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

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

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| --- |
| *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 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:*** | 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'