    Reference: '#/components/schemas/Tac'
Required:
  - plmnId
  - tac
TaiRm:
Type: object
Properties:
  plmnId:
    Reference: '#/components/schemas/PlmnId'
  tac:
    Reference: '#/components/schemas/Tac'
Required:
  - plmnId
  - tac
nullable: true
Ecgi:
Type: object
Properties:
  plmnId:
    Reference: '#/components/schemas/PlmnId'
    # PLMN Identity
  eutraCellId:
    Reference: '#/components/schemas/EutraCellId'
Required:
  - plmnId
  - eutraCellId
EcgiRm:
Type: object
Properties:
  plmnId:
    Reference: '#/components/schemas/PlmnId'
    # PLMN Identity
  eutraCellId:
    Reference: '#/components/schemas/EutraCellId'
Required:
  - plmnId
  - eutraCellId
nullable: true
Ncgi:
Type: object
Properties:
  plmnId:
    Reference: '#/components/schemas/PlmnId'
  nrCellId:
    Reference: '#/components/schemas/NrCellId'
Required:
  - plmnId
  - nrCellId
NcgiRm:
Type: object
Properties:
  plmnId:
    Reference: '#/components/schemas/PlmnId'
  nrCellId:
```

```

    Reference: '#/components/schemas/NrCellId'
  Required:
    - plmnId
    - nrCellId
  nullable: true
  UserLocation:
    Type: object
    Properties:
      eutraLocation:
        Reference: '#/components/schemas/EutraLocation'
      nrLocation:
        Reference: '#/components/schemas/NrLocation'
      n3gaLocation:
        Reference: '#/components/schemas/N3gaLocation'
  EutraLocation:
    Type: object
    Properties:
      tai:
        Reference: '#/components/schemas/Tai'
      ecgi:
        Reference: '#/components/schemas/Ecgi'
      ageOfLocationInformation:
        Type: integer
        Minimum: 0
        Maximum: 32767
      ueLocationTimestamp:
        Reference: '#/components/schemas/DateTime'
      geographicalInformation:
        Type: string
        Pattern: '^[0-9A-F]{16}$'
      geodeticInformation:
        Type: string
        Pattern: '^[0-9A-F]{20}$'
      globalNgenbId:
        Reference: '#/components/schemas/GlobalRanNodeId'
  Required:
    - tai
    - ecgi
  EutraLocationRm:
    Type: object
    Properties:
      tai:
        Reference: '#/components/schemas/Tai'
      ecgi:
        Reference: '#/components/schemas/Ecgi'
      ageOfLocationInformation:
        Type: integer
        Minimum: 0
        Maximum: 32767
      ueLocationTimestamp:
        Reference: '#/components/schemas/DateTime'
      geographicalInformation:

```



```

    Type: string
    Pattern: '^[0-9A-F]{16}$'
  geodeticInformation:
    Type: string
    Pattern: '^[0-9A-F]{20}$'
  globalNgenbId:
    Reference: '#/components/schemas/GlobalRanNodeId'
  Required:
    - tai
    - ecgi
  nullable: true
NrLocation:
  Type: object
  Properties:
    tai:
      Reference: '#/components/schemas/Tai'
    ncgi:
      Reference: '#/components/schemas/Ncgi'
  ageOfLocationInformation:
    Type: integer
    Minimum: 0
    Maximum: 32767
  ueLocationTimestamp:
    Reference: '#/components/schemas/DateTime'
  geographicalInformation:
    Type: string
    Pattern: '^[0-9A-F]{16}$'
  geodeticInformation:
    Type: string
    Pattern: '^[0-9A-F]{20}$'
  globalGnbId:
    Reference: '#/components/schemas/GlobalRanNodeId'
  Required:
    - tai
    - ncgi
NrLocationRm:
  Type: object
  Properties:
    tai:
      Reference: '#/components/schemas/Tai'
    ncgi:
      Reference: '#/components/schemas/Ncgi'
  ageOfLocationInformation:
    Type: integer
    Minimum: 0
    Maximum: 32767
  ueLocationTimestamp:
    Reference: '#/components/schemas/DateTime'
  geographicalInformation:
    Type: string
    Pattern: '^[0-9A-F]{16}$'
  geodeticInformation:

```

