3GPP TSG SA WG5 Meeting 137-e S5-213138

Electronic meeting, online, 10 - 19 May 2021

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **28.541** | **CR** | **0488** | **rev** | **-** | **Current version:** | **17.2.1** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| --- |
|  |
| ***Title:***  | OpenAPI Enhansement of NRM definition for the NWDAF |
|  |  |
| ***Source to WG:*** | S5 |
| ***Source to TSG:*** | Huawei |
|  |  |
| ***Work item code:*** | adNRM |  | ***Date:*** | 2021-04-29 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-17 |
|  | *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 canbe 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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | In the LS response S5-206299, SA5 confirms that the OAM can provide network slice information to NWDAF via OAM configuration mechanism when network slice is created. Currently the network slice information provided to NWDAF is specified in TS 28.541 section 5.3.18 which already includes sNSSAIList. SA5 can consider NSI ID and address of the NRF serving such network slice or slice associated NFs in future enhancement. However, it is not possible for the NWDAF to get KPIs for a network slice, if the NWDAF has no information about the DN of the network slice. In order to enable the NWDAF to collect the KPIs of a network slice, the NRM definition for the NWDAF should also include the DN of relevant network slice. |
|  |  |
| ***Summary of change:*** | The stage 3 update for the following change:Adding new networkSliceInfoList attribute for NWDAFFunction；Adding new data type definition of networkSliceInfo；Adding new attribute definition of networkSliceInfoList. |
|  |  |
| ***Consequences if not approved:*** | The NWDAF cannot consume the performance management services to collect the KPIs of a network slice. |
|  |  |
| ***Clauses affected:*** | G.4.3  |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 28.541 CR 0487 |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** | The following branch was created and validated<https://forge.3gpp.org/rep/sa5/MnS/tree/S5-213138_Rev2_TS28541_R17_CR0488_Enhansement_of_NRM_definition_for_the_NWDAF> |
|  |  |
| ***This CR's revision history:*** |  |

|  |
| --- |
| **1st Change** |

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

openapi: 3.0.1

info:

 title: 3GPP 5GC NRM

 version: 17.2.0

 description: >-

 OAS 3.0.1 specification of the 5GC NRM

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externalDocs:

 description: 3GPP TS 28.541 V17.2.0; 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

 NetworkSliceInfo:

 type: object

 properties:

 sNSSAI:

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

 cNSIId:

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

 networkSliceRef:

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

 NetworkSliceInfoList:

 type: array

 items:

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

 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

 QosData:

 type: object

 properties:

 qosId:

 type: string

 fiveQIValue:

 type: integer

 maxbrUl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/BitRateRm'

 maxbrDl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/BitRateRm'

 gbrUl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/BitRateRm'

 gbrDl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/BitRateRm'

 arp:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/Arp'

 qosNotificationControl:

 type: boolean

 reflectiveQos:

 type: boolean

 sharingKeyDl:

 type: string

 sharingKeyUl:

 type: string

 maxPacketLossRateDl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/PacketLossRateRm'

 maxPacketLossRateUl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/PacketLossRateRm'

 extMaxDataBurstVol:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/ExtMaxDataBurstVolRm'

 QosDataList:

 type: array

 items:

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

 SteeringMode:

 type: object

 properties:

 steerModeValue:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/SteerModeValue'

 active:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/AccessType'

 standby:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/AccessTypeRm'

 threeGLoad:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/Uinteger'

 prioAcc:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/AccessType'

 TrafficControlData:

 type: object

 properties:

 tcId:

 type: string

 flowStatus:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/FlowStatus'

 redirectInfo:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RedirectInformation'

 addRedirectInfo:

 type: array

 items:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/RedirectInformation'

 minItems: 1

 muteNotif:

 type: boolean

 trafficSteeringPolIdDl:

 type: string

 nullable: true

 trafficSteeringPolIdUl:

 type: string

 nullable: true

 routeToLocs:

 type: array

 items:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/RouteToLocation'

 traffCorreInd:

 type: boolean

 upPathChgEvent:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/UpPathChgEvent'

 steerFun:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/SteeringFunctionality'

 steerModeDl:

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

 steerModeUl:

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

 mulAccCtrl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/MulticastAccessControl'

 TrafficControlDataList:

 type: array

 items:

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

 PccRule:

 type: object

 properties:

 pccRuleId:

 type: string

 description: Univocally identifies the PCC rule within a PDU session.

 flowInfoList:

 type: array

 items:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/FlowInformation'

 applicationId:

 type: string

 appDescriptor:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/ApplicationDescriptor'

 contentVersion:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/ContentVersion'

 precedence:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29571\_CommonData.yaml#/components/schemas/Uinteger'

 afSigProtocol:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/AfSigProtocol'

 isAppRelocatable:

 type: boolean

 isUeAddrPreserved:

 type: boolean

 qosData:

 type: array

 items:

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

 altQosParams:

 type: array

 items:

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

 trafficControlData:

 type: array

 items:

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

 conditionData:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29512\_Npcf\_SMPolicyControl.yaml#/components/schemas/ConditionData'

 tscaiInputDl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscaiInputContainer'

 tscaiInputUl:

 $ref: 'https://forge.3gpp.org/rep/all/5G\_APIs/raw/REL-16/TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/TscaiInputContainer'

#-------- 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'

 Dynamic5QISet:

 $ref: '#/components/schemas/Dynamic5QISet-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'

 Dynamic5QISet:

 $ref: '#/components/schemas/Dynamic5QISet-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'

 dynamic5QISetRef:

 $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'

 PredefinedPccRuleSet:

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

 configurable5QISetRef:

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

 dynamic5QISetRef:

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

 - $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'

 PredefinedPccRuleSet:

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

 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'

 networkSliceInfoList:

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

 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'

 Dynamic5QISet-Single:

 allOf:

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

 - type: object

 properties:

 attributes:

 allOf:

 - type: object

 properties:

 dynamic5QIs:

 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

 PredefinedPccRuleSet-Single:

 allOf:

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

 - type: object

 properties:

 attributes:

 allOf:

 - type: object

 properties:

 predefinedPccRules:

 type: array

 items:

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

#-------- 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'

 Dynamic5QISet-Multiple:

 type: array

 items:

 $ref: '#/components/schemas/Dynamic5QISet-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'

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

 - $ref: '#/components/schemas/Dynamic5QISet-Single'

|  |
| --- |
| **End of Changes** |