**3GPP TSG-SA5 Meeting #131e *S5-203065rev1***

**25 May to 03 June 2020, E-meeting**

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| *CR-Form-v11.4* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.541** | **CR** | **0287** | **rev** | **-** | **Current version:** | **16.4.1** |  |
|  | | | | | | | | |
| *For* [***HELP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Add IOC for 5QI to DSCP mapping | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Intel | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNRM | | | | |  | ***Date:*** | | | 2020-05-14 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) Rel-12 (Release 12) Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In 5GC user data QoS control, the SMF maps the 5QI to DSCP, and provides the mapped DSCP to UPF when establishing the QoS flow. The mapping of 5QIs and DSCPs are needed by OAM to monitor the performance of GTP tunnel, so OAM may need to configure the mapping in some cases, for instance for the non-standardized 5QIs.  So the mapping between 5QIs and DSCPs needs to be modelled in 5G NRM. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add an IOC for 5QI to DSCP mapping. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The 5QI to DSCP mapping cannot be known and controlled by OAM. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2.1, 5.3.x (new), 5.3.y (new), 5.4.1, F.4.3, G.4.3, H.5.x (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |

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| **First Modified Sections** |

### 5.2.1 Class diagram of 5GC NFs

#### 5.2.1.1 Relationships

This clause depicts the set of classes (e.g. IOCs) that encapsulates the information relevant for NRM of 5GC NFs definitions. This clause provides the overview of the relationships of relevant classes in UML. Subsequent clauses provide more detailed specification of various aspects of these classes.

The Figure 5.2.1.1-1 shows the 5GC NF NRM containment/naming relationship.

Figure 5.2.1.1-1: 5GC NRM containment/naming relationship

The Figure 5.2.1.1-2 shows the transport view of AMF NRM.



Figure 5.2.1.1-2: Transport view of AMF NRM

The Figure 5.2.1.1-3 shows the transport view of SMF NRM.

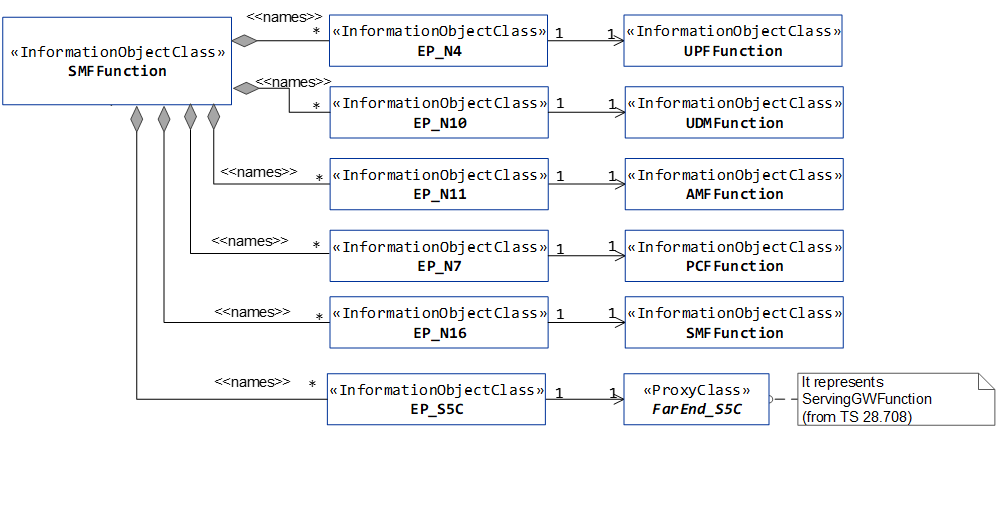


Figure 5.2.1.1-3: Transport view of SMF NRM

The Figure 5.2.1.1-4 shows the transport view of UPF NRM.

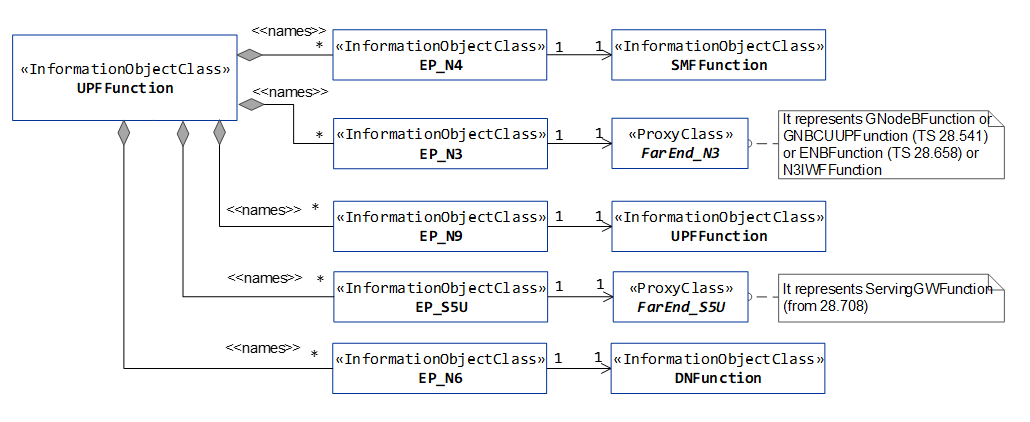


Figure 5.2.1.1-4: Transport view of UPF NRM

The Figure 5.2.1.1-5 shows the transport view of N3IWF NRM.



Figure 5.2.1.1-5: Transport view of N3IWF NRM

The Figure 5.2.1.1-6 shows the transport view of PCF NRM.

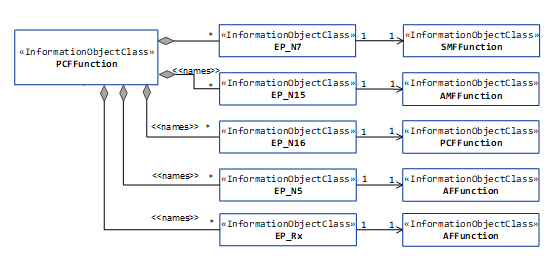


Figure 5.2.1.1-6: Transport view of PCF NRM

The Figure 5.2.1.1-7 shows the transport view of AUSF NRM.

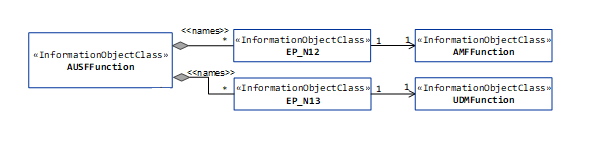


Figure 5.2.1.1-7: Transport view of AUSF NRM

The Figure 5.2.1.1-8 shows the transport view of UDM NRM.

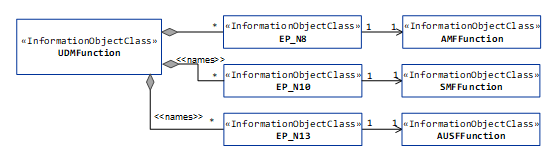


Figure 5.2.1.1-8: Transport view of UDM NRM

The Figure 5.2.1.1-9 shows the transport view of NRF NRM.



Figure 5.2.1.1-9: Transport view of NRF NRM

The Figure 5.2.1.1-10 shows the transport view of NSSF NRM.



Figure 5.2.1.1-10: Transport view of NSSF NRM

The Figure 5.2.1.1-11 shows the transport view of SMSF NRM.



Figure 5.2.1.1-11: Transport view of SMSF NRM

The Figure 5.2.1.1-12 shows the transport view of 5G location service related NRM.



Figure 5.2.1.1-12: Transport view of LMF NRM

The Figure 5.2.1.1-13 shows the transport view of 5G-EIR NRM.



Figure 5.2.1.1-13: Transport view of 5G-EIR NRM

The Figure 5.2.1.1-14 shows the transport view of SEPP NRM.

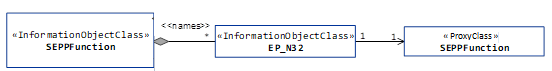


Figure 5.2.1.1-14: Transport view of SEPP NRM

The Figure 5.2.1.1-x shows the NRM fragment for 5QI and DSCP mapping.



Figure 5.2.1.1-x: NRM fragment for 5QI and DSCP mapping.

#### 5.2.1.2 Inheritance

This clause depicts the inheritance relationships that exist between IOCs.

Figure 5.2.1.2-1 shows the inheritance hierarchy from IOC ManagedFunction related to the 5GC NF NRM.



