**3GPP TSG-SA5 Meeting #132eS5-204410**

**e-meeting, 17 - 28 August 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v11.4* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.541** | **CR** | **0369** | **rev** | **-** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | add relation between transport and application level endpoints stage 3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2020-08-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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:*** | | To provide transport network (TN) topology requirements and individual TN QoS attributes requirements to the TN management system for a network slice, 3GPP management system needs to exchange TN related information between 3GPP management systems, as well as between 3GPP and TN management systems. E.g., RAN/CN management system needs to expose RAN/CN transport related information to E2E 3GPP management system, then E2E 3GPP management system could exchange this information with TN management system to enable TN management system configuring TN resources for the network slice. In current Network Resource Model (NRM), application level endpoints are defined for each RAN/CN network function, and transport level endpoints are defined for each RAN/CN network slice subnet. However, the relationship between application and transport level endpoints is not defined. Without this association, the TN controller doesn’t know which NF a transport endpoint is connected, and the RAN/CN management system doesn’t know where to route the traffic in transport layer. Also, the management system/administrator cannot depict end to end slice topology. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add association between application and transport level endpoints.  Refine nextHopInfo definition | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | 3GPP data traffic cannot be routed to related transport node, then reach to remote endpoint | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | D.4.3, G.4.3, J.4.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

|  |
| --- |
| **Start of 1st modification** |

## D.4.3 OpenAPI document "nrNrm.yaml"

openapi: 3.0.1

info:

title: NR NRM

version: 16.5.0

description: >-

OAS 3.0.1 specification of the NR NRM

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externalDocs:

description: 3GPP TS 28.541 V16.5.0; 5G NRM, NR NRM

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

paths: {}

components:

schemas:

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

GnbId:

type: string

GnbIdLength:

type: integer

minimum: 22

maximum: 32

GnbName:

type: string

maxLength: 150

GnbDuId:

type: number

minimum: 0

maximum: 68719476735

GnbCuUpId:

type: number

minimum: 0

maximum: 68719476735

Sst:

type: integer

maximum: 255

Snssai:

type: object

properties:

sst:

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

sd:

type: string

SnssaiList:

type: array

items:

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

Mnc:

type: string

pattern: '[0-9]{3}|[0-9]{2}'

PlmnId:

type: object

properties:

mcc:

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

mnc:

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

PlmnIdList:

type: array

items:

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

PlmnInfo:

type: object

properties:

plmnId":

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

snssai:

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

PlmnInfoList:

type: array

items:

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

GGnbIdList:

type: array

items: string  
 pattern: '^[0-9]{3}[0-9]{2,3}-(22|23|24|25|26|27|28|29|30|31|32)-[0-9]{1,10}'

GEnbIdList:

type: array

items: string  
 pattern: '^[0-9]{3}[0-9]{2,3}-(18|20|21|22)-[0-9]{1,7}'

NrPci:

type: integer

maximum: 503

NrTac:

type: integer

maximum: 16777215

Tai:

type: object

properties:

plmnId:

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

nrTac:

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

BackhaulAddress:

type: object

properties:

gnbId:

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

tai:

$ref: "#/components/schemas/Tai"

MappingSetIDBackhaulAddress:

type: object

properties:

setID:

type: integer

backhaulAddress:

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

IntraRatEsActivationOriginalCellLoadParameters:

type: object

properties:

loadThreshold:

type: integer

timeDuration:

type: integer

IntraRatEsActivationCandidateCellsLoadParameters:

type: object

properties:

loadThreshold:

type: integer

timeDuration:

type: integer

IntraRatEsDeactivationCandidateCellsLoadParameters:

type: object

properties:

loadThreshold:

type: integer

timeDuration:

type: integer

EsNotAllowedTimePeriod:

type: object

properties:

startTimeandendTime:

type: string

periodOfDay:

type: string

daysOfWeekList:

type: string

listoftimeperiods:

type: string

InterRatEsActivationOriginalCellParameters:

type: object

properties:

loadThreshold:

type: integer

timeDuration:

type: integer

InterRatEsActivationCandidateCellParameters:

type: object

properties:

loadThreshold:

type: integer

timeDuration:

type: integer

InterRatEsDeactivationCandidateCellParameters:

type: object

properties:

loadThreshold:

type: integer

timeDuration:

type: integer

UeAccProbilityDistPerSSB:

type: object

properties:

targetProbability:

type: integer

numberofpreamblessent:

type: integer

UeAccDelayProbilityDistPerSSB:

type: object

properties:

targetProbability:

type: integer

accessdelay:

type: integer

NRPciList:

type: object

properties:

