**3GPP TSG-CT WG3 Meeting #113e C3-210250**

**E-Meeting, 25th – 29th January 2021 (Revision of C3-20xxxx)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.520** | **CR** | **0252** | **rev** | **-** | **Current version:** | **16.6.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Correction to S-NSSAI applicability | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA | | | | |  | ***Date:*** | | | 2021-01-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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:*** | | S-NSSAI subscription is not applicable to all the features, "UeMobility" and "NetworkPerformance" features are not applicable to S-NSSAI aligned both in Stage 2 and this specification, meanwhile type EventSubscription and type EventFilter define "ServiceExperience" and "NsiLoad" are applicable to "nsiIdInfos" attribute instead of "snssais" attribute.  Hence the related S-NSSAI subscription applicability need to be corrected in the related tables in this specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Correct the related NOTE specify the "snssais" attribute is not applicable to features "ServiceExperience", "NsiLoad", "UeMobility" and "NetworkPerformance". | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Not correct scope of S-NSSAI features applicability, misaliagnment with stage 2 and in this specification | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1.6.2.3, 5.2.6.2.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | This CR does not impact the OpenAPI files. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

\*\*\* 1st Change \*\*\*

##### 5.1.6.2.3 Type EventSubscription

Table 5.1.6.2.3-1: Definition of type EventSubscription

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| anySlice | AnySlice | C | 0..1 | Default is "FALSE". (NOTE 1) |  |
| appIds | array(ApplicationId) | C | 1..N | Identification(s) of application to which the subscription applies.  The absence of appIds means subscription to all applications. (NOTE 8) | ServiceExperience  UeCommunication  AbnormalBehaviour |
| dnns | array(Dnn) | C | 1..N | Identification(s) of DNN to which the subscription applies. Each DNN is a full DNN with both the Network Identifier and Operator Identifier, or a DNN with the Network Identifier only.  The absence of dnns means subscription to all DNNs (NOTE 8) | ServiceExperience, AbnormalBehaviour  UeCommunication |
| dnais | array(Dnai) | C | 1..N | Identification(s) of user plane access to DN(s) which the subscription applies. | ServiceExperience |
| event | NwdafEvent | M | 1 | Event that is subscribed. |  |
| extraReportReq | EventReportingRequirement | O | 0..1 | The extra event reporting requirement information. |  |
| loadLevelThreshold | integer | C | 0..1 | Indicates that the NWDAF shall report the corresponding network slice load level to the NF service consumer where the load level of the network slice instance identified by snssais is reached. (NOTE 4)  May be included when subscribed event is "SLICE\_LOAD\_LEVEL". |  |
| matchingDir | MatchingDirection | O | 0..1 | A matching direction may be provided alongside a threshold. If omitted, the default value is CROSSED. | NfLoad, QoSSustainability, UserDataCongestion, NetworkPerformance |
| nfLoadLvlThds | array(ThresholdLevel) | C | 1..N | Shall be supplied in order to start reporting when an average load level is reached.(NOTE 4) | NfLoad |
| networkArea | NetworkAreaInfo | C | 0..1 | Identification of network area to which the subscription applies.  The absence of networkArea means subscription to all network areas. (NOTE 7), (NOTE 8) | ServiceExperience UeMobility  UeCommunication  QoSSustainability  AbnormalBehaviour  UserDataCongestion  NetworkPerformance |
| nfInstanceIds | array(NfInstanceId) | O | 1..N | Identification(s) of NF instances. | NfLoad |
| nfSetIds | array(NfSetId) | O | 1..N | Identification(s) of NF instance sets. | NfLoad |
| nfTypes | array(NFType) | O | 1..N | Identification(s) of NF types. | NfLoad |
| notificationMethod | NotificationMethod | O | 0..1 | Indicate the notification method. (NOTE 2) |  |
| nsiIdInfos | array(NsiIdInfo) | O | 1..N | Each element identifies the S-NSSAI and the optionally associated network slice instance(s).  May be included when subscribed event is "NSI\_LOAD\_LEVEL" or  "SERVICE\_EXPERIENCE".  (NOTE 1) | ServiceExperience  NsiLoad |