Figure 5.2.1.2-1: Inheritance hierarchy from IOC ManagedFunction related to the 5GC NF NRM

Figure 5.2.1.2-2 shows the inheritance hierarchy from IOC EP\_RP related to 5GC NF NRM.

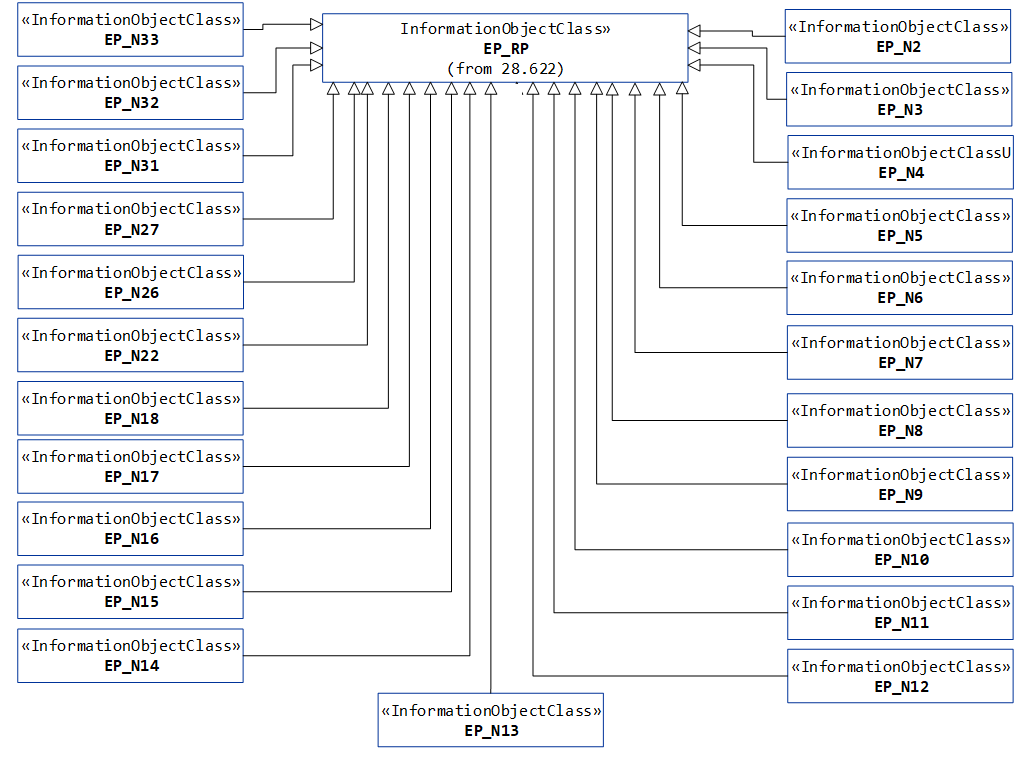


Figure 5.2.1.2-2: Inheritance hierarchy from IOC EP\_RP related to the 5GC NF NRM



Figure 5.2.1.2-x: Inheritance hierarchy for IOC FiveQiDscpMapping

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| **Next Modified Sections** |

### 5.3.x FiveQiDscpMappingSet

#### 5.3.x.1 Definition

This IOC specifies the set of mapping between 5QIs and DSCP.

#### 5.3.x.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| fiveQiDscpMappingList | M | T | T | F | T |

#### 5.3.x.3 Attribute constraints

None.

#### 5.3.x.4 Notifications

The common notifications defined in subclause 5.5 are valid for this IOC, without exceptions or additions.

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| **Next Modified Sections** |

### 5.3.y FiveQiDscpMapping <<dataType>>

#### 5.3.y.1 Definition

This data type specifies the mapping between 5QIs to DSCP.

#### 5.3.y.2 Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| fiveQIValues | M | T | T | F | T |
| dscp | M | T | T | F | T |

#### 5.3.y.3 Attribute constraints

None

#### 5.3.y.4 Notifications

The subclause 4.5 of the <<IOC>> using this <<dataType>> as one of its attributes, shall be applicable.

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| **Next Modified Sections** |

### 5.4.1 Attribute properties

The following table defines the attributes that are present in several Information Object Classes (IOCs) of the present document.

