3GPP TSG-SA5 Meeting #143-eS5-223335

e-meeting, 9 - 17 May 2022

Source: asiaInfo, Huawei

Title: add Service Support Expectation in clause 7.2.2 stage3

Document for: Approval

Agenda Item: 6.6.3

# 1 Decision/action requested

*The group is asked to discuss and approval.*

# 2 References

[1] 3GPP draft TS 28.312: “Management and orchestration; Intent driven management services for mobile networks v1.1.0”.

# 3 Rationale

This contribution proposes to add Service Support Expectation in clause 7.2.2 stage3, because other scenario specific expectation is TBD.

# 4 Detailed proposal

It proposes to make the following changes to TS 28.312[1].

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

# 7 Stage 3 definition for Intent Driven Management

### 7.2.2 OpenAPI document "TS28312\_intentNrm.yaml"

openapi: 3.0.1

info:

title: Intent NRM

description: OAS 3.0.1 specification of the Intent NRM

version: 17.0.0

paths: {}

components:

schemas:

Intent-Single:

allOf:

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

- type: object

properties:

userLabel:

type: string

intentExpectations:

type: array

items:

$ref: "#/components/schemas/IntentExpectation"

intentContexts:

type: array

items:

$ref: "#/components/schemas/IntentContext"

Status:

$ref: "#/components/schemas/IntentFulfilStatus"

IntentExpectation:

type: object

properties:

expectationId:

type: string

expectationObjects:

type: array

items:

$ref: "#/components/schemas/ExpectationObject"

expectationTargets:

type: array

items:

$ref: "#/components/schemas/ExpectationTarget"

expectationContexts:

type: array

items:

$ref: "#/components/schemas/ExpectationContext"

ExpectationObject:

type: object

properties:

objectType:

type: string

enum:

- RAN\_SubNetwrok #value for Radio Network Expectation--#

- Service\_Support #value for Service Support Expectation--#

- TBD #-This will be added based on defined scenario specfic intent expectation-#

objectInstance:

$ref: "TS28623\_comDefs.yaml#/components/schemas/Dn"

objectContexts:

type: array

items:

$ref: "#/components/schemas/ObjectContext"

ExpectationTarget:

oneOf:

#--ExpectationTargets defind for Radio Network Expectation (ObjectType is RAN\_SubNetwork)- #

- $ref: "#/components/schemas/WeakRSRPRatioTarget"

- $ref: "#/components/schemas/LowSINRRatioTarget"

- $ref: "#/components/schemas/AveULRANUEThptTarget"

- $ref: "#/components/schemas/AveDLRANUEThptTarget"

- $ref: "#/components/schemas/LowULRANUEThptRatioTarget"

- $ref: "#/components/schemas/LowDLRANUEThptRatioTarget"

#--ExpectationTargets defind for Radio Network Expectation (ObjectType is RAN\_SubNetwork)- #

#--ExpectationTargets defind for Service Support Expectation (ObjectType is ServiceSupport)- #

- $ref: "#/components/schemas/ DLThptPerUETarget"

- $ref: "#/components/schemas/ ULThptPerUETarget"

- $ref: "#/components/schemas/ DLLatencyTarget"

- $ref: "#/components/schemas/ ULLatencyTarget"

- $ref: "#/components/schemas/MaxNumberofUEsTarget"

- $ref: "#/components/schemas/ActivityFactorTarget"

- $ref: "#/components/schemas/UESpeedTarget"

#--ExpectationTargets defind for Service Support Expectation (ObjectType is Service\_Support)- # #--ExpectationTargets defind for other Scenario specific Expectation-----TBD---------------#

#--ExpectationTargets defind for other Scenario specific Expectation-----TBD---------------#

ObjectContext:

oneOf:

#--ObjectContext defind for Radio Network Expectation (ObjectType is RAN\_SubNetwork)-------#

- $ref: "#/components/schemas/CoverageAreaPolygonContext"

- $ref: "#/components/schemas/CoverageTACContext"

- $ref: "#/components/schemas/PLMNContext"

- $ref: "#/components/schemas/NRFqBandContext"

- $ref: "#/components/schemas/RATContext"

#--ObjectContext defind for Radio Network Expectation (ObjectType is RAN\_SubNetwork)-------#

#--ObjectContext defind for Service Support Expectation (ObjectType is Service\_Support)-------#

- $ref: "#/components/schemas/EdgeIdenfiticationIdContext"

- $ref: "#/components/schemas/EdgeIdenfiticationLocContext"

