**3GPP TSG-SA5 Meeting #142-e *S5-222339***

**e-meeting, 4-12 April 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.538** | **CR** | **draftCR** | **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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Update ECM NRM stage 3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eECM | | | | |  | ***Date:*** | | | 2022-3-25 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | *Rel-18* |
|  | *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:*** | | Related to S5-222338. Correct ECM NRM stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Related to S5-222338. Correct ECM NRM stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Not applicable for implementation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | A.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | https://forge.3gpp.org/rep/sa5/MnS/-/blob/S5-222339\_draftCR\_28\_538\_update\_ECM\_NRM\_stage\_3/OpenAPI/EdgeNRM.yaml | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

A.2 Solution Set (SS) definitions

A.2.1 OpenAPI document "edgeNrm.yaml"

openapi: 3.0.1

info:

title: 3GPP Edge NRM

version: 17.1.0

description: >-

OAS 3.0.1 specification of the Edge NRM

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externalDocs:

description: 3GPP TS 28.538; Edge NRM

url: http://www.3gpp.org/ftp/Specs/archive/28\_series/28.538/

paths: {}

components:

schemas:

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

ServingLocation:

type: object

properties:

geographicalLocation:

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

topologicalLocation:

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

TopologicalServiceArea:

type: object

properties:

cellIdList:

type: array

item: integer

trackingAreaIdList:

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

servingPLMN:

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

GeoLoc:

type: object

properties:

geographicalCoordinates:

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

civicLocation:

type: string

GeographicalCoordinates:

type: object

properties:

latitude:

type: integer

longitude:

type: integer

EDNConnectionInfo:

type: object

properties:

dNN:

type: string

eDNServiceArea:

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

AffinityAntiAffinity:

type: object

properties:

affinityEAS:

type: array

item: string

antiAffinityEAS:

type: array

item: string

VirtualResource:

type: object

properties:

virtualMemory:

type: integer

virtualDisk:

type: integer

virutalCPU:

type: string

SoftwareImageInfo:

type: object

properties:

minimumDisk:

type: integer

minimumRAM:

type: integer

discFormat:

type: string

operatingSystem:

type: string

swImageRef:

type: string

description: indicates the reference to the actual software image that is represented by URL (see clause 7.1.6.5 in ETSI NFV IFA-011 [7]).

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

SubNetwork-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

Subnetwork:

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

ECSFunction:

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

EdgeDataNetwork:

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

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

EdgeDataNetwork-Single:

allOf:

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

- type: object

properties:

ednIdentifier:

type: string

eDNConnectionInfo:

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

- type: object

properties:

EASFunction:

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

EESFunction:

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

EASFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

eASIdentifier:

type: string

eESAddress:

type: array

item: string

eASRequirementsRef:

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

eASAddress:

type: array

item: string

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

EESFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

eESIdentifier:

type: string

eESServingLocation:

type: array

item:

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

eESAddress:

type: array

item: string

serviceContinuitySupport:

type: boolean

eASFunctonRef:

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

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

ECSFunction-Single:

allOf:

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

- type: object

properties:

attributes:

allOf:

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

- type: object

properties:

eCSAddress:

type: string

providerIdentifier:

type: string

edgeDataNetworkRef:

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

eESFuncitonRef:

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

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

EASRequirements:

allOf:

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

- type: object

properties:

requiredEASservingLocation:

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

affinityAntiAffinity:

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

serviceContinuity:

type: boolean

virtualResource:

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

softwareImageInfo:

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

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

SubNetwork-Multiple:

type: array

items:

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

EASFunction-Multiple:

type: array

items:

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

ECSFunction-Multiple:

type: array

items:

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

EESFunction-Multiple:

type: array

items:

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

EdgeDataNetwork-Multiple:

type: array

items:

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

#--------------------------------- Definition ------------------------------------

resources-edgeNrm:

oneOf:

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

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

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

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

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

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