| Attribute Name | Documentation and Allowed Values | Properties | |
| --- | --- | --- | --- |
| aMFIdentifier | The AMFI is constructed from an AMF Region ID, an AMF Set ID and an AMF Pointer. The AMF Region ID identifies the region, the AMF Set ID uniquely identifies the AMF Set within the AMF Region, and the AMF Pointer uniquely identifies the AMF within the AMF Set. (Ref. 3GPP TS 23.003 [13]) | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| aMFSetId | It represents the AMF Set ID, which is uniquely identifies the AMF Set within the AMF Region.  allowedValues: defined in subclause 2.10.1 of 3GPP TS 23.003 [13]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| aMFSetMemberList | It is the list of DNs of AMFFunction instances of the AMFSet.  allowedValues: N/A | type: DN  multiplicity: 1  isOrdered: N/A  isUnique: True  defaultValue: None  isNullable: False | |
| aMFRegionId | It represents the AMF Region ID, which identifies the region.  allowedValues: defined in subclause 2.10.1 of 3GPP TS 23.003 [13]. | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| localAddress | This parameter specifies the localAddress including IP address and VLAN ID used for initialization of the underlying transport.  First string is IP address, IP address can be an IPv4 address (See RFC 791 [37]) or an IPv6 address (See RFC 2373 [38]).  Second string is VLAN Id (See IEEE 802.1Q [39]). | type: String  multiplicity: 2  isOrdered: True  isUnique: N/A  defaultValue: None  isNullable: False | |
| remoteAddress | Remote address including IP address used for initialization of the underlying transport.  IP address can be an IPv4 address (See RFC 791 [37]) or an IPv6 address (See RFC 2373 [38]). | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False | |
| nfProfileList | It is a set of NFProfile(s) to be registered in the NRF instance. NFProfile is defined in 3GPP TS 29.510 [23]. | type: <<dataType>>  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| nSIIdList | It is a set of NSI Id. The NSI ID is defined in subclause 6.1.6.2.8 of 3GPP TS 29.531 [24]. | type: String  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| sNSSAIList | See subclause 4.4.1. |  | |
| sBIFQDN | It is used to indicate the FQDN of the registered NF instance in service-based interface, for example, NF instance FQDN structure is:  nftype<nfnum>.slicetype<sliceid>.mnc<MNC>.mcc<MCC>.3gppnetwork.org | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| sBIServiceList | It is used to indicate the all supported NF services registered on service-based interface. | type: String  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| nRTACList | It is the list of Tracking Area Codes (either legacy TAC or extended TAC).  allowedValues:  Legacy TAC and Extended TAC are defined in clause 9.3.3.10 of TS 38.413 [5]. | type: Integer  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| supportedBMOList | It is used to indicate the list of supported BMOs (Bridge Managed Objects) required for integration with TSN system. | type: String  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False | |
| managedNFProfile | This parameter defines profile for managed NF (See TS 23.501 [22]).  allowedValues: N/A | type: ManagedNFProfile  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nfInstanceID | This parameter defines unique identity of the NF Instance. The format of the NF Instance ID shall be a Universally Unique Identifier (UUID) version 4, as described in IETF RFC 4122 [44]  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| nfType | This parameter defines type of Network Function  allowedValues: See TS 23.501[22] for NF types | type: ENUM  multiplicity: 1..\*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| fqdn | This parameter defines FQDN of the Network Function (See TS 23.003 [5])  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| ipAddress | This parameter defines IP Address of the Network Function. It can be IPv4 address (See RFC 791 [24]) or IPv6 address (See RFC 2373 [25]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| authzInfo | This parameter defines NF Specific Service authorization information. It shall include the NF type (s) and NF realms/origins allowed to consume NF Service(s) of NF Service Producer (See TS 23.501[22]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| locality | The parameter defines information about the location of the NF instance (e.g. geographic location, data center) defined by operator (See TS 29.510[23]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: True |
| capacity | This parameter defines static capacity information in the range of 0-65535, expressed as a weight relative to other NF instances of the same type; if capacity is also present in the nfServiceList parameters, those will have precedence over this value (See TS 29.510[23])  allowedValues: 0-65535 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| nFInfo | This parameter includes NF specific data in Managed NF profile  allowedValues: N/A | type: NFInfo  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| hostAddr | This parameter defines host address of a NF  allowedValues: N/A | type: HostAddr  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| priority | This parameter defines Priority (relative to other NFs of the same type) in the range of 0-65535, to be used for NF selection; lower values indicate a higher priority. If priority is also present in the nfServiceList parameters, those will have precedence over this value (See TS 29.510[23]).  allowedValues: 0-65535 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| supportedDataSetIds | This parameter defines list of supported data sets in the UDR instance (See TS 29.510[23]).  allowedValues: "SUBSCRIPTION", "POLICY", EXPOSURE", "APPLICATION" | type: ENUM  multiplicity: 1..\*  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| nFSrvGroupId | This parameter defines identity of the group that is served by the NF instance (See TS 29.510[23]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| smfServingAreas | This parameter defines the SMF service area(s) the UPF can serve (See TS 29.510[23]).  allowedValues: N/A | type: String  multiplicity: 1..\*  isOrdered: F  isUnique: True  defaultValue: None  isNullable: False |
| isRemoveAllowed | This indicates if the subject NRCellRelation can be removed (deleted) or not.  If TRUE, the subject NRCellRelation instance can be removed (deleted).  If FALSE, the subject NRCellRelation instance shall not be removed (deleted) by any entity but an MnS consumer.  allowedValues: TRUE,FALSE | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| isHOAllowed | This indicates if HO is allowed or prohibited.  If TRUE, handover is allowed from source cell to target cell. The source cell is identified by the name-containing NRCellCU of the NRCellRelation that contains the isHOAllowed. The target cell is referenced by the NRCellRelation that contains this isHOAllowed.  If FALSE, handover shall not be allowed.  allowedValues: TRUE,FALSE | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| x2BlackList | This is a list of DNs of NRCellCU and ExternalNRCellCU. If the target node DN is a member of the source node’s NRCellCU.x2BlackList, the source node is:  1) Prohibited from sending X2 connection request to target node;  2) Forced to tear down established X2 connection to target node  3) Not allowed to accept incoming X2 connection request from target node.  The same DN may appear here and in NRCellCU.x2WhiteList. In such case, the DN in x2WhiteList shall be treated as if it is absent. | type: DN  multiplicity: 1..\*  isOrdered: False  isUnique: True  defaultValue: None  isNullable: False |
| xnBlackList | This is a list of DNs of NRCellCU and ExternalNRCellCU. If the target node DN is a member of the source node’s NRCellCU.xnBlackList, the source node is:  1) Prohibited from sending Xn connection request to target node;  2) Forced to tear down established Xn connection to target node  3) Not allowed to accept incoming Xn connection request from target node.  The same DN may appear here and in NRCellCU.xnWhiteList. In such case, the DN in xnWhiteList shall be treated as if it is absent. | type: DN  multiplicity: 1..\*  isOrdered: False  isUnique: True  defaultValue: None  isNullable: False |
| x2WhiteList | This is a list of DNs of NRCellCU and ExternalNRCellCU. If the target node DN is a member of the source node’s NRCellCU.x2WhiteList, the source node:  - is allowed to request the establishment of X2 connection with the target node;  - is not allowed to initiate the tear down of established X2 connection to target node  The same DN may appear here and in NRCellCU.x2BlackList. In such case, the DN here shall be treated as if it is absent. | type: String  multiplicity: 1..\*  isOrdered: False  isUnique: True  defaultValue: None  isNullable: False |
| xnWhiteList | This is a list of DNs of NRCellCU and ExternalNRCellCU. If the target node DN is a member of the source node’s NRCellCU.xnWhiteList, the source node:  - is allowed to request the establishment of Xn connection with the target node;  - is not allowed to initiate the tear down of established Xn connection to target node  The same DN may appear here and in NRCellCU.xnBlackList. In such case, the DN here shall be treated as if it is absent. | type: String  multiplicity: 1..\*  isOrdered: False  isUnique: True  defaultValue: None  isNullable: False |
| x2XnHOBlackList | This is a list of DNs of any number and combination of cells represented by the following IoCs:  NRCellCU  ExternalNRCellCU.  ExternalEUtranCellTDD  ExternalEUtranCellFDD  EUtranCellTDD  EUtranCellFDD  For all the entries in NRCellCU.x2XnHOBlackList, the subject NRCellCU is prohibited to use the X2 or Xn interface for HOs even if an X2 or Xn interface exists to the target cell. | type: DN  multiplicity: 1..\*  isOrdered: False  isUnique: True  defaultValue: None  isNullable: False |
| groupId | This parameter identiies a list of target NF services on which the same communication model is applied to.  allowedValues: N/A | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| commModelType | This parameter defines communication model used by a NF to interact with NF service(s) (See TS 23.501 [2]).  allowedValues:”DIRECT\_COMMUNICATION\_WO\_NRF”, “DIRECT\_COMMUNICATION\_WITH\_NRF”, “INDIRECT\_COMMUNICATION\_WO\_DEDICATED\_DISCOVERY”, “INDIRECT\_COMMUNICATION\_WITH\_DEDICATED\_DISCOVERY” | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| targetNFServiceList | This parameter lists target NF services sharing same communication model and configuration.  allowedValues: N/A | type: DN  multiplicity: 1..\*  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| commModelConfiguration | This parameter defines configuration parameters for specific communication model for a group of NF Services.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| supportedFuncList | This parameter lists functionalities supported by a SCP. Refer to TS 23.501 [2]. | type: SupportedFunction  multiplicity: 1..\*  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| address | This parameter defines address of a SCP instance, it can be IP address (either IPv4 address (See RFC 791 [24]) or IPv6 address (See RFC 2373 [25])) or FQDN (See TS 23.003 [5]). | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| function | This parameter defines name of a functionality supported by a SCP. | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| policy | This parameter defines configuration policies of a functionality supported by a SCP. | type: String  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| capabilityList | This parameter lists capabilities supported by a NEF. Refer to TS 23.501 [2].  allowedValues: N/A | type: String  multiplicity: 1..\*  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| isINEF | This parameter defines if the NEF is an Intermediate NEF.  allowedValues: TRUE, FALSE | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| isCAPIFSup | This parameter defines if the NEF support Common API Framework.  allowedValues: TRUE, FALSE | type: Boolean  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| sEPPType | This parameter defines the type of a SEPP entity. Refer to TS 33.501 [52].  allowedValues: “CSEPP”, “PSEPP” | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: False  defaultValue: None  isNullable: False |
| sEPPId | This parameter is identifier of a SEPP, it is unique inside a PLMN.  allowedValues: N/A | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| remotePlmnId | This parameter defines PLMNId of the remote SEPP.  allowedValues: N/A | Type: PLMNId  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| remoteSeppAddress | This parameter defines address of the remote SEPP. It can be IP address (either IPv4 address (See RFC 791 [24]) or IPv6 address (See RFC 2373 [25])) or FQDN(See TS 23.003 [5]).  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| remoteSeppId | This parameter defines identifier of the remote SEPP. it is unique inside a PLMN.  allowedValues: N/A | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| n32cParas | This attribute is used to configure parameters to establish security link between two SEPPs.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| n32fPolicy | This attribute is used to configure policies to protect the messages exchanged between SEPPs.  allowedValues: N/A | type: String  multiplicity: 1  isOrdered: F  isUnique: N/A  defaultValue: None  isNullable: False |
| withIPX | This attribute defines if there’s an IPX interconnected between two SEPPs.  allowedValues: TRUE, FALSE | type: Boolean  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: False |
| FiveQiDscpMappingList | It provides the list of mapping between 5QIs and DSCP.  allowedValues: N/A | type: FiveQiDscpMapping  multiplicity: \*  isOrdered: N/A  isUnique: N/A  defaultValue: None  isNullable: False |
| fiveQIValues | It indicates a list of 5QI value.  allowedValues: 0 - 255 | type: Integer  multiplicity: \*  isOrdered: N/A  isUnique: Yes  defaultValue: None  isNullable: False |
| dscp | It indicates a DSCP.  allowedValues: 0 - 255 | type: Integer  multiplicity: 1  isOrdered: N/A  isUnique: Yes  defaultValue: None  isNullable: False |

|  |
| --- |
| **Next Modified Sections** |

## F.4.3 XML schema "ngcNrm.xsd"

<?xml version="1.0" encoding="UTF-8"?>

<!--

3GPP TS 28.541 5GC Network Resource Model

XML schema definition

ngcNrm.xsd

-->

<schema

targetNamespace="http://www.3gpp.org/ftp/specs/archive/28\_series/28.541#ngcNrm"

elementFormDefault="qualified"

attributeFormDefault="unqualified"

xmlns="http://www.w3.org/2001/XMLSchema"

xmlns:xn="http://www.3gpp.org/ftp/specs/archive/28\_series/28.623#genericNrm" xmlns:nn="http://www.3gpp.org/ftp/specs/archive/28\_series/28.541#nrNrm" xmlns:en="http://www.3gpp.org/ftp/specs/archive/28\_series/28.659#eutranNrm"

xmlns:ngc="http://www.3gpp.org/ftp/specs/archive/28\_series/28.541#ngcNrm"

