**3GPP TSG-SA5 Meeting #156 *S5-244873***

**Maastricht, The Netherlands, 19 - 23 August 2024**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **104** | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *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 | **X** | Core Network | **X** |

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| ***Title:***  | Rel-18 CR TS 28.104 Fix stage 3 MDAFunction properties |
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| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | TEI18 |  | ***Date:*** | 2024-07-30 |
|  |  |  |  |  |
| ***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)* |
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| ***Reason for change:*** | In stage 2 both MDARequest and MDAReport are contained by an MDAFunction. The properties of an MDAFunction includes a list of Dn’s that reference the MLModels (defined in TS 28.105) and a list of Dn’s that reference aIMLInferenceFunctions (defined in TS 28.105). Furthermore the MDAFunction inherits properties from the ManagedFunction (defined in TS 28.622) while MDAReport and MDARequest inherit from Top (defined in TS 28.622). The mapping to stage 3 does not reflect this correctly |
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| ***Summary of change:*** | Define an array to hold a list of Dn’s for mLModelReferenceList attributeDefine an array to hold a list of Dn’s for aIMLInferenceFunctionList attributeFix inheritance of MDAFunction from ManagedFunction Add MDAReport reference as property of MDAFunction |
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| ***Consequences if not approved:*** | Misalignment between stage 2 and 3 may cause confusion and result in interoperability issues. |
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| ***Clauses affected:*** | FORGE |
|  |  |
|  | **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:*** | Forge MR link: <https://forge.3gpp.org/rep/sa5/MnS/-/merge_requests/1319> at commit d88ba96681e59e3a41d2295b381e6f73370f3204 |
|  |  |
| ***This CR's revision history:*** |  |

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| **Start of Change** |

Forge MR link: <https://forge.3gpp.org/rep/sa5/MnS/-/merge_requests/1319> at commit d88ba96681e59e3a41d2295b381e6f73370f3204

\*\*\* START OF CHANGE 1 \*\*\*

\*\*\* OpenAPI/TS28104\_MdaNrm.yaml \*\*\*

<CODE BEGINS>

openapi: 3.0.1

info:

 title: MDA NRM

 version: 18.4.0

 description: >-

 OAS 3.0.1 specification of the MDA NRM

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externalDocs:

 description: 3GPP TS 28.104; MDA

 url: http://www.3gpp.org/ftp/Specs/archive/28\_series/28.104/

paths: {}

components:

 schemas:

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

 MDATypes:

 type: array

 items:

 type: string

 MDAOutputs:

 type: array

 items:

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

 AnalyticsScopeType:

 oneOf:

 - type: object

 properties:

 managedEntitiesScope:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/DnList'

 - type: object

 properties:

 areaScope:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/GeoArea'

 MDAOutputPerMDAType:

 type: object

 properties:

 mDAType:

 type: string

 mDAOutputIEFilters:

 type: array

 items:

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

 MDAOutputIEFilter:

 type: object

 properties:

 mDAOutputIEName:

 type: string

 filterValue:

 type: string

 threshold:

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

 analyticsPeriod:

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

 timeOut:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/DateTime'

 ReportingMethod:

 type: string

 enum:

 - FILE

 - STREAMING

 - NOTIFICATION

 ReportingTarget:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/Uri'

 AnalyticsSchedule:

 oneOf:

 - type: object

 properties:

 timeDurations:

 type: array

 items:

 $ref: 'TS28104\_MdaReport.yaml#/components/schemas/TimeWindow'

 - type: object

 properties:

 granularityPeriod:

 type: integer

 ThresholdInfo:

 type: object

 properties:

 monitoredMDAOutputIE:

 type: string

 thresholdDirection:

 type: string

 enum:

 - UP

 - DOWN

 - UP\_AND\_DOWN

 thresholdValue:

 oneOf:

 - type: integer

 - $ref: 'TS28623\_ComDefs.yaml#/components/schemas/Float'

 hysteresis:

 oneOf:

 - type: integer

 minimum: 0

 - type: number

 format: float

 minimum: 0

#-------- Definition of types for name-containments ------

 SubNetwork-ncO-MdaNrm:

 type: object

 properties:

 MDAFunction:

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

 MDAReport:

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

 ManagedElement-ncO-MdaNrm:

 type: object

 properties:

 MDAFunction:

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

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

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

 MDAFunction-Single:

 allOf:

 - $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

 - type: object

 properties:

 attributes:

 allOf:

 - $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/ManagedFunction-Attr'

 - type: object

 properties:

 supportedMDACapabilities:

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

 mLModelRefList:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/DnList'

 aIMLInferenceFunctionRefList:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/DnList'

 - $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/ManagedFunction-ncO'

 - type: object

 properties:

 MDARequest:

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

 MDAReport:

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

 MDARequest-Single:

 allOf:

 - $ref: 'TS28623\_GenericNrm.yaml#/components/schemas/Top'

 - type: object

 properties:

 attributes:

 allOf:

 - type: object

 properties:

 requestedMDAOutputs:

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

 reportingMethod:

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

 reportingTarget:

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

 analyticsScope:

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

 startTime:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/DateTime'

 stopTime:

 $ref: 'TS28623\_ComDefs.yaml#/components/schemas/DateTime'

 recommendationFilter:

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

 MDAReport-Single:

 $ref: 'TS28104\_MdaReport.yaml#/components/schemas/MDAReport'

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

 MDAFunction-Multiple:

 type: array

 items:

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

 MDARequest-Multiple:

 type: array

 items:

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

 MDAReport-Multiple:

 type: array

 items:

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

#-------- Definitions in TS 28.104 for TS 28.532 ---------------------------------

 resources-mdaNrm:

 oneOf:

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

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

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

<CODE ENDS>

\*\*\* END OF CHANGE 1 \*\*\*

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| **End of Change** |