| nsiLevelThrds | array(Uinteger) | O | 1..N | Identifies the load threshold for each S-NSSAI or S-NSSAI and the optionally associated network slice instance identified by the "nsiIds" attribute within the "nsiIdInfos" attribute.  (NOTE 4) | NsiLoad |
| qosRequ | QosRequirement | C | 0..1 | Indicates the QoS requirements. It shall be included when subscribed event is "QOS\_SUSTAINABILITY". | QoSSustainability |
| qosFlowRetThds | array(RetainabilityThreshold) | C | 1..N | Represents the QoS flow retainability thresholds.Shall be supplied for the 5QI ("5qi" in "qosRequ") or resource type ("resType" in "qosRequ") of GBR resource type. (NOTE 4) | QoSSustainability |
| ranUeThrouThds | array(BitRate) | C | 1..N | Represents the RAN UE throughput thresholds.  Shall be supplied for the 5QI ("5qi" in "qosRequ") or resource type ("resType" in "qosRequ") of non-GBR resource type.(NOTE 4) | QoSSustainability |
| repetitionPeriod | DurationSec | C | 0..1 | Shall be supplied for notification Method "PERIODIC" by the "notificationMethod" attribute. |  |
| snssais | array(Snssai) | C | 1..N | Identification(s) of network slice to which the subscription applies. (NOTE 1), (NOTE 8) |  |
| tgtUe | TargetUeInformation | O | 0..1 | Identifies target UE information | (NOTE 3) |
| congThresholds | array(ThresholdLevel) | C | 1..N | Represents the congestion threshold levels. (NOTE 4) | UserDataCongestion |
| nwPerfRequs | array(NetworkPerfRequirement) | C | 1..N | Represents the network performance requirements. This attribute shall be included when subscribed eventis "NETWORK\_PERFORMANCE". | NetworkPerformance |
| bwRequs | array(BwRequirement) | O | 1..N | Represents the bandwidth requirement for each application. | ServiceExperience |
| excepRequs | array(Exception) | C | 1..N | Represents a list of Exception Ids with associated thresholds. May only be present when subscribed event is "ABNORMAL\_BEHAVIOUR".  (NOTE 5, NOTE 6) | AbnormalBehaviour |
| exptAnaType | ExpectedAnalyticsType | C | 0..1 | Represents expected UE analytics type.  It shall not be present if the "excepRequs" attribute is provided. (NOTE 6) | AbnormalBehaviour |
| exptUeBehav | ExpectedUeBehaviourData | O | 0..1 | Represents expected UE behaviour. | AbnormalBehaviour |
| NOTE 1: The "snssais" attribute is not applicable to features "ServiceExperience", "NsiLoad", "UeMobility" and "NetworkPerformance". When subscribed event is "SLICE\_LOAD\_LEVEL", the identifications of network slices, either information about slice(s) identified by "snssais", or "anySlice" set to "TRUE" shall be included. When subscribed event is "QOS\_SUSTAINABILITY", "NF\_LOAD", "UE\_COMM", "ABNORMAL\_BEHAVIOUR" or "USER\_DATA\_CONGESTION", the identifications of network slices identified by "snssais" is optional. When subscribed event is "NSI\_LOAD\_LEVEL" or "SERVICE\_EXPERIENCE", either the "nsiIdInfos" attribute or "anySlice" set to "TRUE" shall be included.  NOTE 2: When notificationMethod is not supplied, the default value is "THRESHOLD".  NOTE 3: Applicability is further described in the corresponding data type.  NOTE 4: This property shall be provided if the "notifMethod" in "evtReq" is set to "ON\_EVENT\_DETECTION" or "notificationMethod" in "eventSubscriptions" is set to "THRESHOLD" or omitted.  NOTE 5: Only "excepId" and "excepLevel" within the Exception data type apply to the "excepRequs" attribute within EventSubscription data type.  NOTE 6: Either "excepRequs" or "exptAnaType" shall be provided if subscribed event is "ABNORMAL\_BEHAVIOUR".  NOTE 7: For "NETWORK\_PERFORMANCE", "SERVICE\_EXPERIENCE" or "USER\_DATA\_CONGESTION" event, this attribute shall be provided if the event applied for all UEs (i.e. "anyUe" attribute set to true within the "tgtUe" attribute). For "QOS\_SUSTAINABILITY", this attribute shall be provided.  NOTE 8: For "ABNORMAL\_BEHAVIOUR" event with "anyUe" attribute in "tgtUe" attribute sets to true,  - at least one of the "networkArea" and the "snssais" attribute should be included, if the expected analytics type via the"exptAnaType" attribute or the list of Exception Ids via the "excepRequs" attribute is mobility related;  - at least one of the "networkArea", "appIds", "dnns" and "snssais" attribute should be included, if the expected analytics type via the"exptAnaType" attribute or the list of Exception Ids via the "excepRequs" attribute is communication related;  - the expected analytics type via the"exptAnaType" attribute or the list of Exception Ids via "excepRequs" attribute shall not be requested for both mobility and communication related analytics at the same time. | | | | | |