```

    Type: string
    Pattern: '^[0-9A-F]{20}$'
  globalGnbId:
    Reference: '#/components/schemas/GlobalRanNodeId'
  Required:
    - tai
    - ncgi
  nullable: true
N3gaLocation:
  Type: object
  Properties:
    n3gppTai:
      Reference: '#/components/schemas/Tai'
    n3IwfId:
      Type: string
      Pattern: '^[A-Za-z0-9]+$'
    ueIpv4Addr:
      Reference: '#/components/schemas/Ipv4Addr'
    ueIpv6Addr:
      Reference: '#/components/schemas/Ipv6Addr'
    portNumber:
      Reference: '#/components/schemas/UInteger'
UpSecurity:
  Type: object
  Properties:
    upIntegr:
      Reference: '#/components/schemas/UpIntegrity'
    upConfid:
      Reference: '#/components/schemas/UpConfidentiality'
  Required:
    - upIntegr
    - upConfid
UpSecurityRm:
  Type: object
  Properties:
    upIntegr:
      Reference: '#/components/schemas/UpIntegrity'
    upConfid:
      Reference: '#/components/schemas/UpConfidentiality'
  Required:
    - upIntegr
    - upConfid
  nullable: true
NgApCause:
  Type: object
  Properties:
    group:
      Reference: '#/components/schemas/UInteger'
    value:
      Reference: '#/components/schemas/UInteger'
  Required:
    - group
    - value

```

```
BackupAmfInfo:
  Type: object
  Properties:
    backupAmf:
      Reference: '#/components/schemas/AmfName'
    guamiList:
      Type: array
      Items:
        Reference: '#/components/schemas/Guami'
      minItems: 1
  Required:
    - backupAmf
RefToBinaryData:
  Type: object
  Properties:
    contentId:
      Type: string
  Required:
    - contentId
RefToBinaryDataRm:
  Type: object
  Properties:
    contentId:
      Type: string
  Required:
    - contentId
  nullable: true
RouteToLocation:
  Type: object
  Properties:
    dnai:
      Reference: '#/components/schemas/Dnai'
    routeInfo:
      Reference: '#/components/schemas/RouteInformation'
    routeProfId:
      Type: string
      nullable: true
  Required:
    - dnai
  nullable: true
RouteInformation:
  Type: object
  Properties:
    ipv4Addr:
      Reference: '#/components/schemas/Ipv4Addr'
    ipv6Addr:
      Reference: '#/components/schemas/Ipv6Addr'
    portNumber:
      Reference: '#/components/schemas/Uinteger'
  Required:
    - portNumber
  nullable: true
```

SubscribedDefaultQos:**Type:** object**Required:**

- 5qi
- arp

Properties:**5qi:****Reference:** '#/components/schemas/5Qi'**arp:****Reference:** '#/components/schemas/Arp'**priorityLevel:****Reference:** '#/components/schemas/5QiPriorityLevel'**Area:****Type:** object**oneOf:**

- required:
- tacs
- required:
- areaCode

Properties:**tacs:****Type:** array**Items:****Reference:** '#/components/schemas/Tac'**minItems:** 1**areaCodes:****Reference:** '#/components/schemas/AreaCode'**ServiceAreaRestriction:****Type:** object**Properties:****restrictionType:****Reference:** '#/components/schemas/RestrictionType'**areas:****Type:** array**Items:****Reference:** '#/components/schemas/Area'**maxNumOfTAs:****Reference:** '#/components/schemas/UInteger'**allOf:**

#

1st condition: restrictionType and areas attributes shall be either both absent
or both present

#

- oneOf:

- not:

Required: [restrictionType]

- required: [areas]

#

2nd condition: if restrictionType takes value NOT_ALLOWED_AREAS,
then maxNumOfTAs shall be absent

#

- anyOf:

- not:

Required: [restrictionType]**Properties:**

```

        restrictionType:
          Type: string
          enum: [ NOT_ALLOWED_AREAS ]
        - not:
          Required: [ maxNumOfTAS ]
PresenceInfo:
  Type: object
  Properties:
    praId:
      Type: string
    presenceState:
      Reference: '#/components/schemas/PresenceState'
    trackingAreaList:
      Type: array
      Items:
        Reference: '#/components/schemas/Tai'
      minItems: 1
    ecgiList:
      Type: array
      Items:
        Reference: '#/components/schemas/Ecgi'
      minItems: 1
    ncgiList:
      Type: array
      Items:
        Reference: '#/components/schemas/Ncgi'
      minItems: 1
    globalRanNodeIdList:
      Type: array
      Items:
        Reference: '#/components/schemas/GlobalRanNodeId'
      minItems: 1
PresenceInfoRm:
  Type: object
  Properties:
    praId:
      Type: string
    presenceState:
      Reference: '#/components/schemas/PresenceState'
    trackingAreaList:
      Type: array
      Items:
        Reference: '#/components/schemas/Tai'
      minItems: 0
    ecgiList:
      Type: array
      Items:
        Reference: '#/components/schemas/Ecgi'
      minItems: 0
    ncgiList:
      Type: array
      Items:

```