>

<import namespace="http://www.3gpp.org/ftp/specs/archive/28\_series/28.623#genericNrm"/>

<import namespace="http://www.3gpp.org/ftp/specs/archive/28\_series/28.659#eutranNrm"/>

<import namespace="http://www.3gpp.org/ftp/specs/archive/28\_series/28.541#nrNrm"/>

<!--NGC NRM IM class associated XML elements -->

<complexType name="aMFIdentifier">

<sequence>

<element name="amfRegionId" type="ngc:AmfRegionId"/>

<element name="amfSetId" type="ngc:AmfSetId"/>

<element name="amfPointer" type="ngc:AmfPointer"/>

</sequence>

</complexType>

<simpleType name="AmfRegionId">

<restriction base="integer">

<maxInclusive value="255"/>

<!-- The AMF Region ID is 8-bitslength, defined in 23.003 -->

</restriction>

</simpleType>

<simpleType name="AmfSetId">

<restriction base="integer">

<maxInclusive value="1023"/>

<!-- The AMF Region ID is 10-bits length, defined in 23.003 -->

</restriction>

</simpleType>

<simpleType name="AmfPointer">

<restriction base="integer">

<maxInclusive value="63"/>

<!-- The AMF Pointer is 6-bits length, defined in 23.003 -->

</restriction>

</simpleType> <complexType name="NrTACList">

<sequence>

<element name="tac" type="nn:NrTac" minOccurs="0" maxOccurs="unbounded"/>

</sequence>

</complexType>

<complexType name="managedNFProfile">

<sequence>

<element name="nfInstanceID" type="string"/>

<element name="nfType" type="ngc:NfType"/>

<element name="hostAddr" type="ngc:hostAddr"/>

<element name="authzInfo" type="string" minOccurs="0"/>

<element name="location" type="string" minOccurs="0"/>

<element name="capacity" type="ngc:capacity" minOccurs="0"/>

<element name="nfInfo" type="ngc:Nfinfo"/>

</sequence>

</complexType>

<complexType name="hostAddr">

<!-- Refer to definitions in TS 28.541-->

<sequence>

<choice minOccurs="0" maxOccurs="1">

<element name="ipAddress" type="string"/>

<element name="fqdn" type="string"/>

</choice>

</sequence>

</complexType>

<simpleType name="capacity">

<!-- Refer to definitions in TS 28.541-->

<restriction base="integer">

<minInclusive value="0"/>

<maxInclusive value="65535"/>

</restriction>

</simpleType>

<complexType name="Nfinfo">

<!-- Refer to definitions in TS 28.541-->

<sequence>

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<element name="amfInfo" type="ngc:AmfInfo"/>

<element name="udrInfo" type="ngc:UdrInfo"/>

<element name="udmInfo" type="ngc:UdmInfo"/>

<element name="ausfInfo" type="ngc:AusfInfo"/>

<element name="upfInfo" type="ngc:UpfInfo"/>

</choice>

</sequence>

</complexType>

<complexType name="NFProfileList">

<sequence>

<element name="nfProfile" type="ngc:NfProfile"/>

</sequence>

</complexType>

<complexType name="NfProfile">

<sequence>

<element name="nfInstanceID" type="string"/>

<!-- nfInstanceID is uuid of NF instance -->

<element name="nfType" type="ngc:NfType"/>

<element name="nfType" type="ngc:NfType"/>

<element name="sNssais" type="ngc: SnssaiList"/>

<element name="fqdn" type="string"/>

<element name="interPlmnFqdn" type="string"/>

<element name="ipv4Addresses" type="string"/>

<element name="ipv6Addresses" type="string"/>

<element name="ipv6Prefixes" type="string"/>

<element name="capacity" type="string"/>

<element name="udrInfo" type="ngc:UdrInfo"/>

<element name="amfInfo" type="ngc:AmfInfo"/>

<element name="smfInfo" type="ngc:SmfInfo"/>

<element name="upfInfo" type="ngc:UpfInfo"/>

<element name="nfServices" type="ngc:NfServices"/>

<element name="priority" type="integer" minOccurs="0"/>

<element name="nFSrvGroupId" type=" string"/>

<element name="smfServingAreas" type="string"/>

<element name="locality" type="string"/>

<element name="authzInfo" type="string"/>

</sequence>

</complexType>

<complexType name="NfServices">

<sequence>

<element name="serviceInstanceId" type="string"/>

<element name="serviceName" type="string"/>

<element name="version" type="string"/>

<element name="schema" type="string"/>

<element name="fqdn" type="string"/>

<element name="interPlmnFqdn" type="string"/>

<element name="ipEndPoints" type="ngc:IpEndpoints"/>

<element name="apiPrefix" type="string"/>

<element name="defaultNotificationSubscriptions" type="ngc:DefaultNotificationSubscriptions"/>

<element name="allowedPlmns" type="en:PLMNIdList"/>

<element name="allowedNfTypes" type="ngc:NFTypeList"/>

<element name="allowedNssais" type="ngc:Nssai"/>

<element name="capacity" type="string"/>

<element name="supportedFeatures" type="string"/>

</sequence>

</complexType>

<simpleType name="NfType">

<restriction base="string">

<!-- NF name is defined in TS 23.501 -->

<enumeration value="NRF"/>

<enumeration value="UDM"/>

<enumeration value="AMF"/>

<enumeration value="SMF"/>

<enumeration value="AUSF"/>

<enumeration value="NEF"/>

<enumeration value="PCF"/>

<enumeration value="SMSF"/>

<enumeration value="NSSF"/>

<enumeration value="UDR"/>

<enumeration value="LMF"/>

<enumeration value="GMLC"/>

<enumeration value="5GEIR"/>

<enumeration value="SEPP"/>

<enumeration value="UPF"/>

<enumeration value="N3IWF"/>

<enumeration value="AF"/>

<enumeration value="UDSF"/>

<enumeration value="DN"/>

</restriction>

</simpleType>

<complexType name="NFTypeList">

<sequence>

<element name="NFType" type="ngc:NfType"/>

</sequence>

</complexType>

<complexType name="LocalEndPoint">

<sequence>

<element name="ipv4Address" type="string"/>

<element name="ipv6Address" type="string"/>

<element name="ipv6Prefix" type="string"/>

<element name="vlanId" type="integer"/>

</sequence>

</complexType>

<complexType name="RemoteEndPoint">

<sequence>

<element name="ipv4Address" type="string"/>

<element name="ipv6Address" type="string"/>

<element name="ipv6Prefix" type="string"/>

</sequence>

</complexType>

<complexType name="UdrInfo">

<sequence>

<element name="supiRange" type="ngc:SupiRange"/>

</sequence>

</complexType>

<complexType name="SupiRange">

<sequence>

<element name="start" type="string"/>

<element name="end" type="string"/>

<element name="pattern" type="string"/>

</sequence>

</complexType>

<complexType name="AmfInfo">

<sequence>

<element name="amfSetId" type="ngc:AmfSetId"/>

</sequence>

</complexType>

<complexType name="SmfInfo">

<sequence>

<element name="dnn" type="string"/>

</sequence>

</complexType>

<complexType name="UpfInfo">

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</sequence>

</complexType>

<complexType name="SnssaiUpfInfo">

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<element name="sNssai" type="ngc:SNssai"/>

<element name="dnnUpfInfoList" type="ngc:DnnUpfInfoList"/>

</sequence>

</complexType>

<complexType name="DnnUpfInfoList">

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<element name="dnn" type="string"/>