\*\*\* 2nd Change \*\*\*

##### 5.2.6.2.3 Type EventFilter

Table 5.2.6.2.3-1: Definition of type EventFilter

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| anySlice | AnySlice | C | 0..1 | Default is "FALSE". (NOTE 1) |  |
| appIds | array(ApplicationId) | C | 1..N | Identification(s) of application. The absence of appIds means applicable to all applications. (NOTE 4) | ServiceExperience  UeCommunication AbnormalBehaviour |
| dnns | array(Dnn) | C | 1..N | Identification(s) of DNN. Each DNN is a full DNN with both the Network Identifier and Operator Identifier, or a DNN with the Network Identifier only. The absence of dnns means applicable to all DNNs. (NOTE 4) | ServiceExperience  UeCommunication  AbnormalBehaviour |
| dnais | array(Dnai) | C | 1..N | Identification(s) of user plane accesses to DN(s) which the subscription applies. It may be included when event-id is "SERVICE\_EXPERIENCE". | ServiceExperience |
| snssais | array(Snssai) | C | 1..N | Identification(s) of network slice to which the subscription belongs. (NOTE 1), (NOTE 4) |  |
| nfInstanceIds | array(NfInstanceId) | O | 1..N | Identification(s) of NF instances. | NfLoad |
| nfSetIds | array(NfSetId) | O | 1..N | Identification(s) of NF instance sets. | NfLoad |
| nfTypes | array(NFType) | O | 1..N | Identification(s) of NF types. | NfLoad |
| networkArea | NetworkAreaInfo | C | 0..1 | This IE represents the network area where the NF service consumer wants to know the analytics result. (NOTE 2), (NOTE 4) | UeMobility  UeCommunication  NetworkPerformance  QoSSustainability  ServiceExperience  UserDataCongestion  AbnormalBehaviour |
| nsiIdInfos | array(NsiIdInfo) | O | 1..N | Each element identifies the S-NSSAI and the optionally associated network slice instance(s).  May be included when subscribed event is "NSI\_LOAD\_LEVEL" or  "SERVICE\_EXPERIENCE".  (NOTE 1) | ServiceExperience  NsiLoad |
| nwPerfTypes | array(NetworkPerfType) | C | 1..N | Represents the network performance types. This attribute shall be included when event-id is "NETWORK\_PERFORMANCE". | NetworkPerformance |
| qosRequ | QoSRequirement | C | 0..1 | Represents the QoS requirements. This attribute shall be included when event-id is "QOS\_SUSTAINABILITY". | QoSSustainability |
| bwRequs | array(BwRequirement) | O | 1..N | Represents the media/application bandwidth requirement for each application.  It may only be present if "appIds" attribute is provided. | ServiceExperience |
| excepIds | array(ExceptionId) | C | 1..N | Represents a list of Exception Ids.  (NOTE 3) | AbnormalBehaviour |
| exptAnaType | ExpectedAnalyticsType | C | 0..1 | Represents expected UE analytics type.  (NOTE 3) | AbnormalBehaviour |
| exptUeBehav | ExpectedUeBehaviourData | O | 0..1 | Represents expected UE behaviour. | AbnormalBehaviour |
| NOTE 1: The "snssais" attribute is not applicable to features "ServiceExperience", "NsiLoad", "UeMobility" and "NetworkPerformance". When event-id in the request is "LOAD\_LEVEL\_INFORMATION", the identifications of network slices, either information about slice(s) identified by the "snssais" attribute, or "anySlice" set to "TRUE", shall be included. When subscribed event is "NSI\_LOAD\_LEVEL" or "SERVICE\_EXPERIENCE", either the "nsiIdInfos" attribute or anySlice set to "TRUE" shall be included. When subscribed event is "QOS\_SUSTAINABILITY", "NF\_LOAD", "UE\_COMM", "ABNORMAL\_BEHAVIOUR" or "USER\_DATA\_CONGESTION", the identifications of network slices identified by the "snssais" attribute is optional.  NOTE 2: For "NETWORK\_PERFORMANCE", "SERVICE\_EXPERIENCE" or "USER\_DATA\_CONGESTION" event, this attribute shall be provided if the event applied for all UEs (i.e. "anyUe" attribute set to true). For "QOS\_SUSTAINABILITY", this attribute shall be provided.  NOTE 3: Either "excepIds" or "exptAnaType" shall be provided if event-id in the request is "ABNORMAL\_BEHAVIOUR".  NOTE 4: For "ABNORMAL\_BEHAVIOUR" event with "anyUe" attribute in "tgt-ue" attribute sets to true,  - at least one of the "networkArea" and the "snssais" attribute should be included, if the expected analytics type via the"exptAnaType" attribute or the list of Exception Ids via the "excepIds" attribute is mobility related;  - at least one of the "networkArea", "appIds", "dnns" and "snssais" attribute should be included, if the expected analytics type via the"exptAnaType" attribute or the list of Exception Ids via the "excepIds" attribute is communication related;  - the expected analytics type via the"exptAnaType" attribute or the list of Exception Ids via "excepIds" attribute shall not be requested for both mobility and communication related analytics at the same time. | | | | | |

\*\*\* End of Changes \*\*\*