**3GPP TSG-CT WG3 Meeting #135C3-243370**

**Hyderabad, IN, 27 - 31 May, 2024 (revision of C3-243abc)**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.591** | **CR** | **0192** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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:*** | Support of providing the relative proximity data collected from the AF | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Nokia, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eNA\_Ph3 | | | | |  | ***Date:*** | | | 2024-05-10 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | According to Table 6.19.2-2 in TS 23.288, the AF may provide the relative proximity data to the consumer. This data needs to be defined in stage 3. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Define new feature and update NefEventNotification data type to support providing the relative proximity data of the relative proximity data. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Stage 2 requirement is not implemented. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1.6.2.4, 5.6.3.3, 5.1.8 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | The CR does not impact the OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 5.1.6.2.4 Type: NefEventNotification

Table 5.1.6.2.4-1: Definition of type NefEventNotification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description | Applicability |
| event | NefEvent | M | 1 | Represents the reported application related event. |  |
| timeStamp | DateTime | M | 1 | Time at which the event is observed. |  |
| svcExprcInfos | array(ServiceExperienceInfo) | C | 1..N | Contains the service experience information.  Shall be present if the "event" attribute sets to "SVC\_EXPERIENCE" | ServiceExperience |
| ueMobilityInfos | array(UeMobilityInfo) | C | 1..N | Contains the UE mobility information.  Shall be present if the "event" attribute sets to "UE\_MOBILITY" | UeMobility |
| ueCommInfos | array(UeCommunicationInfo) | C | 1..N | Contains the application communication information.  Shall be present if the "event" attribute sets to "UE\_COMM" | UeCommunication |
| excepInfos | array(ExceptionInfo) | C | 1..N | Each element represents the exception information for a service flow.  Shall be present if the "event" attribute sets to "EXCEPTIONS". | Exceptions |
| congestionInfos | array(UserDataCongestionCollection) | C | 1..N | Each element represents the user data congestion information for an AF application.  Shall be present if the "event" attribute sets to "USER\_DATA\_CONGESTION". | UserDataCongestion |
| perfDataInfos | array(PerformanceDataInfo) | C | 1..N | Each element represents the performance data information collected for an AF application. | PerformanceData |
| dispersionInfos | array(DispersionCollection) | C | 1..N | Each element represents the UE dispersion information collected for an AF.  Shall be present if the "event" attribute sets to "DISPERSION". | Dispersion |
| collBhvrInfs | array(CollectiveBehaviourInfo) | C | 1..N | Each element represents the collective behaviour information related to a set of UEs, applications. Shall be present if the "event" attribute sets to "COLLECTIVE\_BEHAVIOUR".  (NOTE) | CollectiveBehaviour |
| msQoeMetrInfos | array(MsQoeMetricsCollection) | C | 1..N | Each element represents the Media Streaming QoE metrics information collected for an UE application via the Data Collection AF.  Shall be present if the "event" attribute sets to "MS\_QOE\_METRICS".  This attribute is deprecated; the attribute "msQoeMetrics" should be used instead. | MSQoeMetrics |
| msQoeMetrics | array(QoEMetricsCollection) | C | 1..N | Each element represents the Media Streaming QoE metrics event notification.  Shall be present if the "event" attribute sets to "MS\_QOE\_METRICS".  This attribute deprecates "msQoeMetrInfos" attribute. | MSEventExposure |
| msConsumpInfos | array(MsConsumptionCollection) | C | 1..N | Each element represents the Media Streaming Consumption reports information collected for an UE application via the Data Collection AF.  Shall be present if the "event" attribute sets to "MS\_CONSUMPTION".  This attribute is deprecated; the attribute "msConsumpReports" should be used instead. | MSConsumption |
| msConsumpReports | array(ConsumptionReportingUnitsCollection) | C | 1..N | Each element represents the Media Streaming Consumption event notification.  Shall be present if the "event" attribute sets to "MS\_CONSUMPTION".  This attribute deprecates "msConsumpInfos" attribute. | MSEventExposure |
| msNetAssInvInfos | array(MsNetAssInvocationCollection) | C | 1..N | Each element represents the Media Streaming Network Assistance invocation information collected for an UE application via the Data Collection AF.  Shall be present if the "event" attribute sets to "MS\_NET\_ASSIST\_INVOCATION".  This attribute is deprecated; the attribute "msNetAssistInvocation" should be used instead. | MSNetAssInvocation |
| msNetAssistInvocation | array(NetworkAssistanceInvocationsCollection) | C | 1..N | Each element represents the Media Streaming Network Assistance invocation event notification.  Shall be present if the "event" attribute sets to "NET\_ASSIST\_INVOCATION".  This attribute deprecates "msNetAssInvInfos" attribute. | MSEventExposure |
| msDynPlyInvInfos | array(MsDynPolicyInvocationCollection) | C | 1..N | Each element represents the Media Streaming Dynamic Policy Invocation information collected for an UE application via the Data Collection AF.  Shall be present if the "event" attribute sets to "MS\_DYN\_POLICY\_INVOCATION".  This attribute is deprecated; the attribute "msDynPlyInvocation" should be used instead. | MSDynPolicyInvocation |
| msDynPlyInvocation | array(DynamicPolicyInvocationsCollection) | C | 1..N | Each element represents the Media Streaming Dynamic Policy invocation event notification.  Shall be present if the "event" attribute sets to "MS\_DYN\_POLICY\_INVOCATION".  This attribute deprecates "msDynPlyInvInfos" attribute. | MSEventExposure |
| msAccActInfos | array(MSAccessActivityCollection) | C | 1..N | Each element represents the Media Streaming access activity collected for an UE application via the Data Collection AF.  Shall be present if the "event" attribute sets to "MS\_ACCESS\_ACTIVITY".  This attribute is deprecated; the attribute "msAccess" should be used instead. | MSAccessActivity |
| msAccess | array(MediaStreamingAccessesCollection) | C | 1..N | Each element represents the Media Streaming access event notification.  Shall be present if the "event" attribute sets to "MS\_ACCESS\_ACTIVITY".  This attribute deprecates "msAccActInfos" attribute. | MSEventExposure |
| gnssAssistDataInfo | GNSSAssistDataInfo | C | 0..1 | Represents the GNSS Assistance data information.  This attribute shall be present only if the "event" attribute is set to "GNSS\_ASSISTANCE\_DATA". | GNSSAssistData |
| datVolTransTimeInfos | array(DatVolTransTimeCollection) | C | 1..N | Each element represents the data volume transfer time information related to an UE. The "gpsi" attribute within the DatVolTransTimeCollection data type is not applicable.  This attribute shall be present if the "event" attribute sets to "DATA\_VOLUME\_TRANSFER\_TIME". | DataVolTransferTime |
| NOTE: The "collBhvrInfs" attribute may include the "collisionDist", "absDirs", "relDirs", "ueTrajectory" and "confidence" attributes only if the "RelativeProximity" feature is supported. | | | | | |