```

        Reference: '#/components/schemas/Ncgi'
      minItems: 0
    globalRanNodeIdList:
      Type: array
      Items:
        Reference: '#/components/schemas/GlobalRanNodeId'
    nullable: true
  GlobalRanNodeId:
    Type: object
    Properties:
      plmnId:
        Reference: '#/components/schemas/PlmnId'
      n3IwfId:
        Reference: '#/components/schemas/N3IwfId'
      gNbId:
        Reference: '#/components/schemas/GNbId'
      ngeNbId:
        Reference: '#/components/schemas/NgeNbId'
    oneOf:
      - required: [ n3IwfId ]
      - required: [ gNbId ]
      - required: [ ngeNbId ]
    Required:
      - plmnId
  GNbId:
    Type: object
    Properties:
      bitLength:
        Type: integer
        Minimum: 22
        Maximum: 32
      gNBValue:
        Type: string
        Pattern: '^[A-Za-f0-9]{6,8}$'
    Required:
      - bitLength
      - gNBValue
# Data Types related to 5G QoS as defined in subclause 5.5
# SIMPLE DATA TYPES
  Qfi:
    Type: integer
    Minimum: 0
    Maximum: 63
  QfiRm:
    Type: integer
    Minimum: 0
    Maximum: 63
    nullable: true
  5Qi:
    Type: integer
    Minimum: 0
    Maximum: 255
  5QiRm:

```

```
    Type: integer
    Minimum: 0
    Maximum: 255
    nullable: true
BitRate:
    Type: string
    Pattern: '^\\d+(\\.\\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$'
BitRateRm:
    Type: string
    Pattern: '^\\d+(\\.\\d+)? (bps|Kbps|Mbps|Gbps|Tbps)$'
    nullable: true
ArpPriorityLevel:
    Type: integer
    Minimum: 1
    Maximum: 15
    nullable: true
5QiPriorityLevel:
    Type: integer
    Minimum: 1
    Maximum: 127
5QiPriorityLevelRm:
    Type: integer
    Minimum: 1
    Maximum: 127
    nullable: true
PacketDelBudget:
    Type: integer
    Minimum: 1
PacketDelBudgetRm:
    Type: integer
    Minimum: 1
    nullable: true
PacketErrRate:
    Type: string
    Pattern: '^([0-9]E-[0-9])$'
PacketErrRateRm:
    Type: string
    Pattern: '^([0-9]E-[0-9])$'
    nullable: true
PacketLossRate:
    Type: integer
    Minimum: 0
    Maximum: 1000
PacketLossRateRm:
    Type: integer
    Minimum: 0
    Maximum: 1000
    nullable: true
AverWindow:
    Type: integer
    Minimum: 1
```

```

    Maximum: 4095
    Default: 2000
AverWindowRm:
    Type: integer
    Maximum: 4095
    Default: 2000
    Minimum: 1
    nullable: true
MaxDataBurstVol:
    Type: integer
    Minimum: 1
    Maximum: 4095
MaxDataBurstVolRm:
    Type: integer
    Minimum: 1
    Maximum: 4095
    nullable: true
# ENUMERATED DATA TYPES
PreemptionCapability:
  anyOf:
    - type: string
      enum:
        - NOT_PREEMPT
        - MAY_PREEMPT
    - type: string
PreemptionCapabilityRm:
  anyOf:
    - type: string
      enum:
        - NOT_PREEMPT
        - MAY_PREEMPT
    - type: string
  nullable: true
PreemptionVulnerability:
  anyOf:
    - type: string
      enum:
        - NOT_PREEMPTABLE
        - PREEMPTABLE
    - type: string
PreemptionVulnerabilityRm:
  anyOf:
    - type: string
      enum:
        - NOT_PREEMPTABLE
        - PREEMPTABLE
    - type: string
  nullable: true
ReflectiveQoSAttribute:
  anyOf:
    - type: string
      enum:
        - RQOS
        - NO_RQOS
    - type: string
ReflectiveQoSAttributeRm:

```



