**3GPP TSG-SA5 Meeting #155 *S5-243281***

**Jeju, South Korea, 27 - 31 May 2024**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **28.623** | **CR** | **0351** | **rev** | **1** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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 | **X** | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Rel-19 CR TS 28.623 Remove ManagedNFService | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei,Nokia, Nokia Shanghai Bell, ZTE | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | AdNRM\_Ph3 | | | | |  | ***Date:*** | | | 2024-05-13 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | C |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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:*** | | Following issues observed for NRM fragment for ManagedNFService:  1**.** From specification view, TS 28.622 defines the generic model which is agnostic to generation and domains, however, the ManagedNFService IOC is 5GC specific.  2. ManagedNFService is name-contained by ManagedFunction which is also inherited by NG-RAN ManagedFunction (e.g. GNBCUCPFunction), it gives impression that GNBCUCPFunction also name contained ManagedFunctionService. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Move NRM Fragment definition for ManagedNFService from generic information model definitions in TS 28.622/623 to 5GC NRM information model definitions in TS 28.541. 2. Remove the name contain information between ManagedFunction and ManagedNFService | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The implementation of MangedNFService is incorrect | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | YAML code normatively stored in the 3GPP 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 28.622 CR 0369 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | Forge MR link: <https://forge.3gpp.org/rep/sa5/MnS/-/merge_requests/1143> at commit 927f94d6c245201a6b1b06166e2211226920951f | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

\*\*\* START OF CHANGE 3 \*\*\*

\*\*\* OpenAPI/TS28623\_GenericNrm.yaml \*\*\*

<CODE BEGINS>

openapi: 3.0.1

info:

title: Generic NRM

version: 18.6.0

description: >-

OAS 3.0.1 definition of the Generic NRM

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externalDocs:

description: 3GPP TS 28.623; Generic NRM

url: http://www.3gpp.org/ftp/Specs/archive/28\_series/28.623/

paths: {}

components:

schemas:

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

VnfParameter:

type: object

properties:

vnfInstanceId:

type: string

vnfdId:

type: string

flavourId:

type: string

autoScalable:

type: boolean

PeeParameter:

type: object

properties:

siteIdentification:

type: string

siteDescription:

type: string

siteLatitude:

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

siteLongitude:

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

siteAltitude:

type: number

format: float

equipmentType:

type: string

environmentType:

type: string

powerInterface:

type: string

TransportProtocol:

anyOf:

- type: string

enum:

- TCP

- type: string

SupportedPerfMetricGroup:

type: object

properties:

performanceMetrics:

type: array

items:

type: string

granularityPeriods:

type: array

items:

type: integer

minimum: 1

reportingMethods:

type: array

items:

type: string

enum:

- FILE\_BASED\_LOC\_SET\_BY\_PRODUCER

- FILE\_BASED\_LOC\_SET\_BY\_CONSUMER

- STREAM\_BASED

reportingPeriods:

type: array

items:

type: integer

minimum: 1

ReportingCtrl:

oneOf:

- type: object

properties:

fileReportingPeriod:

type: integer

- type: object

properties:

fileReportingPeriod:

type: integer

notificationRecipientAddress:

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

- type: object

properties:

fileReportingPeriod:

type: integer

fileLocation:

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

- type: object

properties:

streamTarget:

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

Scope:

oneOf:

- type: object

properties:

scopeType:

type: string

enum:

- BASE\_ONLY

- BASE\_ALL

- BASE\_NTH\_LEVEL

- BASE\_SUBTREE

scopeLevel:

type: integer

- type: object

properties:

dataNodeSelector:

type: string

ProcessMonitor:

description: >-

This data type is the "ProcessMonitor" data type without specialisations.

type: object

properties:

jobId:

type: string

status:

type: string

enum:

- NOT\_STARTED

- RUNNING

- FINSHED

- FAILED

- PARTIALLY\_FAILED

- CANCELLING

- CANCELLED

progressPercentage:

type: integer

minimum: 0

maximum: 100

progressStateInfo:

type: string

resultStateInfo:

type: string

startTime:

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

endTime:

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

timer:

type: integer

AreaScope:

oneOf:

- type: array

items:

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

- type: array

items:

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

- type: array

items:

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

- type: array

items:

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

- type: array

items:

$ref: '#/components/schemas/NpnId-Type'

Tai:

type: object

properties:

mcc:

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

mnc:

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

tac:

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

Tac:

type: string

pattern: '(^[A-Fa-f0-9]{4}$)|(^[A-Fa-f0-9]{6}$)'

EutraCellId:

type: string

pattern: '^[A-Fa-f0-9]{7}$'

NrCellId:

type: string

pattern: '^[A-Fa-f0-9]{9}$'

IpAddr:

oneOf:

- $ref: 'TS28623\_ComDefs.yaml#/components/schemas/Ipv4Addr'

- $ref: 'TS28623\_ComDefs.yaml#/components/schemas/Ipv6Addr'