- $ref: "#/components/schemas/CoverageAreaTAContext"

#--ObjectContext defind for Service Support Expectation (ObjectType is ServiceSupport)-------#

#--ObjectContext defind for other Scenario specific Expectation -----------TBD------------#

#--ObjectContext defind for other Scenario specific Expectation -----------TBD------------#

ExpectationContext:

type: object

properties:

contextAttribute:

type: string

contextCondition:

$ref: "#/components/schemas/Condition"

contextValueRange:

type: array

items:

type: number

oneOf:

#--ExpectationContext defind for Service Support Expectation (ObjectType is Service\_Support)- #

- $ref: "#/components/schemas/ServiceStartTimeContext"

- $ref: "#/components/schemas/ServiceEndTimeContext"

- $ref: "#/components/schemas/UEMobilityLevelContext"

- $ref: "#/components/schemas/ResourceSharingLevelContext"

#--ExpectationContext defind for Service Support Expectation (ObjectType is Service\_Support)- #

IntentContext:

type: object

properties:

contextAttribute:

type: string

contextCondition:

$ref: "#/components/schemas/Condition"

contextValueRange:

type: array

items:

type: number

Condition:

type: string

enum:

- Is\_equal\_to

- Is\_less\_than

- Is\_greater\_than

- Is\_within\_the\_range IntentFulfilStatus:

type: string

enum:

- FULFILLED

- NOT\_FULFILLED

#-------Definition of the concrete ExpectationTarget dataType----------#

WeakRSRPRatioTarget:

type: object

properties:

targetName:

type: string

enum:

- WeakRSRPRatio

targetCondition:

type: string

enum:

- Is\_less\_than

targetValueRange:

type: integer

minimum: 0

maximum: 100

targetContexts:

$ref: "#/components/schemas/WeakRSRPContext"

WeakRSRPContext:

type: object

properties:

contextAttribute:

type: string

enum:

- WeakRSRPThreshold

contextCondition:

type: string

enum:

- Is\_less\_than

contextValueRange:

type: number

LowSINRRatioTarget:

type: object

properties:

targetName:

type: string

enum:

- LowSINRRatio

targetCondition:

type: string

enum:

- Is\_less\_than

targetValueRange:

type: integer

minimum: 0

maximum: 100

targetContexts:

$ref: "#/components/schemas/LowSINRContext"

LowSINRContext:

type: object

properties:

contextAttribute:

type: string

enum:

- LowSINRThreshold

contextCondition:

type: string

enum:

- Is\_less\_than

contextValueRange:

type: integer

AveULRANUEThptTarget:

type: object

properties:

targetName:

type: string

enum:

- AveULRANUEThpt

targetCondition:

type: string

enum:

- Is\_greater\_than

targetValueRange:

type: integer

AveDLRANUEThptTarget:

type: object

properties:

targetName:

type: string

enum:

- AveDLRANUEThpt

targetCondition:

type: string

enum:

- Is\_greater\_than

targetValueRange:

type: integer

LowULRANUEThptRatioTarget:

type: object

properties:

targetName:

type: string

enum:

- LowULRANUEThptRatio

targetCondition:

type: string

enum:

- Is\_less\_than

targetValueRange:

type: integer

minimum: 0

maximum: 100

targetContexts:

$ref: "#/components/schemas/LowULRANUEThptContext"

LowULRANUEThptContext:

type: object

properties:

contextAttribute:

type: string

enum:

- LowULRANUEThptThreshold

contextCondition:

type: string

enum:

- Is\_less\_than

contextValueRange:

type: number

LowDLRANUEThptRatioTarget:

type: object

properties:

targetName:

type: string

enum:

- LowDLRANUEThptRatio

targetCondition:

type: string

enum:

- Is\_less\_than

targetValueRange:

type: integer

minimum: 0

maximum: 100

targetContexts:

$ref: "#/components/schemas/LowDLRANUEThptContext"

LowDLRANUEThptContext:

type: object

properties:

contextAttribute:

type: string

enum:

- LowDLRANUEThptThreshold

contextCondition:

type: string

enum:

- Is\_less\_than

contextValueRange:

type: number

DLThptPerUETarget:

type: object

properties:

targetName:

type: string

enum:

- DLThptPerUE

targetCondition:

type: string

enum:

- Is\_greater\_than

targetValueRange:

$ref: "sliceNrm.yaml#/components/schemas/XLThpt”

ULThptPerUETarget:

type: object

properties:

targetName:

type: string

enum:

- UlThptPerUE

targetCondition:

type: string

enum:

- Is\_greater\_than

targetValueRange:

$ref: "sliceNrm.yaml#/components/schemas/XLThpt”

DLLatencyTarget:

type: object

properties:

targetName:

type: string

enum:

- DLLatency

targetCondition:

type: string

enum:

- Is\_less\_than

targetValueRange:

type: integer

ULLatencyTarget:

type: object

properties:

targetName:

type: string

enum:

- ULLatency

targetCondition:

type: string

enum:

- Is\_less\_than

targetValueRange:

type: integer

MaxNumberofUEsTarget:

type:object

properties:

targetAttribute:

type: string

enum:

- MaxNumberofUEs

targetCondition:

type: string

enum:

- Is\_less \_than

targetValueRange:

type: integer

ActivityFactorTarget:

type:object

properties:

targetAttribute:

type: string

enum:

- ActivityFactor

targetCondition:

type: string

enum:

- Is\_equal \_than

targetValueRange:

type: integer

UESpeedTarget:

type:object

properties:

targetAttribute:

type: string

enum:

- UESpeed

targetCondition:

type: string

enum:

- Is\_less \_than

targetValueRange:

type: integer

#-------Definition of the concrete ExpectationTarget dataType----------#

#-------Definition of the concrete ObjectTarget dataType----------------#

CoverageAreaPolygonContext:

type: object

properties:

contextAttribute:

type: string

enum:

- CoverageAreaPolygon

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

$ref: "#/components/schemas/CoverageArea"

CoverageArea:

type: string

CoverageTACContext:

type: object

properties:

contextAttribute:

type: string

enum:

- CoverageAreaTac

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

$ref: "nrNrm.yaml#/components/schemas/NrTac"

PLMNContext:

type: object

properties:

contextAttribute:

type: string

enum:

- PLMN

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

$ref: "nrNrm.yaml#/components/schemas/PlmnId"

NRFqBandContext:

type: object

properties:

contextAttribute:

type: string

enum:

- NRFqBand

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

type: string

RATContext:

type: object

properties:

contextAttribute:

type: string

enum:

- RAT

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

type: string

enum:

- UTRAN

- EUTRAN

- NR

EdgeIdenfiticationIdContext:

type:object

properties:

contextAttribute:

type:string

enum:

- EdgeIdentificationId

contextCondition:

type: string

enum:

- Is\_equal\_than

contextValueRange:

type: array

items:

$ref: "#/components/schemas/EdnIdentifier"

EdnIdentifier:

type: string

EdgeIdenfiticationLocContext:

type:object

properties:

contextAttribute:

type:string

enum:

- EdgeIdentificationTarget

contextCondition:

type: string

enum:

- Is\_equal\_than

contextValueRange:

type: array

items:

type: string

CoverageAreaTAContext:

type:object

properties:

contextAttribute:

type:string

enum:

- coverageAreaTA

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

$ref: ”#/components/schemas/CoverageAreaTAList”

CoverageAreaTAList:

type: integer

#-------Definition of the concrete ObjectTarget dataType----------------#

#-------Definition of the concrete ExpectionContext dataType----------------#

ServiceStartTimeContext

type:object

properties:

contextAttribute:

type:string

enum:

- ServiceStartTime

contextCondition:

type: string

enum:

- Is\_equal\_than

contextValueRange:

type: array

items:

type: string

ServiceEndTimeContext

type:object

properties:

contextAttribute:

type:string

enum:

- ServiceEndTime

contextCondition:

type: string

enum:

- Is\_equal\_than

contextValueRange:

type: array

items:

type: string

UEMobilityLevelContext:

type:object

properties:

contextAttribute:

type:string

enum:

- UEMobilityLevel

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

$ref: ”sliceNrm.yaml#/components/schemas/MobilityLevel”

ResourceSharingLevelContext:

type:object

properties:

contextAttribute:

type:string

enum:

- ResourceSharingLevel

contextCondition:

type: string

enum:

- Is\_within\_the\_range

contextValueRange:

type: array

items:

$ref: ”sliceNrm.yaml#/components/schemas/SharingLevel”

#-------Definition of the concrete ExpectionContext dataType----------------#

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

Intent-Multiple:

type: array

items:

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

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

#----- Definitions in TS 28.312 for TS 28.532 --------------------------#

resources-intentNrm:

oneOf:

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

#----- Definitions in TS 28.312 for TS 28.532 --------------------------#

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