```

anyOf:
  - type: string
    enum:
      - RQOS
      - NO_RQOS
  - type: string
nullable: true
NotificationControl:
anyOf:
  - type: string
    enum:
      - REQUESTED
      - NOT_REQUESTED
  - type: string
NotificationControlRm:
anyOf:
  - type: string
    enum:
      - REQUESTED
      - NOT_REQUESTED
  - type: string
nullable: true
QosResourceType:
anyOf:
  - type: string
    enum:
      - NON_GBR
      - NON_CRITICAL_GBR
      - CRITICAL_GBR
  - type: string
QosResourceTypeRm:
anyOf:
  - type: string
    enum:
      - NON_GBR
      - NON_CRITICAL_GBR
      - CRITICAL_GBR
  - type: string
nullable: true
AdditionalQosFlowInfo:
anyOf:
  - type: string
    enum:
      - MORE_LIKELY
  - type: string
nullable: true
# STRUCTURED DATA TYPES
Arp:
Type: object
Properties:
  priorityLevel:
    Reference: '#/components/schemas/ArpPriorityLevel'
  preemptCap:
    Reference: '#/components/schemas/PreemptionCapability'
  preemptVuln:
    Reference: '#/components/schemas/PreemptionVulnerability'
Required:

```

- priorityLevel
- preemptCap
- preemptVuln

ArpRm:**Type:** object**Properties:****priorityLevel:****Reference:** '#/components/schemas/ArpPriorityLevel'**preemptCap:****Reference:** '#/components/schemas/PreemptionCapability'**preemptVuln:****Reference:** '#/components/schemas/PreemptionVulnerability'**Required:**

- priorityLevel
- preemptCap
- preemptVuln

nullable: true**Ambr:****Type:** object**Properties:****uplink:****Reference:** '#/components/schemas/BitRate'**downlink:****Reference:** '#/components/schemas/BitRate'**Required:**

- uplink
- downlink

AmbrRm:**Type:** object**Properties:****uplink:****Reference:** '#/components/schemas/BitRate'**downlink:****Reference:** '#/components/schemas/BitRate'**Required:**

- uplink
- downlink

nullable: true**Dynamic5Qi:****Type:** object**Properties:****resourceType:****Reference:** '#/components/schemas/QosResourceType'**priorityLevel:****Reference:** '#/components/schemas/5QiPriorityLevel'**packetDelayBudget:****Reference:** '#/components/schemas/PacketDelBudget'**packetErrRate:****Reference:** '#/components/schemas/PacketErrRate'**averWindow:****Reference:** '#/components/schemas/AverWindow'**maxDataBurstVol:****Reference:** '#/components/schemas/MaxDataBurstVol'

```

Required:
- resourceType
- priorityLevel
- packetDelayBudget
- packetErrRate
NonDynamic5Qi:
Type: object
Properties:
  priorityLevel:
    Reference: '#/components/schemas/5QiPriorityLevel'
  averWindow:
    Reference: '#/components/schemas/AverWindow'
  maxDataBurstVol:
    Reference: '#/components/schemas/MaxDataBurstVol'
  minProperties: 0
# Data Types related to 5G Trace as defined in subclause 5.6
# SIMPLE DATA TYPES
# Enumerations
TraceDepth:
  anyOf:
    - type: string
      enum:
        - MINIMUM
        - MEDIUM
        - MAXIMUM
        - MINIMUM_WO_VENDOR_EXTENSION
        - MEDIUM_WO_VENDOR_EXTENSION
        - MAXIMUM_WO_VENDOR_EXTENSION
    - type: string
TraceDepthRm:
  anyOf:
    - type: string
      enum:
        - MINIMUM
        - MEDIUM
        - MAXIMUM
        - MINIMUM_WO_VENDOR_EXTENSION
        - MEDIUM_WO_VENDOR_EXTENSION
        - MAXIMUM_WO_VENDOR_EXTENSION
    - type: string
  nullable: true
# STRUCTURED DATA TYPES
TraceData:
Type: object
nullable: true
Properties:
  traceRef:
    Type: string
    Pattern: '^ [0-9]{3} [0-9]{2,3} - [A-Za-f0-9]{6}$'
  traceDepth:
    Reference: '#/components/schemas/TraceDepth'
  neTypeList:
    Type: string
    Pattern: '^ [A-Za-f0-9]+$'
  eventList:
    Type: string

```

```

        Pattern: '^[A-Fa-f0-9]+$'
collectionEntityIpv4Addr:
        Reference: '#/components/schemas/Ipv4Addr'
collectionEntityIpv6Addr:
        Reference: '#/components/schemas/Ipv6Addr'
interfaceList:
        Type: string
        Pattern: '^[A-Fa-f0-9]+$'
Required:
    - traceRef
    - traceDepth
    - neTypeList
    - eventList
# Data Types related to 5G ODB as defined in subclause 5.7
# SIMPLE DATA TYPES
# Enumerations
RoamingOdb:
    anyOf:
    - type: string
      enum:
      - OUTSIDE_HOME_PLMN
      - OUTSIDE_HOME_PLMN_COUNTRY
    - type: string
OdbPacketServices:
    anyOf:
    - type: string
      enum:
      - ALL_PACKET_SERVICES
      - ROAMER_ACCESS_HPLMN_AP
      - ROAMER_ACCESS_VPLMN_AP
    - type: string
    nullable: true
# STRUCTURED DATA TYPES
OdbData:
    Type: object
    Properties:
      roamingOdb:
        Reference: '#/components/schemas/RoamingOdb'
      odbPacketServices:
        Reference: '#/components/schemas/OdbPacketServices'
# Data Types related to Charging as defined in subclause 5.8
# SIMPLE DATA TYPES
ChargingId:
    Reference: '#/components/schemas/Uint32'
RatingGroup:
    Reference: '#/components/schemas/Uint32'
ServiceId:
    Reference: '#/components/schemas/Uint32'
# Enumerations
# STRUCTURED DATA TYPES
SecondaryRatUsageReport:
    Type: object
    Properties:
      secondaryRatType:
        Reference: '#/components/schemas/RatType'
      qosFlowsUsageData:

```

```

    Type: array
    Items:
      Reference: '#/components/schemas/QosFlowUsageReport'
    minItems: 1
  Required:
    - secondaryRatType
    - qosFlowsUsageData
QosFlowUsageReport:
  Type: object
  Properties:
    qfi:
      Reference: '#/components/schemas/Qfi'
    startTimeStamp:
      Reference: '#/components/schemas/DateTime'
    endTimeStamp:
      Reference: '#/components/schemas/DateTime'
    downlinkVolume:
      Reference: '#/components/schemas/Int64'
    uplinkVolume:
      Reference: '#/components/schemas/Int64'
  Required:
    - qfi
    - startTimeStamp
    - endTimeStamp
    - downlinkVolume
    - uplinkVolume
# HTTP responses
responses:
  '400':
    Description: Bad request
    content:
      application/problem+json:
        schema:
          Reference: '#/components/schemas/ProblemDetails'
  '401':
    Description: Unauthorized
    content:
      application/problem+json:
        schema:
          Reference: '#/components/schemas/ProblemDetails'
  '403':
    Description: Forbidden
    content:
      application/problem+json:
        schema:
          Reference: '#/components/schemas/ProblemDetails'
  '404':
    Description: Not Found
    content:
      application/problem+json:
        schema:
          Reference: '#/components/schemas/ProblemDetails'
  '405':
    Description: Method Not Allowed

```

```
'408':
  Description: Request Timeout
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'406':
  Description: 406 Not Acceptable
'409':
  Description: Conflict
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'410':
  Description: Gone
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'411':
  Description: Length Required
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'412':
  Description: Precondition Failed
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'413':
  Description: Payload Too Large
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'414':
  Description: URI Too Long
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'415':
  Description: Unsupported Media Type
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'429':
  Description: Too Many Requests
  content:
```

```
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'500':
  Description: Internal Server Error
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'501':
  Description: Not Implemented
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'503':
  Description: Service Unavailable
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
'504':
  Description: Gateway Timeout
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
Default:
  Description: Generic Error
  content:
    application/problem+json:
      schema:
        Reference: '#/components/schemas/ProblemDetails'
```

External Docs

Description: 3GPP TS 29.571 Common Data Types for Service Based Interfaces, version 15.2.0
URL: 'http://www.3gpp.org/ftp/Specs/archive/29_series/29.571/'

