



## Common Data

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Common data types are applicable to several 5GC SBI API specifications as defined in 3GPP TS 29.571 [5] and should be referenced from individual 5GC SBI API specifications.

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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 '

## externalDocs

**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/'

## 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: '^((?:([1-9a-f][0-9a-f]{0,3}))\*)(?:([1-9a-f][0-9a-f]{0,3}))-:0,6(?:([1-9a-f][0-9a-f]{0,3}))\*\$'  
 - pattern: '^(((^[^:]+){7}([^[^:]+))|(((^[^:]+)\*[^[^:]+)?::((^[^:]+)\*[^[^:]+)?))\$'

**example:** '2001:db8:85a3::8a2e:370:7334'

**nullable:** true

## Ipv6Prefix

**Type:** string

**allOf:**

- pattern: '^((?:([1-9a-f][0-9a-f]{0,3}))\*)(?:([1-9a-f][0-9a-f]{0,3}))-:0,6(?:([1-9a-f][0-9a-f]{0,3}))\*\v((([0-9])([0-9]{2})|(1[0-1][0-9])(12[0-8])))\$'  
 - pattern: '^(((^[^:]+){7}([^[^:]+))|(((^[^:]+)\*[^[^:]+)?::((^[^:]+)\*[^[^:]+)?))(v.+)\$'

**example:** '2001:db8:abcd:12::0/64'

## Ipv6PrefixRm

**Type:** string

**allOf:**

- pattern: '^((?:([1-9a-f][0-9a-f]{0,3}))\*)(?:([1-9a-f][0-9a-f]{0,3}))-:0,6(?:([1-9a-f][0-9a-f]{0,3}))\*\v((([0-9])([0-9]{2})|(1[0-1][0-9])(12[0-8])))\$'  
 - pattern: '^(((^[^:]+){7}([^[^:]+))|(((^[^:]+)\*[^[^:]+)?::((^[^:]+)\*[^[^:]+)?))(v.+)\$'

**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

## VarUeld

**Type:** string  
**Pattern:** '^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|.+)S'

## VarUeldRm

**Type:** string  
**Pattern:** '^(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|.+)S'  
**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

**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

## Changeltem

**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**Groupld****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}\$'**GroupldRm****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

## Amfld

**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

## 5GMmCause

**Reference:** '#/components/schemas/UInteger'

## AmfName

**Type:** string

## AreaCode

**Type:** string

## AreaCodeRm

**Type:** string

**nullable:** true

## N3lwfld

**Type:** string

## NgeNblId

**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

## UplIntegrity

**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

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.

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

```

## Snssai

```

Type: object
Properties:
sst:
Type: integer
Minimum: 0
Maximum: 255
sd:
Type: string
Pattern: '^[A-Za-f0-9]{6}$'
Required:
- sst

```

## PImnId

```

Type: object
Properties:
mcc:
Reference: '#/components/schemas/Mcc'
mnc:
Reference: '#/components/schemas/Mnc'
Required:
- mcc
- mnc

```

## PImnIdRm

```

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-Fa-f0-9]+\$'

**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-Fa-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-Fa-f0-9]{6}\$'

**traceDepth:**

**Reference:** '#/components/schemas/TraceDepth'

**neTypeList:**

**Type:** string

**Pattern:** '^[A-Fa-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:**

'412'

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'