</sequence>

</complexType>

<complexType name="DefaultNotificationSubscription">

<sequence>

<element name="notificationType" type="ngc:NotificationType"/>

<element name="callbackUri" type="string"/>

<element name="n1MessageClass" type="string"/>

<element name="n2InformationClass" type="string"/>

</sequence>

</complexType>

<simpleType name="NotificationType">

<restriction base="string">

<enumeration value="N1\_MESSAGES"/>

<enumeration value="N2\_INFORMATION"/>

<enumeration value="LOCATION\_NOTIFICATION"/>

</restriction>

</simpleType>

<simpleType name="TransportProtocol">

<restriction base="string">

<enumeration value="TCP"/>

</restriction>

</simpleType>

<simpleType name="NfStatus">

<restriction base="string">

<enumeration value="REGISTERED"/>

<enumeration value="SUSPENDED"/>

</restriction>

</simpleType>

<complexType name="NfRegistrationData">

<sequence>

<element name="heartBeatTimer" type="integer"/>

<element name="nfProfile" type="ngc:NfProfile"/>

</sequence>

</complexType>

<complexType name="NSILdList">

<sequence>

<element name="nSIId" type="string"/>

<!-- NSI Id is defined in TS 29.531 -->

</sequence>

</complexType>

<complexType name="SnssaiList">

<sequence>

<element name="sNssai" type="ngc:SNssai"/>

</sequence>

</complexType>

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<element name="sst" type="ngc:Sst" minOccurs="0"/>

<element name="sd" type="ngc:Sd"/>

</sequence>

</complexType>

<simpleType name="Sst">

<restriction base="integer">

<maxInclusive value="255"/>

<!-- SST is 1-octets length and defined in TS 23.003 -->

</restriction>

</simpleType>

<simpleType name="Sd">

<restriction base="integer">

<maxInclusive value="65535"/>

<!-- SST is 2-octets length and defined in TS 23.003 -->

</restriction>

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</restriction>

</simpleType>

<simpleType name="SEPPType">

<restriction base="string">

<enumeration value="CSEPP"/>

<enumeration value="PSEPP"/>

</restriction>

</simpleType>

<complexType name="SupportedFunc">

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<element name="function" type="string"/>

<element name="policy" type="string" minOccurs="0"/>

</sequence>

</complexType>

<complexType name="SupportedFuncList">

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<element name="supportedFunc" type="ngc:SupportedFunc"/>

</sequence>

</complexType>

<simpleType name="CommModelType">

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<enumeration value="DIRECT\_COMMUNICATION\_WO\_NRF"/>

<enumeration value="DIRECT\_COMMUNICATION\_WITH\_NRF"/>

<enumeration value="INDIRECT\_COMMUNICATION\_WO\_DEDICATED\_DISCOVERY"/>

<enumeration value="INDIRECT\_COMMUNICATION\_WITH\_DEDICATED\_DISCOVERY"/>

</restriction>

</simpleType>

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<sequence>

<element name="groupId" type="integer"/>

<element name="commModelType" type="ngc:CommModelType"/>

<element name="targetNFServiceList" type="xn:dnlist"/>

<element name="commModelConfiguration" type="string"/>

</sequence>

</complexType>

<complexType name="CommModelList">

<sequence>

<element name="commModel" type="ngc:CommModel"/>

</sequence>

</complexType>

<complexType name="CapabilityList">

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</sequence>

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<complexType name="FiveQIList">

<sequence>

<element name="FiveQI" type="integer"/>

</sequence>

</complexType>

<complexType name="FiveQiDscpMapping">

<sequence>

<element name="fiveQIValues" type="ngc:FiveQIList"/>

<element name="dscp" type="integer"/>

</sequence>

</complexType>

<complexType name="FiveQiDscpMappingList">

<sequence>

<element name="FiveQiDscpMapping" type="ngc:5qiDscpMapping"/>

</sequence>

</complexType>

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<element name="pLMNIdList" type="en:PLMNIdList"/>

<element name="aMFIdentifier" type="ngc:aMFIdentifier"/>

<element name="sBIFqdn" type="string"/>

<element name="snssaiList" type="ngc:SnssaiList" minOccurs="0"/>

<element name="aMFSet" type="xn:dn" minOccurs="0"/>

<element name="priority" type="integer" minOccurs="0"/>

<element name="measurements" type="xn:MeasurementTypesAndGPsList" minOccurs="0"/>

<element name="managedNFProfile" type="ngc:managedNFProfile" minOccurs="0"/>

<element name="commModelList" type="ngc:CommModelList" minOccurs="1"/>

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<element ref="ngc:EP\_N12"/>

<element ref="ngc:EP\_N14"/>

<element ref="ngc:EP\_N15"/>

<element ref="ngc:EP\_N17"/>

<element ref="ngc:EP\_N22"/>

<element ref="ngc:EP\_N26"/>

<element ref="ngc:EP\_N20"/>

<element ref="ngc:EP\_NLS"/>

<element ref="ngc:EP\_NLG"/>

<element ref="xn:VsDataContainer"/>

<element ref="xn:MeasurementControl"/>

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<element name="pLMNIdList" type="en:PLMNIdList"/>

<element name="nRTACList" type="ngc:NrTACList"/>

<element name="sBIFqdn" type="string"/>

<element name="snssaiList" type="ngc:SnssaiList" minOccurs="0"/>

<element name="priority" type="integer" minOccurs="0"/>

<element name="measurements" type="xn:MeasurementTypesAndGPsList" minOccurs="0"/>

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<element ref="ngc:EP\_N7"/>

<element ref="ngc:EP\_N16"/>

<element ref="ngc:EP\_S5C"/>

<element ref="ngc:FiveQiDscpMappingSet"/>

<element ref="xn:VsDataContainer"/>

<element ref="xn:MeasurementControl"/>

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<element name="snssaiList" type="ngc:SnssaiList" minOccurs="0"/>

<element name="priority" type="integer" minOccurs="0"/>

<element name="measurements" type="xn:MeasurementTypesAndGPsList" minOccurs="0"/>

<element name="managedNFProfile" type="ngc:managedNFProfile" minOccurs="0"/>

<element name="commModelList" type="ngc:CommModelList" minOccurs="1"/>

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<element ref="ngc:EP\_S5U"/>

<element ref="ngc:EP\_N6"/>

<element ref="xn:VsDataContainer"/>

<element ref="xn:MeasurementControl"/>

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<element name="measurements" type="xn:MeasurementTypesAndGPsList" minOccurs="0"/>

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<element ref="ngc:EP\_Rx"/>

<element ref="xn:VsDataContainer"/>

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<element ref="xn:MeasurementControl"/>

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<element name="priority" type="integer" minOccurs="0"/>

<element name="measurements" type="xn:MeasurementTypesAndGPsList" minOccurs="0"/>

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<element ref="xn:MeasurementControl"/>

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<element name="sBIFqdn" type="string"/>

<element name="snssaiList" type="ngc:SnssaiList" minOccurs="0"/>

<element name="priority" type="integer" minOccurs="0"/>

<element name="measurements" type="xn:MeasurementTypesAndGPsList" minOccurs="0"/>

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</element>

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<element ref="xn:MeasurementControl"/>

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<element name="userLabel" type="string" minOccurs="0"/>

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<element name="userLabel" type="string" minOccurs="0"/>

<!-- End of inherited attributes from EP\_RP -->

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<!-- End of inherited attributes from EP\_RP -->

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<element name="userLabel" type="string" minOccurs="0"/>

<!-- End of inherited attributes from EP\_RP -->

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<element name="remoteSeppId" type="integer" minOccurs="0"/>

<element name="n32cParas" type="string" minOccurs="0"/>

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<!-- End of inherited attributes from EP\_RP -->

<element name="localAddress" type="ngc:LocalEndPoint" minOccurs="0"/>

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<element name="userLabel" type="string" minOccurs="0"/>

<!-- End of inherited attributes from EP\_RP -->

<element name="localAddress" type="ngc:LocalEndPoint" minOccurs="0"/>

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<element name="localAddress" type="ngc:LocalEndPoint" minOccurs="0"/>

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<extension base="xn:NrmClass">

<sequence>

<element name="attributes">

<complexType>

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| --- |
| **Next Modified Sections** |

## G.4.3 OpenAPI document "5gcNrm.yaml"

openapi: 3.0.1

info:

title: 3GPP 5GC NRM

version: 16.5.0

description: >-

OAS 3.0.1 specification of the 5GC NRM

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externalDocs:

description: 3GPP TS 28.541 V16.4.0; 5G NRM, 5GC NRM

url: http://www.3gpp.org/ftp/Specs/archive/28\_series/28.541/

paths: {}

components:

schemas:

#-------- Definition of types-----------------------------------------------------

AmfIdentifier:

type: object

description: 'AmfIdentifier comprise of amfRegionId, amfSetId and amfPointer'

properties:

amfRegionId:

$ref: '#/components/schemas/AmfRegionId'

amfSetId:

$ref: '#/components/schemas/AmfSetId'

amfPointer:

$ref: '#/components/schemas/AmfPointer'

AmfRegionId:

type: integer

description: AmfRegionId is defined in TS 23.003

maximum: 255

AmfSetId:

type: string

description: AmfSetId is defined in TS 23.003

maximum: 1023

AmfPointer:

type: integer

description: AmfPointer is defined in TS 23.003

maximum: 63

IpEndPoint:

type: object

properties:

ipv4Address:

$ref: 'genericNrm.yaml#/components/schemas/Ipv4Addr'

ipv6Address:

$ref: 'genericNrm.yaml#/components/schemas/Ipv6Addr'

ipv6Prefix:

$ref: 'genericNrm.yaml#/components/schemas/Ipv6Prefix'

transport:

$ref: 'genericNrm.yaml#/components/schemas/TransportProtocol'

port:

type: integer

NFProfileList:

type: array

description: List of NF profile

items:

$ref: '#/components/schemas/NFProfile'

NFProfile:

type: object

description: 'NF profile stored in NRF, defined in TS 29.510'

properties:

nFInstanceId:

type: string

description: uuid of NF instance

nFType:

$ref: 'genericNrm.yaml#/components/schemas/NFType'

nFStatus:

$ref: '#/components/schemas/NFStatus'

plmn:

$ref: 'nrNrm.yaml#/components/schemas/PlmnId'

sNssais:

$ref: 'nrNrm.yaml#/components/schemas/Snssai'

fqdn:

$ref: 'genericNrm.yaml#/components/schemas/Fqdn'

interPlmnFqdn:

$ref: 'genericNrm.yaml#/components/schemas/Fqdn'

nfServices:

type: array

items:

$ref: '#/components/schemas/NFService'

NFService:

type: object

description: NF Service is defined in TS 29.510

properties:

serviceInstanceId:

type: string

serviceName:

type: string

version:

type: string

schema:

type: string

fqdn:

$ref: 'genericNrm.yaml#/components/schemas/Fqdn'

interPlmnFqdn:

$ref: 'genericNrm.yaml#/components/schemas/Fqdn'

ipEndPoints:

type: array

items:

$ref: '#/components/schemas/IpEndPoint'

apiPrfix:

type: string

allowedPlmns:

$ref: 'nrNrm.yaml#/components/schemas/PlmnId'

allowedNfTypes:

type: array

items:

$ref: 'genericNrm.yaml#/components/schemas/NFType'

allowedNssais:

type: array

items:

$ref: 'nrNrm.yaml#/components/schemas/Snssai'

NFStatus:

type: string

description: any of enumrated value

enum:

- REGISTERED

- SUSPENDED

NSIIdList:

type: array

items:

$ref: '#/components/schemas/NSIId'

NSIId:

type: string

description: NSI Id is defined in TS 29.531

TACList:

type: array

items:

$ref: 'nrNrm.yaml#/components/schemas/NrTac'

WeightFactor:

type: integer

UdmInfo:

type: object

properties:

nFSrvGroupId:

type: string

AusfInfo:

type: object

properties:

nFSrvGroupId:

type: string

UpfInfo:

type: object

properties:

smfServingAreas:

type: string

AmfInfo:

type: object

properties:

priority:

type: integer

SupportedDataSetId:

type: string

description: any of enumrated value

enum:

- SUBSCRIPTION

- POLICY

- EXPOSURE

- APPLICATION

Udrinfo:

type: object

properties:

supportedDataSetIds:

type: array

items:

$ref: '#/components/schemas/SupportedDataSetId'

nFSrvGroupId:

type: string

NFInfo:

oneOf:

- $ref: '#/components/schemas/UdmInfo'

- $ref: '#/components/schemas/AusfInfo'

- $ref: '#/components/schemas/UpfInfo'

- $ref: '#/components/schemas/AmfInfo'

- $ref: '#/components/schemas/Udrinfo'

ManagedNFProfile:

type: object

properties:

nfInstanceID:

type: string

nfType:

$ref: 'genericNrm.yaml#/components/schemas/NFType'

authzInfo:

type: string

hostAddr:

$ref: 'genericNrm.yaml#/components/schemas/HostAddr'

locality:

type: string

nFInfo:

$ref: '#/components/schemas/NFInfo'

capacity:

type: integer

SEPPType:

type: string

description: any of enumrated value

enum:

- CSEPP

- PSEPP

SupportedFunc:

type: object

properties:

function:

type: string

policy:

type: string

SupportedFuncList:

type: array

items:

$ref: '#/components/schemas/SupportedFunc'

CommModelType:

type: string

description: any of enumrated value

enum:

- DIRECT\_COMMUNICATION\_WO\_NRF

- DIRECT\_COMMUNICATION\_WITH\_NRF

- INDIRECT\_COMMUNICATION\_WO\_DEDICATED\_DISCOVERY

- INDIRECT\_COMMUNICATION\_WITH\_DEDICATED\_DISCOVERY

CommModel:

type: object

properties:

groupId:

type: integer

commModelType:

$ref: '#/components/schemas/CommModelType'

targetNFServiceList:

$ref: 'genericNrm.yaml#/components/schemas/DnList'

commModelConfiguration:

type: string

CommModelList:

type: array

items:

$ref: '#/components/schemas/CommModel'

CapabilityList:

type: array

items:

type: string

FiveQiDscpMapping:

type: object

properties:

fiveQIValues:

type: array

items:

type: integer

dscp:

type: integer

#-------- Definition of concrete IOCs --------------------------------------------

SubNetwork-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/SubNetwork-Attr'

- $ref: 'genericNrm.yaml#/components/schemas/SubNetwork-ncO'

- type: object

properties:

SubNetwork:

$ref: '#/components/schemas/SubNetwork-Multiple'

ManagedElement:

$ref: '#/components/schemas/ManagedElement-Multiple'

ExternalAmfFunction:

$ref: '#/components/schemas/ExternalAmfFunction-Multiple'

ExternalNrfFunction:

$ref: '#/components/schemas/ExternalNrfFunction-Multiple'

ExternalNssfFunction:

$ref: '#/components/schemas/ExternalNssfFunction-Multiple'

AmfSet:

$ref: '#/components/schemas/AmfSet-Multiple'

AmfRegion:

$ref: '#/components/schemas/AmfRegion-Multiple'

ManagedElement-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedElement-Attr'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedElement-ncO'

- type: object

properties:

AmfFunction:

$ref: '#/components/schemas/AmfFunction-Multiple'

SmfFunction:

$ref: '#/components/schemas/SmfFunction-Multiple'

UpfFunction:

$ref: '#/components/schemas/UpfFunction-Multiple'

N3iwfFunction:

$ref: '#/components/schemas/N3iwfFunction-Multiple'

PcfFunction:

$ref: '#/components/schemas/PcfFunction-Multiple'

AusfFunction:

$ref: '#/components/schemas/AusfFunction-Multiple'

UdmFunction:

$ref: '#/components/schemas/UdmFunction-Multiple'

UdrFunction:

$ref: '#/components/schemas/UdrFunction-Multiple'

UdsfFunction:

$ref: '#/components/schemas/UdsfFunction-Multiple'

NrfFunction:

$ref: '#/components/schemas/NrfFunction-Multiple'

NssfFunction:

$ref: '#/components/schemas/NssfFunction-Multiple'

SmsfFunction:

$ref: '#/components/schemas/SmsfFunction-Multiple'

LmfFunction:

$ref: '#/components/schemas/LmfFunction-Multiple'

NgeirFunction:

$ref: '#/components/schemas/NgeirFunction-Multiple'

SeppFunction:

$ref: '#/components/schemas/SeppFunction-Multiple'

NwdafFunction:

$ref: '#/components/schemas/NwdafFunction-Multiple'

ScpFunction:

$ref: '#/components/schemas/ScpFunction-Multiple'

NefFunction:

$ref: '#/components/schemas/NefFunction-Multiple'

AmfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

amfIdentifier:

$ref: '#/components/schemas/AmfIdentifier'

sBIFqdn:

type: string

weightFactor:

$ref: '#/components/schemas/WeightFactor'

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

amfSet:

$ref: 'genericNrm.yaml#/components/schemas/Dn'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N2:

$ref: '#/components/schemas/EP\_N2-Multiple'

EP\_N8:

$ref: '#/components/schemas/EP\_N8-Multiple'

EP\_N11:

$ref: '#/components/schemas/EP\_N11-Multiple'

EP\_N12:

$ref: '#/components/schemas/EP\_N12-Multiple'

EP\_N14:

$ref: '#/components/schemas/EP\_N14-Multiple'

EP\_N15:

$ref: '#/components/schemas/EP\_N15-Multiple'

EP\_N17:

$ref: '#/components/schemas/EP\_N17-Multiple'

EP\_N20:

$ref: '#/components/schemas/EP\_N20-Multiple'

EP\_N22:

$ref: '#/components/schemas/EP\_N22-Multiple'

EP\_N26:

$ref: '#/components/schemas/EP\_N26-Multiple'

EP\_NLS:

$ref: '#/components/schemas/EP\_NLS-Multiple'

EP\_NLG:

$ref: '#/components/schemas/EP\_NLG-Multiple'

AmfSet-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

nRTACList:

$ref: '#/components/schemas/TACList'

amfSetId:

$ref: '#/components/schemas/AmfSetId'

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

AmfRegion-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

nRTACList:

$ref: '#/components/schemas/TACList'

amfRegionId:

$ref: '#/components/schemas/AmfRegionId'

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

SmfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

nRTACList:

$ref: '#/components/schemas/TACList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N4:

$ref: '#/components/schemas/EP\_N4-Multiple'

EP\_N7:

$ref: '#/components/schemas/EP\_N7-Multiple'

EP\_N10:

$ref: '#/components/schemas/EP\_N10-Multiple'

EP\_N11:

$ref: '#/components/schemas/EP\_N11-Multiple'

EP\_N16:

$ref: '#/components/schemas/EP\_N16-Multiple'

EP\_S5C:

$ref: '#/components/schemas/EP\_S5C-Multiple'

FiveQiDscpMappingSet:

$ref: '#/components/schemas/FiveQiDscpMappingSet-Single'

UpfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

nRTACList:

$ref: '#/components/schemas/TACList'

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N3:

$ref: '#/components/schemas/EP\_N3-Multiple'

EP\_N4:

$ref: '#/components/schemas/EP\_N4-Multiple'

EP\_N6:

$ref: '#/components/schemas/EP\_N6-Multiple'

EP\_N9:

$ref: '#/components/schemas/EP\_N9-Multiple'

EP\_S5U:

$ref: '#/components/schemas/EP\_S5U-Multiple'

N3iwfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N3:

$ref: '#/components/schemas/EP\_N3-Multiple'

EP\_N4:

$ref: '#/components/schemas/EP\_N4-Multiple'

PcfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N5:

$ref: '#/components/schemas/EP\_N5-Multiple'

EP\_N7:

$ref: '#/components/schemas/EP\_N7-Multiple'

EP\_N15:

$ref: '#/components/schemas/EP\_N15-Multiple'

EP\_N16:

$ref: '#/components/schemas/EP\_N16-Multiple'

EP\_Rx:

$ref: '#/components/schemas/EP\_Rx-Multiple'

AusfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N12:

$ref: '#/components/schemas/EP\_N12-Multiple'

EP\_N13:

$ref: '#/components/schemas/EP\_N13-Multiple'

UdmFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N8:

$ref: '#/components/schemas/EP\_N8-Multiple'

EP\_N10:

$ref: '#/components/schemas/EP\_N10-Multiple'

EP\_N13:

$ref: '#/components/schemas/EP\_N13-Multiple'

UdrFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

UdsfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

NrfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

nSIIdList:

$ref: '#/components/schemas/NSIIdList'

nFProfileList:

$ref: '#/components/schemas/NFProfileList'

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N27:

$ref: '#/components/schemas/EP\_N27-Multiple'

NssfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

nSIIdList:

$ref: '#/components/schemas/NSIIdList'

nFProfileList:

$ref: '#/components/schemas/NFProfileList'

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N22:

$ref: '#/components/schemas/EP\_N22-Multiple'

EP\_N31:

$ref: '#/components/schemas/EP\_N31-Multiple'

SmsfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N20:

$ref: '#/components/schemas/EP\_N20-Multiple'

EP\_N21:

$ref: '#/components/schemas/EP\_N21-Multiple'

EP\_MAP\_SMSC:

$ref: '#/components/schemas/EP\_MAP\_SMSC-Multiple'

LmfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_NLS:

$ref: '#/components/schemas/EP\_NLS-Multiple'

NgeirFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N17:

$ref: '#/components/schemas/EP\_N17-Multiple'

SeppFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnId:

$ref: 'nrNrm.yaml#/components/schemas/PlmnId'

sEPPType:

$ref: '#/components/schemas/SEPPType'

sEPPId:

type: integer

fqdn:

$ref: 'genericNrm.yaml#/components/schemas/Fqdn'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

- type: object

properties:

EP\_N32:

$ref: '#/components/schemas/EP\_N32-Multiple'

NwdafFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

commModelList:

$ref: '#/components/schemas/CommModelList'

ScpFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

supportedFuncList:

$ref: '#/components/schemas/SupportedFuncList'

address:

$ref: 'genericNrm.yaml#/components/schemas/HostAddr'

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

NefFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

sBIFqdn:

type: string

snssaiList:

$ref: 'nrNrm.yaml#/components/schemas/SnssaiList'

managedNFProfile:

$ref: '#/components/schemas/ManagedNFProfile'

capabilityList:

$ref: '#/components/schemas/CapabilityList'

isINEF:

type: boolean

isCAPIFSup:

type: boolean

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-ncO'

ExternalAmfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

amfIdentifier:

$ref: '#/components/schemas/AmfIdentifier'

ExternalNrfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

ExternalNssfFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnIdList:

$ref: 'nrNrm.yaml#/components/schemas/PlmnIdList'

ExternalSeppFunction-Single:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNrm.yaml#/components/schemas/ManagedFunction-Attr'

- type: object

properties:

plmnId:

$ref: 'nrNrm.yaml#/components/schemas/PlmnId'

sEPPId:

type: integer

fqdn:

$ref: 'genericNrm.yaml#/components/schemas/Fqdn'

EP\_N2-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N3-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N4-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N5-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N6-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N7-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N8-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N9-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N10-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N11-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N12-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N13-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N14-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N15-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N16-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N17-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N20-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N21-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N22-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N26-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N27-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N31-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_N32-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

remotePlmnId:

$ref: 'nrNrm.yaml#/components/schemas/PlmnId'

remoteSeppAddress:

$ref: 'genericNrm.yaml#/components/schemas/HostAddr'

remoteSeppId:

type: integer

n32cParas:

type: string

n32fPolicy:

type: string

withIPX:

type: boolean

EP\_S5C-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_S5U-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_Rx-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_MAP\_SMSC-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_NLS-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

EP\_NLG-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/EP\_RP-Attr'

- type: object

properties:

localAddress:

$ref: 'nrNrm.yaml#/components/schemas/LocalAddress'

remoteAddress:

$ref: 'nrNrm.yaml#/components/schemas/RemoteAddress'

FiveQiDscpMappingSet-Single:

allOf:

- $ref: 'genericNRM.yaml#/components/schemas/Top-Attr'

- type: object

properties:

attributes:

allOf:

- type: object

properties:

FiveQiDscpMappingList:

type: array

items:

$ref: '#/components/schemas/FiveQiDscpMapping'

#-------- Definition of JSON arrays for name-contained IOCs ----------------------

SubNetwork-Multiple:

type: array

items:

$ref: '#/components/schemas/SubNetwork-Single'

ManagedElement-Multiple:

type: array

items:

$ref: '#/components/schemas/ManagedElement-Single'

AmfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/AmfFunction-Single'

SmfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/SmfFunction-Single'

UpfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/UpfFunction-Single'

N3iwfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/N3iwfFunction-Single'

PcfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/PcfFunction-Single'

AusfFunction-Multiple:

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$ref: '#/components/schemas/AusfFunction-Single'

UdmFunction-Multiple:

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UdrFunction-Multiple:

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UdsfFunction-Multiple:

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NrfFunction-Multiple:

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NssfFunction-Multiple:

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SmsfFunction-Multiple:

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LmfFunction-Multiple:

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NgeirFunction-Multiple:

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items:

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SeppFunction-Multiple:

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items:

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NwdafFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/NwdafFunction-Single'

ScpFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/ScpFunction-Single'

NefFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/NefFunction-Single'

ExternalAmfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/ExternalAmfFunction-Single'

ExternalNrfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/ExternalNrfFunction-Single'

ExternalNssfFunction-Multiple:

type: array

items:

$ref: '#/components/schemas/ExternalNssfFunction-Single'

ExternalSeppFunction-Nultiple:

type: array

items:

$ref: '#/components/schemas/ExternalSeppFunction-Single'

AmfSet-Multiple:

type: array

items:

$ref: '#/components/schemas/AmfSet-Single'

AmfRegion-Multiple:

type: array

items:

$ref: '#/components/schemas/AmfRegion-Single'

EP\_N2-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_N2-Single'

EP\_N3-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_N3-Single'

EP\_N4-Multiple:

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$ref: '#/components/schemas/EP\_N4-Single'

EP\_N5-Multiple:

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EP\_N6-Multiple:

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$ref: '#/components/schemas/EP\_N8-Single'

EP\_N9-Multiple:

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$ref: '#/components/schemas/EP\_N9-Single'

EP\_N10-Multiple:

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$ref: '#/components/schemas/EP\_N10-Single'

EP\_N11-Multiple:

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items:

$ref: '#/components/schemas/EP\_N11-Single'

EP\_N12-Multiple:

type: array

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$ref: '#/components/schemas/EP\_N12-Single'

EP\_N13-Multiple:

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$ref: '#/components/schemas/EP\_N13-Single'

EP\_N14-Multiple:

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items:

$ref: '#/components/schemas/EP\_N14-Single'

EP\_N15-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_N15-Single'

EP\_N16-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_N16-Single'

EP\_N17-Multiple:

type: array

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$ref: '#/components/schemas/EP\_N17-Single'

EP\_N20-Multiple:

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$ref: '#/components/schemas/EP\_N20-Single'

EP\_N21-Multiple:

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$ref: '#/components/schemas/EP\_N21-Single'

EP\_N22-Multiple:

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$ref: '#/components/schemas/EP\_N22-Single'

EP\_N26-Multiple:

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$ref: '#/components/schemas/EP\_N26-Single'

EP\_N27-Multiple:

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$ref: '#/components/schemas/EP\_N27-Single'

EP\_N31-Multiple:

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$ref: '#/components/schemas/EP\_N31-Single'

EP\_N32-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_N32-Single'

EP\_S5C-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_S5C-Single'

EP\_S5U-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_S5U-Single'

EP\_Rx-Multiple:

type: array

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$ref: '#/components/schemas/EP\_Rx-Single'

EP\_MAP\_SMSC-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_MAP\_SMSC-Single'

EP\_NLS-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_NLS-Single'

EP\_NLG-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_NLG-Single'

#------------ Definitions in TS 28.541 for TS 28.532 -----------------------------

resources-5gcNrm:

oneOf:

- $ref: '#/components/schemas/SubNetwork-Single'

- $ref: '#/components/schemas/ManagedElement-Single'

- $ref: '#/components/schemas/AmfFunction-Single'

- $ref: '#/components/schemas/SmfFunction-Single'

- $ref: '#/components/schemas/UpfFunction-Single'

- $ref: '#/components/schemas/N3iwfFunction-Single'

- $ref: '#/components/schemas/PcfFunction-Single'

- $ref: '#/components/schemas/AusfFunction-Single'

- $ref: '#/components/schemas/UdmFunction-Single'

- $ref: '#/components/schemas/UdrFunction-Single'

- $ref: '#/components/schemas/UdsfFunction-Single'

- $ref: '#/components/schemas/NrfFunction-Single'

- $ref: '#/components/schemas/NssfFunction-Single'

- $ref: '#/components/schemas/SmsfFunction-Single'

- $ref: '#/components/schemas/LmfFunction-Single'

- $ref: '#/components/schemas/NgeirFunction-Single'

- $ref: '#/components/schemas/SeppFunction-Single'

- $ref: '#/components/schemas/NwdafFunction-Single'

- $ref: '#/components/schemas/ScpFunction-Single'

- $ref: '#/components/schemas/NefFunction-Single'

- $ref: '#/components/schemas/ExternalAmfFunction-Single'

- $ref: '#/components/schemas/ExternalNrfFunction-Single'

- $ref: '#/components/schemas/ExternalNssfFunction-Single'

- $ref: '#/components/schemas/ExternalSeppFunction-Single'

- $ref: '#/components/schemas/AmfSet-Single'

- $ref: '#/components/schemas/AmfRegion-Single'

- $ref: '#/components/schemas/EP\_N2-Single'

- $ref: '#/components/schemas/EP\_N3-Single'

- $ref: '#/components/schemas/EP\_N4-Single'

- $ref: '#/components/schemas/EP\_N5-Single'

- $ref: '#/components/schemas/EP\_N6-Single'

- $ref: '#/components/schemas/EP\_N7-Single'

- $ref: '#/components/schemas/EP\_N8-Single'

- $ref: '#/components/schemas/EP\_N9-Single'

- $ref: '#/components/schemas/EP\_N10-Single'

- $ref: '#/components/schemas/EP\_N11-Single'

- $ref: '#/components/schemas/EP\_N12-Single'

- $ref: '#/components/schemas/EP\_N13-Single'

- $ref: '#/components/schemas/EP\_N14-Single'

- $ref: '#/components/schemas/EP\_N15-Single'

- $ref: '#/components/schemas/EP\_N16-Single'

- $ref: '#/components/schemas/EP\_N17-Single'

- $ref: '#/components/schemas/EP\_N20-Single'

- $ref: '#/components/schemas/EP\_N21-Single'

- $ref: '#/components/schemas/EP\_N22-Single'

- $ref: '#/components/schemas/EP\_N26-Single'

- $ref: '#/components/schemas/EP\_N27-Single'

- $ref: '#/components/schemas/EP\_N31-Single'

- $ref: '#/components/schemas/EP\_N31-Single'

- $ref: '#/components/schemas/EP\_S5C-Single'

- $ref: '#/components/schemas/EP\_S5U-Single'

- $ref: '#/components/schemas/EP\_Rx-Single'

- $ref: '#/components/schemas/EP\_MAP\_SMSC-Single'

- $ref: '#/components/schemas/EP\_NLS-Single'

- $ref: '#/components/schemas/EP\_NLG-Single'

- $ref: '#/components/schemas/FiveQiDscpMappingSet-Single'

|  |
| --- |
| **Next Modified Sections** |

## H.5.x module \_3gpp-5gc-nrm-FiveQiDscpMappingSet@2020-05-27.yang

module \_3gpp-5gc-nrm-FiveQiDscpMappingSet {

yang-version 1.1;

namespace urn:3gpp:sa5:\_3gpp-5gc-nrm-FiveQiDscpMappingSet;

prefix FiveQiDscpMapping3gpp;

import \_3gpp-common-top { prefix top3gpp; }

import \_3gpp-common-managed-element { prefix me3gpp; }

import \_3gpp-5gc-nrm-smffunction { prefix smf3gpp; }

import \_3gpp-nr-nrm-gnbcucpfunction { prefix gnbcucp3gpp; }

import \_3gpp-nr-nrm-gnbcuupfunction { prefix gnbcuup3gpp; }

organization "3gpp SA5";

contact "https://www.3gpp.org/DynaReport/TSG-WG--S5--officials.htm?Itemid=464";

description " This IOC represents the set of mapping between 5QIs and DSCP.";

reference "3GPP TS 28.541";

revision 2020-05-27 { reference "CR-0287"; }

grouping FiveQiDscpMapping {

leaf-list fiveQIValues {

type uint32 {

range 0..255 ;

}

mandatory true;

description " Identifies the 5QI values that are mapped to a same DSCP, as specified in TS 28.541.";

}

leaf dscp {

type uint32 {

range 0..255 ;

}

mandatory true;

}

}

grouping FiveQiDscpMappingSetGrp {

description "Represents the FiveQiDscpMappingSet IOC.";

list FiveQiDscpMappingList {

key "dscp";

uses FiveQiDscpMapping;

}

}

grouping FiveQiDscpMappingSetSubtree {

list FiveQiDscpMappingSet {

description "Specifies the mapping between 5QIs and DSCPs.";

key id;

uses top3gpp:Top\_Grp;

container attributes {

uses FiveQiDscpMappingSetGrp;

}

}

}

augment "/me3gpp:ManagedElement/smf3gpp:SMFFunction" {

uses FiveQiDscpMappingSetSubtree;

}

}

|  |
| --- |
| **End of Modified Sections** |