**3GPP TSG-SA5 Meeting #133-e *S5-205283***

**Online, , 12th Oct 2020 - 21st Oct 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.541** | **CR** |  | **rev** | **-** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | CR Rel-17 ServiceProfle to SliceProfile Translation Stage 3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung Research America, Telefonica, China Mobile, Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EMA5SLA | | | | |  | ***Date:*** | | | 2020-10-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **C** |  | | | | | ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Stage 3 for 205039 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | YAML definition for 205039 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Missing Stage 3 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.4.2, 6.3.x(new), 6.4.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **×** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **×** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **×** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This is input to the Rel-17 28.541 DraftCR for ServiceProfile to SliceProfile translation  Forge Branch: https://forge.3gpp.org/rep/sa5/MnS/raw/S5-205283\_ServiceProfle\_to\_SliceProfile\_Translation\_Stage\_3.docx/OpenAPI/sliceNrm.yaml | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

openapi: 3.0.1

info:

title: Slice NRM

version: 16.5.0

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

ServiceType:

type: string

enum:

- eMBB

- RLLC

- MIoT

- V2X

PerfReqEmbb:

type: object

properties:

expDataRateDL:

type: number

expDataRateUL:

type: number

areaTrafficCapDL:

type: number

areaTrafficCapUL:

type: number

userDensity:

type: number

activityFactor:

type: number

PerfReqEmbbList:

type: array

items:

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

PerfReqUrllc:

type: object

properties:

cSAvailabilityTarget:

type: number

cSReliabilityMeanTime:

type: string

expDataRate:

type: number

msgSizeByte:

type: string

transferIntervalTarget:

type: string

survivalTime:

type: string

PerfReqUrllcList:

type: array

items:

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

PerfReq:

oneOf:

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

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

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'

DLThptPerSliceSubnet:

type: object

properties:

guaThpt:

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

maxThpt:

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

DLThptPerUEPerSubnet:

type: object

properties:

guaThpt:

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

maxThpt:

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

ULThptPerSliceSubnet:

type: object

properties:

guaThpt:

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

maxThpt:

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

ULThptPerUEPerSubnet:

type: object

properties:

guaThpt:

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

maxThpt:

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

MaxPktSize:

type: object

properties:

servAttrCom:

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

maxsize:

type: integer

MaxNumberofPDUSessions:

type: object

properties:

servAttrCom:

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

nOofPDUSessions:

type: integer

KPIMonitoring:

type: object

properties:

servAttrCom:

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

kPIList:

type: string

NBIoT:

type: object

properties:

servAttrCom:

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

support:

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

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

CNSliceSubnetProfile:

type: object

properties:

maxNumberofUEs:

type: integer

latency:

type: integer

dLThptPerSlice:

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

dLThptPerUEPerSubnet:

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

uLThptPerSliceSubnet:

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

uLThptPerUEPerSubnet:

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

maxNumberOfPDUSessions:

type: integer

RANSliceSubnetProfile:

type: object

properties:

coverageAreaGeoPolygon:

type: string

coverageAreaTAList:

type: integer

MobilityLevel:

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

resourceSharingLevel:

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

maxNumberofUEs:

type: integer

activityFactor:

type: integer

dLThptPerUE:

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

uLThptPerUE:

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

uESpeed:

type: integer

reliability:

type: string

serviceType:

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

TopSliceSubnetProfile:

type: object

properties:

coverageArea:

type: string

latency:

type: integer

maxNumberofUEs:

type: integer

dLThptPerSlice:

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

dLThptPerUE:

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

uLThptPerSlice:

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

uLThptPerUE:

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

maxPktSize:

type: integer

maxNumberOfPDUSessions:

type: integer

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'

maxNumberofPDUSessions:

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

kPIMonitoring:

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

nBIoT:

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

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

maxDLDataVolume:

type: string

maxULDataVolume:

type: string

SliceProfileList:

type: object

additionalProperties:

type: object

properties:

snssaiList:

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

plmnIdList:

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

perfReq:

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

CNSliceSubnetProfile:

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

RANSliceSubnetProfile:

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

TopSliceSubnetProfile:

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

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

epApplicationRefs:

$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'

Annex K (normative):  
Void