NRPci:

type: integer

CSonPciList:

type: object

properties:

NRPci:

type: integer

MaximumDeviationHoTrigger:

type: integer

minimum: -20

maximum: 20

MinimumTimeBetweenHoTriggerChange:

type: integer

minimum: 0

maximum: 604800

TstoreUEcntxt:

type: integer

minimum: 0

maximum: 1023

CellState:

type: string

enum:

- IDLE

- INACTIVE

- ACTIVE

CyclicPrefix:

type: string

enum:

- '15'

- '30'

- '60'

- '120'

TxDirection:

type: string

enum:

- DL

- UL

- DL and UL

BwpContext:

type: string

enum:

- DL

- UL

- SUL

IsInitialBwp:

type: string

enum:

- INITIAL

- OTHER

- SUL

QuotaType:

type: string

enum:

- STRICT

- FLOAT

IsESCoveredBy:

type: string

enum:

- NO

- PARTIAL

- FULL

RrmPolicyMember:

type: object

properties:

plmnId:

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

snssai:

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

RrmPolicyMemberList:

type: array

items:

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

LocalAddress:

type: object

properties:

ipv4Address:

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

ipv6Address:

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

vlanId:

type: integer

minimum: 0

maximum: 4096

port:

type: integer

minimum: 0

maximum: 65535

RemoteAddress:

type: object

properties:

ipv4Address:

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

ipv6Address:

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

CellIndividualOffset:

type: object

properties:

rsrpOffsetSSB:

type: integer

rsrqOffsetSSB:

type: integer

sinrOffsetSSB:

type: integer

rsrpOffsetCSI-RS:

type: integer

rsrqOffsetCSI-RS:

type: integer

sinrOffsetCSI-RS:

type: integer

QOffsetRange:

type: integer

enum:

- -24

- -22

- -20

- -18

- -16

- -14

- -12

- -10

- -8

- -6

- -5

- -4

- -3

- -2

- -1

- 0

- 24

- 22

- 20

- 18

- 16

- 14

- 12

- 10

- 8

- 6

- 5

- 4

- 3

- 2

- 1

QOffsetRangeList:

type: object

properties:

rsrpOffsetSSB:

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

rsrqOffsetSSB:

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

sinrOffsetSSB:

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

rsrpOffsetCSI-RS:

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

rsrqOffsetCSI-RS:

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

sinrOffsetCSI-RS:

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

QOffsetFreq:

type: number

TReselectionNRSf:

type: integer

enum:

- 25

- 50

- 75

- 100

SsbPeriodicity:

type: integer

enum:

- 5

- 10

- 20

- 40

- 80

- 160

SsbDuration:

type: integer

enum:

- 1

- 2

- 3

- 4

- 5

SsbSubCarrierSpacing:

type: integer

enum:

- 15

- 30

- 120

- 240

CoverageShape:

type: integer

maximum: 65535

DigitalTilt:

type: integer

minimum: -900

maximum: 900

DigitalAzimuth:

type: integer

minimum: -1800

maximum: 1800

RSSetId:

type: integer

maximum: 4194303

RSSetType:

type: string

enum:

- RS1

- RS2

FrequencyDomainPara:

type: object

properties:

rimRSSubcarrierSpacing:

type: integer

rIMRSBandwidth:

type: integer

nrofGlobalRIMRSFrequencyCandidates:

type: integer

rimRSCommonCarrierReferencePoint:

type: integer

rimRSStartingFrequencyOffsetIdList:

type: array

items:

type: integer

SequenceDomainPara:

type: object

properties:

nrofRIMRSSequenceCandidatesofRS1:

type: integer

rimRSScrambleIdListofRS1:

type: array

items:

type: integer

nrofRIMRSSequenceCandidatesofRS2:

type: integer

rimRSScrambleIdListofRS2:

type: array

items:

type: integer

enableEnoughNotEnoughIndication:

type: string

enum:

- ENABLE

- DISABLE

RIMRSScrambleTimerMultiplier:

type: integer

RIMRSScrambleTimerOffset:

type: integer

TimeDomainPara:

type: object

properties:

dlULSwitchingPeriod1:

type: string

enum:

- MS0P5

- MS0P625

- MS1

- MS1P25

- MS2

- MS2P5

- MS3

- MS4

- MS5

- MS10

- MS20

symbolOffsetOfReferencePoint1:

type: integer

dlULSwitchingPeriod2:

type: string

enum:

- MS0P5

- MS0P625

- MS1

- MS1P25

- MS2

- MS2P5

- MS3

- MS4

- MS5

- MS10

- MS20

symbolOffsetOfReferencePoint2:

type: integer

totalnrofSetIdofRS1:

type: integer

totalnrofSetIdofRS2:

type: integer

nrofConsecutiveRIMRS1:

type: integer

nrofConsecutiveRIMRS2:

type: integer

consecutiveRIMRS1List:

type: array

items:

type: integer

consecutiveRIMRS2List:

type: array

items:

type: integer

enablenearfarIndicationRS1:

type: string

enum:

- ENABLE

- DISABLE

enablenearfarIndicationRS2:

type: string

enum:

- ENABLE

- DISABLE

RimRSReportInfo:

type: object

properties:

detectedSetID:

type: integer

propagationDelay:

type: integer

functionalityOfRIMRS:

type: string

enum:

- RS1

- RS2

- RS1forEnoughMitigation

- RS1forNotEnoughMitigation

RimRSReportConf:

type: object

properties:

reportIndicator:

type: string

enum:

- ENABLE

- DISABLE

reportInterval:

type: integer

nrofRIMRSReportInfo:

type: integer

maxPropagationDelay:

type: integer

rimRSReportInfoList:

type: array

items:

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

#-------- Definition of abstract IOCs --------------------------------------------

RrmPolicy\_-Attr:

type: object

properties:

resourceType:

type: string

rRMPolicyMemberList:

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

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

SubNetwork-Single:

allOf:

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

- type: object

properties:

attributes:

$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'

NRFrequency:

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

ExternalGnbCuCpFunction:

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

ExternalENBFunction:

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

EUtranFrequency:

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

DESManagementFunction:

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

DRACHOptimizationFunction:

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

DMROFunction:

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

DPCIConfigurationFunction:

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

CPCIConfigurationFunction:

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

CESManagementFunction:

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

Configurable5QISet:

$ref: '5gcNrm.yaml#/components/schemas/Configurable5QISet-Multiple'

RimRSGlobal:

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

ManagedElement-Single:

allOf:

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

- type: object

properties:

attributes:

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

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

- type: object

properties:

GnbDuFunction:

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

GnbCuUpFunction:

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

GnbCuCpFunction:

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

DESManagementFunction:

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

DRACHOptimizationFunction:

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

DMROFunction:

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

DPCIConfigurationFunction:

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

CPCIConfigurationFunction:

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

CESManagementFunction:

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

Configurable5QISet:

$ref: '5gcNrm.yaml#/components/schemas/Configurable5QISet-Multiple'

GnbDuFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

gnbDuId:

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

gnbDuName:

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

gnbId:

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

gnbIdLength:

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

rimRSReportConf:

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

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

- type: object

properties:

RRMPolicyRatio:

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

NrCellDu:

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

Bwp-Multiple:

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

NrSectorCarrier-Multiple:

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

EP\_F1C:

$ref: '#/components/schemas/EP\_F1C-Single'

EP\_F1U:

$ref: '#/components/schemas/EP\_F1U-Multiple'

GnbCuUpFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

gnbId:

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

gnbIdLength:

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

gnbCuUpId:

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

plmnInfoList:

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

configurable5QISetRef:

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

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

- type: object

properties:

RRMPolicyRatio:

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

EP\_E1:

$ref: '#/components/schemas/EP\_E1-Single'

EP\_XnU:

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

EP\_F1U:

$ref: '#/components/schemas/EP\_F1U-Multiple'

EP\_NgU:

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

EP\_X2U:

$ref: '#/components/schemas/EP\_X2U-Multiple'

EP\_S1U:

$ref: '#/components/schemas/EP\_S1U-Multiple'

GnbCuCpFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

gnbId:

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

gnbIdLength:

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

gnbCuName:

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

plmnId:

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

x2BlackList:

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

xnBlackList:

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

x2WhiteList:

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

xnWhiteList:

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

xnHOBlackList:

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

x2HOBlackList:

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

mappingSetIDBackhaulAddress:

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

configurable5QISetRef:

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

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

- type: object

properties:

RRMPolicyRatio:

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

NrCellCu:

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

EP\_XnC:

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

EP\_E1:

$ref: '#/components/schemas/EP\_E1-Multiple'

EP\_F1C:

$ref: '#/components/schemas/EP\_F1C-Multiple'

EP\_NgC:

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

EP\_X2C:

$ref: '#/components/schemas/EP\_X2C-Multiple'

DANRManagementFunction:

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

DESManagementFunction:

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

DRACHOptimizationFunction:

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

DMROFunction:

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

NrCellCu-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

cellLocalId:

type: integer

plmnInfoList:

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

nRFrequencyRef:

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

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

- type: object

properties:

RRMPolicyRatio:

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

NRCellRelation:

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

EUtranCellRelation:

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

NRFreqRelation:

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

EUtranFreqRelation:

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

DESManagementFunction:

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

DRACHOptimizationFunction:

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

DMROFunction:

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

CESManagementFunction:

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

NrCellDu-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

administrativeState:

$ref: 'genericNRM.yaml#/components/schemas/AdministrativeState'

operationalState:

$ref: 'genericNRM.yaml#/components/schemas/OperationalState'

cellLocalId:

type: integer

cellState:

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

plmnInfoList:

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

nrPci:

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

nrTac:

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

arfcnDL:

type: integer

arfcnUL:

type: integer

arfcnSUL:

type: integer

bSChannelBwDL:

type: integer

bSChannelBwUL:

type: integer

bSChannelBwSUL:

type: integer

ssbFrequency:

type: integer

minimum: 0

maximum: 3279165

ssbPeriodicity:

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

ssbSubCarrierSpacing:

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

ssbOffset:

type: integer

minimum: 0

maximum: 159

ssbDuration:

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

nrSectorCarrierRef:

type: array

items:

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

bwpRef:

type: array

items:

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

nRFrequencyRef:

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

victimSetRef:

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

aggressorSetRef:

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

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

- type: object

properties:

RRMPolicyRatio:

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

DPCIConfigurationFunction:

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

CPCIConfigurationFunction:

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

NRFrequency-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

absoluteFrequencySSB:

type: integer

minimum: 0

maximum: 3279165

ssbSubCarrierSpacing:

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

multiFrequencyBandListNR:

type: integer

minimum: 1

maximum: 256

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

EUtranFrequency-Single:

allOf:

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

- type: object

properties:

attributes:

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

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

NrSectorCarrier-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

txDirection:

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

configuredMaxTxPower:

type: integer

arfcnDL:

type: integer

arfcnUL:

type: integer

bSChannelBwDL:

type: integer

bSChannelBwUL:

type: integer

sectorEquipmentFunctionRef:

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

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

- type: object

properties:

CommonBeamformingFunction:

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

Bwp-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

bwpContext:

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

isInitialBwp:

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

subCarrierSpacing:

type: integer

cyclicPrefix:

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

startRB:

type: integer

numberOfRBs:

type: integer

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

CommonBeamformingFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

- type: object

properties:

coverageShape:

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

digitalAzimuth:

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

digitalTilt:

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

- type: object

properties:

Beam:

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

Beam-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

- type: object

properties:

beamIndex:

type: integer

beamType:

type: string

enum:

- SSB-BEAM

beamAzimuth:

type: integer

minimum: -1800

maximum: 1800

beamTilt:

type: integer

minimum: -900

maximum: 900

beamHorizWidth:

type: integer

minimum: 0

maximum: 3599

beamVertWidth:

type: integer

minimum: 0

maximum: 1800

RRMPolicyRatio-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

- $ref: '#/components/schemas/RrmPolicy\_-Attr'

- type: object

properties:

rRMPolicyMaxRatio:

type: integer

rRMPolicyMinRatio:

type: integer

rRMPolicyDedicatedRatio:

type: integer

NRCellRelation-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

nRTCI:

type: integer

cellIndividualOffset:

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

adjacentNRCellRef:

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

nRFrequencyRef:

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

isRemoveAllowed:

type: boolean

isHOAllowed:

type: boolean

isESCoveredBy:

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

isENDCAllowed:

type: boolean

EUtranCellRelation-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

adjacentEUtranCellRef:

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

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

NRFreqRelation-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

offsetMO:

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

blackListEntry:

type: array

items:

type: integer

minimum: 0

maximum: 1007

blackListEntryIdleMode:

type: integer

cellReselectionPriority:

type: integer

cellReselectionSubPriority:

type: number

minimum: 0.2

maximum: 0.8

multipleOf: 0.2

pMax:

type: integer

minimum: -30

maximum: 33

qOffsetFreq:

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

qQualMin:

type: number

qRxLevMin:

type: integer

minimum: -140

maximum: -44

threshXHighP:

type: integer

minimum: 0

maximum: 62

threshXHighQ:

type: integer

minimum: 0

maximum: 31

threshXLowP:

type: integer

minimum: 0

maximum: 62

threshXLowQ:

type: integer

minimum: 0

maximum: 31

tReselectionNr:

type: integer

minimum: 0

maximum: 7

tReselectionNRSfHigh:

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

tReselectionNRSfMedium:

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

nRFrequencyRef:

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

EUtranFreqRelation-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

eUTranFrequencyRef:

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

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

DANRManagementFunction-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

intrasystemANRManagementSwitch:

type: boolean

intersystemANRManagementSwitch:

type: boolean

DESManagementFunction-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

desSwitch:

type: boolean

intraRatEsActivationOriginalCellLoadParameters:

$ref: "#/components/schemas/IntraRatEsActivationOriginalCellLoadParameters"

intraRatEsActivationCandidateCellsLoadParameters:

$ref: "#/components/schemas/IntraRatEsActivationCandidateCellsLoadParameters"

intraRatEsDeactivationCandidateCellsLoadParameters:

$ref: "#/components/schemas/IntraRatEsDeactivationCandidateCellsLoadParameters"

esNotAllowedTimePeriod:

$ref: "#/components/schemas/EsNotAllowedTimePeriod"

interRatEsActivationOriginalCellParameters:

$ref: "#/components/schemas/IntraRatEsActivationOriginalCellLoadParameters"

interRatEsActivationCandidateCellParameters:

$ref: "#/components/schemas/IntraRatEsActivationOriginalCellLoadParameters"

interRatEsDeactivationCandidateCellParameters:

$ref: "#/components/schemas/IntraRatEsActivationOriginalCellLoadParameters"

isProbingCapable:

type: string

enum:

- yes

- no

energySavingState:

type: string

enum:

- isNotEnergySaving

- isEnergySaving

DRACHOptimizationFunction-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

drachOptimizationControl:

type: boolean

ueAccProbilityDistPerSSB:

$ref: "#/components/schemas/UeAccProbilityDistPerSSB"

ueAccDelayProbilityDistPerSSB:

$ref: "#/components/schemas/UeAccDelayProbilityDistPerSSB"

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

DMROFunction-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

dmroControl:

type: boolean

maximumDeviationHoTrigger:

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

minimumTimeBetweenHoTriggerChange:

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

tstoreUEcntxt:

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

DPCIConfigurationFunction-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

dPciConfigurationControl:

type: boolean

nRPciList:

$ref: "#/components/schemas/NRPciList"

CPCIConfigurationFunction-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

cPciConfigurationControl:

type: boolean

cSonPciList:

$ref: "#/components/schemas/CSonPciList"

CESManagementFunction-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

cesSwitch:

type: boolean

energySavingControl:

type: string

enum:

- toBeEnergySaving

- toBeNotEnergySaving

energySavingState:

type: string

enum:

- isNotEnergySaving

- isEnergySaving

RimRSGlobal-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

frequencyDomainPara:

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

sequenceDomainPara:

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

timeDomainPara:

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

RimRSSet:

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

RimRSSet-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

setId:

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

setType:

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

rimRSMonitoringStartTime:

type: string

rimRSMonitoringStopTime:

type: string

rimRSMonitoringWindowDuration:

type: integer

rimRSMonitoringWindowStartingOffset:

type: integer

rimRSMonitoringWindowPeriodicity:

type: integer

rimRSMonitoringOccasionInterval:

type: integer

rimRSMonitoringOccasionStartingOffset:

type: integer

nRCellDURefs:

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

ExternalGnbDuFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

gnbId:

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

gnbIdLength:

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

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

- type: object

properties:

EP\_F1C:

$ref: '#/components/schemas/EP\_F1C-Multiple'

EP\_F1U:

$ref: '#/components/schemas/EP\_F1U-Multiple'

ExternalGnbCuUpFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

gnbId:

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

gnbIdLength:

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

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

- type: object

properties:

EP\_E1:

$ref: '#/components/schemas/EP\_E1-Multiple'

EP\_F1U:

$ref: '#/components/schemas/EP\_F1U-Multiple'

EP\_XnU:

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

ExternalGnbCuCpFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

- $ref: >-

genericNRM.yaml#/components/schemas/ManagedFunction-Attr

- type: object

properties:

gnbId:

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

gnbIdLength:

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

plmnId:

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

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

- type: object

properties:

ExternalNrCellCu:

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

EP\_XnC:

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

EP\_E1:

$ref: '#/components/schemas/EP\_E1-Multiple'

EP\_F1C:

$ref: '#/components/schemas/EP\_F1C-Multiple'

ExternalNrCellCu-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

cellLocalId:

type: integer

nrPci:

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

plmnIdList:

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

nRFrequencyRef:

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

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

ExternalENBFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

eNBId:

type: integer

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

- type: object

properties:

ExternalEUTranCell:

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

ExternalEUTranCell-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

EUtranFrequencyRef:

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

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

EP\_XnC-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_E1-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_F1C-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_NgC-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_X2C-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_XnU-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_F1U-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_NgU-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

epTransportRefs:

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

EP\_X2U-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

EP\_S1U-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: '#/components/schemas/LocalAddress'

remoteAddress:

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

#-------- 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'

GnbDuFunction-Multiple:

type: array

items:

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

GnbCuUpFunction-Multiple:

type: array

items:

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

GnbCuCpFunction-Multiple:

type: array

items:

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

NrCellDu-Multiple:

type: array

items:

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

NrCellCu-Multiple:

type: array

items:

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

NRFrequency-Multiple:

type: array

minItems: 1

items:

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

EUtranFrequency-Multiple:

type: array

minItems: 1

items:

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

NrSectorCarrier-Multiple:

type: array

items:

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

Bwp-Multiple:

type: array

items:

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

Beam-Multiple:

type: array

items:

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

RRMPolicyRatio-Multiple:

type: array

items:

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

NRCellRelation-Multiple:

type: array

items:

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

EUtranCellRelation-Multiple:

type: array

items:

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

NRFreqRelation-Multiple:

type: array

items:

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

EUtranFreqRelation-Multiple:

type: array

items:

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

RimRSSet-Multiple:

type: array

items:

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

ExternalGnbDuFunction-Multiple:

type: array

items:

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

ExternalGnbCuUpFunction-Multiple:

type: array

items:

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

ExternalGnbCuCpFunction-Multiple:

type: array

items:

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

ExternalNrCellCu-Multiple:

type: array

items:

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

ExternalENBFunction-Multiple:

type: array

items:

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

ExternalEUTranCell-Multiple:

type: array

items:

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

EP\_E1-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_E1-Single'

EP\_XnC-Multiple:

type: array

items:

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

EP\_F1C-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_F1C-Single'

EP\_NgC-Multiple:

type: array

items:

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

EP\_X2C-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_X2C-Single'

EP\_XnU-Multiple:

type: array

items:

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

EP\_F1U-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_F1U-Single'

EP\_NgU-Multiple:

type: array

items:

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

EP\_X2U-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_X2U-Single'

EP\_S1U-Multiple:

type: array

items:

$ref: '#/components/schemas/EP\_S1U-Single'

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

resources-nrNrm:

oneOf:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- $ref: '#/components/schemas/EP\_E1-Single'

- $ref: '#/components/schemas/EP\_F1C-Single'

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

- $ref: '#/components/schemas/EP\_X2C-Single'

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

- $ref: '#/components/schemas/EP\_F1U-Single'

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

- $ref: '#/components/schemas/EP\_X2U-Single'

- $ref: '#/components/schemas/EP\_S1U-Single'

|  |
| --- |
| **End of 1st modification** |

|  |
| --- |
| **Start of 2nd modification** |

## 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

CNSIIdList:

type: array

items:

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

CNSIId:

type: string

description: CNSI Id is defined in TS 29.531, only for Core Network

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

PacketErrorRate:

type: object

properties:

scalar:

type: integer

exponent:

type: integer

FiveQICharacteristics:

type: object

properties:

fiveQIValue:

type: integer

resourceType:

type: string

enum:

- GBR

- NonGBR

priorityLevel:

type: integer

packetDelayBudget:

type: integer

packetErrorRate:

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

averagingWindow:

type: integer

maximumDataBurstVolume:

type: integer

GtpUPathDelayThresholdsType:

type: object

properties:

n3AveragePacketDelayThreshold:

type: integer

n3MinPacketDelayThreshold:

type: integer

n3MaxPacketDelayThreshold:

type: integer

n9AveragePacketDelayThreshold:

type: integer

n9MinPacketDelayThreshold:

type: integer

n9MaxPacketDelayThreshold:

type: integer

QFPacketDelayThresholdsType:

type: object

properties:

thresholdDl:

type: integer

thresholdUl:

type: integer

thresholdRtt:

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'

Configurable5QISet:

$ref: '#/components/schemas/Configurable5QISet-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'

Configurable5QISet:

$ref: '#/components/schemas/Configurable5QISet-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'

Configurable5QISetRef:

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

- $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'

GtpUPathQoSMonitoringControl:

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

QFQoSMonitoringControl:

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

cNSIIdList:

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

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

cNSIIdList:

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

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'

epTransportRefs:

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

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'

Configurable5QISet-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

- type: object

properties:

configurable5QIs:

type: array

items:

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

GtpUPathQoSMonitoringControl-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

- type: object

properties:

gtpUPathQoSMonitoringState:

type: string

enum:

- ENABLED

- DISABLED

gtpUPathMonitoredSNSSAIs:

type: array

items:

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

monitoredDSCPs:

type: array

items:

type: integer

minimum: 0

maximum: 255

isEventTriggeredGtpUPathMonitoringSupported:

type: boolean

isPeriodicGtpUMonitoringSupported:

type: boolean

isImmediateGtpUMonitoringSupported:

type: boolean

gtpUPathDelayThresholds:

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

gtpUPathMinimumWaitTime:

type: integer

gtpUPathMeasurementPeriod:

type: integer

QFQoSMonitoringControl-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

- type: object

properties:

qFQoSMonitoringState:

type: string

enum:

- ENABLED

- DISABLED

qFMonitoredSNSSAIs:

type: array

items:

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

qFMonitored5QIs:

type: array

items:

type: integer

minimum: 0

maximum: 255

isEventTriggeredQFMonitoringSupported:

type: boolean

isPeriodicQFMonitoringSupported:

type: boolean

isSessionReleasedQFMonitoringSupported:

type: boolean

qFPacketDelayThresholds:

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

qFMinimumWaitTime:

type: integer

qFMeasurementPeriod:

type: integer

#-------- 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:

type: array

items:

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

UdmFunction-Multiple:

type: array

items:

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

UdrFunction-Multiple:

type: array

items:

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

UdsfFunction-Multiple:

type: array

items:

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

NrfFunction-Multiple:

type: array

items:

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

NssfFunction-Multiple:

type: array

items:

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

SmsfFunction-Multiple:

type: array

items:

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

LmfFunction-Multiple:

type: array

items:

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

NgeirFunction-Multiple:

type: array

items:

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

SeppFunction-Multiple:

type: array

items:

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

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:

type: array

items:

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

EP\_N5-Multiple:

type: array

items:

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

EP\_N6-Multiple:

type: array

items:

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

EP\_N7-Multiple:

type: array

items:

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

EP\_N8-Multiple:

type: array

items:

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

EP\_N9-Multiple:

type: array

items:

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

EP\_N10-Multiple:

type: array

items:

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

EP\_N11-Multiple:

type: array

items:

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

EP\_N12-Multiple:

type: array

items:

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

EP\_N13-Multiple:

type: array

items:

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

EP\_N14-Multiple:

type: array

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

items:

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

EP\_N20-Multiple:

type: array

items:

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

EP\_N21-Multiple:

type: array

items:

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

EP\_N22-Multiple:

type: array

items:

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

EP\_N26-Multiple:

type: array

items:

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

EP\_N27-Multiple:

type: array

items:

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

EP\_N31-Multiple:

type: array

items:

$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

items:

$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'

Configurable5QISet-Multiple:

type: array

items:

$ref: '#/components/schemas/Configurable5QISet-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/QFQoSMonitoringControl-Single'

- $ref: '#/components/schemas/GtpUPathQoSMonitoringControl-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/Configurable5QISet-Single'