SchedulingTime:

oneOf:

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

- type: object

properties:

timeIntervals:

type: array

items:

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

- type: object

properties:

timeIntervals:

type: array

items:

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

daysOfWeek:

type: array

items:

type: string

enum:

- MONDAY

- TUESDAY

- WEDNESDAY

- THURSDAY

- FRIDAY

- SATURDAY

- SUNDAY

- type: object

properties:

timeIntervals:

type: array

items:

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

daysOfMonth:

type: array

items:

type: integer

minimum: 0

maximum: 31

NpnId-Type:

type: object

description: This describes the PLMN id, CAG ID list or the NID of the SNPN within the PLMN.

properties:

plmnId:

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

cAGIdList:

type: array

items:

type: string

nIDList:

type: array

items:

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

#-------- Definition of abstract IOC Top -----------------------------------------

Top-Attr:

# This definition will be deprecated, when all occurances of Top-Attr

# are replaced by Top.

type: object

properties:

id:

type: string

nullable: true

objectClass:

type: string

objectInstance:

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

VsDataContainer:

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

required:

- id

Top:

type: object

properties:

id:

type: string

nullable: true

objectClass:

type: string

objectInstance:

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

VsDataContainer:

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

required:

- id

#-------- Definition of IOCs with new name-containments defined in other TS ------

SubNetwork-Attr:

type: object

properties:

dnPrefix:

type: string

userLabel:

type: string

userDefinedNetworkType:

type: string

setOfMcc:

type: array

items:

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

priorityLabel:

type: integer

supportedPerfMetricGroups:

type: array

items:

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

supportedTraceMetrics:

type: array

items:

type: string

ManagedElement-Attr:

type: object

properties:

dnPrefix:

type: string

managedElementTypeList:

type: array

items:

type: string

userLabel:

type: string

locationName:

type: string

managedBy:

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

vendorName:

type: string

userDefinedState:

type: string

swVersion:

type: string

priorityLabel:

type: integer

supportedPerfMetricGroups:

type: array

items:

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

supportedTraceMetrics:

type: array

items:

type: string

SubNetwork-ncO:

type: object

properties:

ManagementNode:

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

MnsAgent:

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

MeContext:

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

PerfMetricJob:

$ref: 'TS28623\_PmControlNrm.yaml#/components/schemas/PerfMetricJob-Multiple'

ThresholdMonitor:

$ref: 'TS28623\_ThresholdMonitorNrm.yaml#/components/schemas/ThresholdMonitor-Multiple'

TraceJob:

$ref: 'TS28623\_TraceControlNrm.yaml#/components/schemas/TraceJob-Multiple'

ManagementDataCollection:

$ref: 'TS28623\_ManagementDataCollectionNrm.yaml#/components/schemas/ManagementDataCollection-Multiple'

NtfSubscriptionControl:

$ref: 'TS28623\_SubscriptionControlNrm.yaml#/components/schemas/NtfSubscriptionControl-Multiple'

AlarmList:

$ref: 'TS28111\_FaultNrm.yaml#/components/schemas/AlarmList-Single'

FileDownloadJob:

$ref: 'TS28623\_FileManagementNrm.yaml#/components/schemas/FileDownloadJob-Multiple'

Files:

$ref: 'TS28623\_FileManagementNrm.yaml#/components/schemas/Files-Multiple'

MnsRegistry:

$ref: 'TS28623\_MnSRegistryNrm.yaml#/components/schemas/MnsRegistry-Single'

Scheduler:

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

ConditionMonitor:

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

SupportedNotifications:

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

QMCJobs:

$ref: 'TS28623\_QoEMeasurementCollectionNrm.yaml#/components/schemas/QMCJob-Multiple'

ManagedElement-ncO:

type: object

properties:

MnsAgent:

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

PerfMetricJob:

$ref: 'TS28623\_PmControlNrm.yaml#/components/schemas/PerfMetricJob-Multiple'

ThresholdMonitor:

$ref: 'TS28623\_ThresholdMonitorNrm.yaml#/components/schemas/ThresholdMonitor-Multiple'

TraceJob:

$ref: 'TS28623\_TraceControlNrm.yaml#/components/schemas/TraceJob-Multiple'

NtfSubscriptionControl:

$ref: 'TS28623\_SubscriptionControlNrm.yaml#/components/schemas/NtfSubscriptionControl-Multiple'

AlarmList:

$ref: 'TS28111\_FaultNrm.yaml#/components/schemas/AlarmList-Single'

FileDownloadJob:

$ref: 'TS28623\_FileManagementNrm.yaml#/components/schemas/FileDownloadJob-Multiple'

Files:

$ref: 'TS28623\_FileManagementNrm.yaml#/components/schemas/Files-Multiple'

Scheduler:

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

ConditionMonitor:

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

SupportedNotifications:

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

QMCJobs:

$ref: 'TS28623\_QoEMeasurementCollectionNrm.yaml#/components/schemas/QMCJob-Multiple'

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

ManagedFunction-Attr:

type: object

properties:

userLabel:

type: string

vnfParametersList:

type: array

items:

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

peeParametersList:

type: array

items:

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

priorityLabel:

type: integer

supportedPerfMetricGroups:

type: array

items:

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

supportedTraceMetrics:

type: array

items:

type: string

EP\_RP-Attr:

type: object

properties:

userLabel:

type: string

farEndEntity:

type: string

supportedPerfMetricGroups:

type: array

items:

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

ManagedFunction-ncO:

type: object

properties:

PerfMetricJob:

$ref: 'TS28623\_PmControlNrm.yaml#/components/schemas/PerfMetricJob-Multiple'

ThresholdMonitor:

$ref: 'TS28623\_ThresholdMonitorNrm.yaml#/components/schemas/ThresholdMonitor-Multiple'

TraceJob:

$ref: 'TS28623\_TraceControlNrm.yaml#/components/schemas/TraceJob-Multiple'

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

VsDataContainer-Single:

type: object

properties:

id:

type: string

attributes:

type: object

properties:

vsDataType:

type: string

vsDataFormatVersion:

type: string

vsData:

nullable: true

VsDataContainer:

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

ManagementNode-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

userLabel:

type: string

managedElements:

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

vendorName:

type: string

userDefinedState:

type: string

locationName:

type: string

swVersion:

type: string

MnsAgent:

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

MnsAgent-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

systemDN:

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

MeContext-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

dnPrefix:

type: string

Scheduler-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

schedulingTimes:

type: array

items:

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

minItems: 1

schedulerStatus:

type: boolean

ConditionMonitor-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

condition:

type: string

conditionStatus:

type: boolean

SupportedNotifications-Single:

allOf:

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

- type: object

properties:

attributes:

type: object

properties:

notificationTypes:

type: array

items:

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

notificationProtocols:

type: array

items:

type: string

enum:

- HTTP

- HTTP\_VES\_ENCAPS

minItems: 1

SubNetwork-Single:

allOf:

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

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

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

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

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

- $ref: 'TS28104\_MdaNrm.yaml#/components/schemas/SubNetwork-ncO-MdaNrm'

- $ref: 'TS28105\_AiMlNrm.yaml#/components/schemas/SubNetwork-ncO-AiMlNrm'

- $ref: 'TS28312\_IntentNrm.yaml#/components/schemas/SubNetwork-ncO-IntentNrm'

- $ref: 'TS28317\_RanScNrm.yaml#/components/schemas/SubNetwork-ncO-RanScNrm'

- $ref: 'TS28536\_CoslaNrm.yaml#/components/schemas/SubNetwork-ncO-CoslaNrm'

- $ref: 'TS28538\_EdgeNrm.yaml#/components/schemas/SubNetwork-ncO-EdgeNrm'

- $ref: 'TS28541\_SliceNrm.yaml#/components/schemas/SubNetwork-ncO-SliceNrm'

- $ref: 'TS28541\_NrNrm.yaml#/components/schemas/SubNetwork-ncO-NrNrm'

- $ref: 'TS28541\_5GcNrm.yaml#/components/schemas/SubNetwork-ncO-5GcNrm'

- $ref: 'TS28318\_DsoNrm.yaml#/components/schemas/SubNetwork-ncO-DsoNrm'

ManagedElement-Single:

allOf:

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

- $ref: '#/components/schemas/ManagedElement-Attr'

- $ref: '#/components/schemas/ManagedElement-ncO'

- $ref: 'TS28104\_MdaNrm.yaml#/components/schemas/ManagedElement-ncO-MdaNrm'

- $ref: 'TS28105\_AiMlNrm.yaml#/components/schemas/ManagedElement-ncO-AiMlNrm'

- $ref: 'TS28536\_CoslaNrm.yaml#/components/schemas/ManagedElement-ncO-CoslaNrm'

- $ref: 'TS28541\_NrNrm.yaml#/components/schemas/ManagedElement-ncO-NrNrm'

- $ref: 'TS28541\_5GcNrm.yaml#/components/schemas/ManagedElement-ncO-5GcNrm'

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

VsDataContainer-Multiple:

type: array

items:

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

ManagementNode-Multiple:

type: array

items:

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

MnsAgent-Multiple:

type: array

items:

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

MeContext-Multiple:

type: array

items:

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

Scheduler-Multiple:

type: array

items:

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

ConditionMonitor-Multiple:

type: array

items:

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

SubNetwork-Multiple:

type: array

items:

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

ManagedElement-Multiple:

type: array

items:

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

#-------- Definitions in TS 28.623 for TS 28.532 ---------------------------------

resources-genericNrm:

oneOf:

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

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

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

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

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

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

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

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

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

<CODE ENDS>

\*\*\* END OF CHANGE 3 \*\*\*

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