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

|  |
| --- |
| **End of 2nd modification** |

|  |
| --- |
| **Start of 3rd modification** |

## J.4.3 OpenAPI document "sliceNrm.yaml"

openapi: 3.0.1

info:

title: Slice NRM

version: 16.4.0

description: >-

OAS 3.0.1 specification of the Slice NRM

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externalDocs:

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

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

paths: {}

components:

schemas:

#------------ Type definitions ---------------------------------------------------

Float:

type: number

format: float

MobilityLevel:

type: string

enum:

- STATIONARY

- NOMADIC

- RESTRICTED MOBILITY

- FULLY MOBILITY

SharingLevel:

type: string

enum:

- SHARED

- NON-SHARED

Category:

type: string

enum:

- CHARACTER

- SCALABILITY

Tagging:

type: string

enum:

- PERFORMANCE

- FUNCTION

- OPERATION

Exposure:

type: string

enum:

- API

- KPI

ServAttrCom:

type: object

properties:

category:

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

tagging:

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

exposure:

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

Support:

type: string

enum:

- NOT SUPPORTED

- SUPPORTED

DelayTolerance:

type: object

properties:

servAttrCom:

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

support:

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

DeterministicComm:

type: object

properties:

servAttrCom:

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

availability:

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

periodicityList:

type: string

DLThptPerSlice:

type: object

properties:

servAttrCom:

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

guaThpt:

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

maxThpt:

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

DLThptPerUE:

type: object

properties:

servAttrCom:

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

guaThpt:

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

maxThpt:

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

ULThptPerSlice:

type: object

properties:

servAttrCom:

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

guaThpt:

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

maxThpt:

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

ULThptPerUE:

type: object

properties:

servAttrCom:

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

guaThpt:

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

maxThpt:

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

MaxPktSize:

type: object

properties:

servAttrCom:

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

maxsize:

type: integer

MaxNumberofConns:

type: object

properties:

servAttrCom:

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

nOofConn:

type: integer

KPIMonitoring:

type: object

properties:

servAttrCom:

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

kPIList:

type: string

SupportedAccessTech:

type: object

properties:

servAttrCom:

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

accTechList:

type: integer

UserMgmtOpen:

type: object

properties:

servAttrCom:

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

support:

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

V2XCommModels:

type: object

properties:

servAttrCom:

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

v2XMode:

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

TermDensity:

type: object

properties:

servAttrCom:

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

density:

type: integer

NsInfo:

type: object

properties:

nsInstanceId:

type: string

nsName:

type: string

ServiceProfileList:

type: object

additionalProperties:

type: object

properties:

snssaiList:

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

plmnIdList:

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

maxNumberofUEs:

type: number

latency:

type: number

uEMobilityLevel:

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

sst:

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

resourceSharingLevel:

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

availability:

type: number

delayTolerance:

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

deterministicComm:

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

dLThptPerSlice:

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

dLThptPerUE:

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

uLThptPerSlice:

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

uLThptPerUE:

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

maxPktSize:

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

maxNumberofConns:

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

kPIMonitoring:

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

supportedAccessTech:

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

userMgmtOpen:

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

v2XModels:

$ref: '#/components/schemas/V2XCommModels'

coverageArea:

type: string

termDensity:

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

activityFactor:

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

uESpeed:

type: integer

jitter:

type: integer

survivalTime:

type: string

reliability:

type: string

SliceProfileList:

type: object

additionalProperties:

type: object

properties:

snssaiList:

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

plmnIdList:

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

maxNumberofUEs:

type: number

coverageAreaTAList:

$ref: '5gcNrm.yaml#/components/schemas/TACList'

latency:

type: number

uEMobilityLevel:

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

resourceSharingLevel:

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

IpAddress:

oneOf:

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

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

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

NetworkSlice:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

networkSliceSubnetRef:

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

operationalState:

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

administrativeState:

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

serviceProfileList:

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

NetworkSliceSubnet:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

managedFunctionRefList:

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

networkSliceSubnetRefList:

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

operationalState:

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

administrativeState:

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

nsInfo:

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

sliceProfileList:

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

EPTransport:

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

EP\_Transport-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

ipAddress:

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

logicInterfaceId:

type: string

nextHopInfo:

type: string

qosProfile:

type: string

epRPRefs:

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

EP\_Transport-Multiple:

type: array

items:

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

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

resources-sliceNrm:

oneOf:

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

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

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

|  |
| --- |
| **End of 3rd modification** |