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

#### 5.6.3.3 Enumeration: AfEvent

The enumeration AfEvent represents the application events that can be subscribed/notified. It shall comply with the provisions defined in table 5.6.3.3-1.

Table 5.6.3.3-1: Enumeration AfEvent

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability |
| SVC\_EXPERIENCE | Indicates that the event subscribed/notified is service experience information for an application. | ServiceExperience |
| UE\_MOBILITY | Indicates that the event subscribed/notified is UE mobility information. | UeMobility |
| UE\_COMM | Indicates that the event subscribed/notified is UE communication information. | UeCommunication |
| EXCEPTIONS | Indicates that the event subscribed/notified is exceptions information. | Exceptions |
| USER\_DATA\_CONGESTION | Indicates that the event subscribed/notified is user data congestion analytics related information. | UserDataCongestion |
| PERF\_DATA | Indicates that the event subscribed/notified is performance data information. | PerformanceData |
| COLLECTIVE\_BEHAVIOUR | Indicates that the event subscribed/notified is collective behaviour information.  If the "RelativeProximity" feature is supported, this event is also applicable for relative proximity data collection. | CollectiveBehaviour  RelativeProximity |
| DISPERSION | Indicates that the event subscribed/notified is dispersion information. | Dispersion |
| MS\_QOE\_METRICS | Indicates that the event subscribed/notified is Media Streaming QoE metrics. | MSQoeMetrics |
| MS\_CONSUMPTION | Indicates that the event subscribed/notified is Media Streaming Consumption reports. | MSConsumption |
| MS\_NET\_ASSIST\_INVOCATION | Indicates that the event subscribed/notified is Media Streaming Network Assistance invocation. | MSNetAssInvocation |
| MS\_DYN\_POLICY\_INVOCATION | Indicates that the event subscribed/notified is Media Streaming Dynamic Policy invocation. | MSDynPolicyInvocation |
| MS\_ACCESS\_ACTIVITY | Indicates that the event subscribed/notified is Media Streaming access activity. | MSAccessActivity |
| GNSS\_ASSISTANCE\_DATA | Indicates that the subscribed/notified event is GNSS Assistance Data Collection. | GNSSAssistData |
| DATA\_VOLUME\_TRANSFER\_TIME | Indicates that the event subscribed is data volume transfer time information. | DataVolTransferTime |

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

### 5.1.8 Feature negotiation

The optional features in table 5.1.8-1 are defined for the Nnef\_EventExposure API. They shall be negotiated using the extensibility mechanism defined in clause 6.6 of 3GPP TS 29.500 [4].

Table 5.1.8-1: Supported Features

|  |  |  |
| --- | --- | --- |
| Feature number | Feature Name | Description |
| 1 | ServiceExperience | This feature indicates support for the "SVC\_EXPERIENCE" event. |
| 2 | UeMobility | This feature indicates support for the "UE\_MOBILITY" event. |
| 3 | UeCommunication | This feature indicates support for the "UE\_COMM" event. |
| 4 | Exceptions | This feature indicates support for the "EXCEPTIONS" event. |
| 5 | ES3XX | Extended Support for 3xx redirections. This feature indicates the support of redirection for any service operation, according to Stateless NF procedures as specified in clauses 6.5.3.2 and 6.5.3.3 of 3GPP TS 29.500 [4] and according to HTTP redirection principles for indirect communication, as specified in clause 6.10.9 of 3GPP TS 29.500 [4]. |
| 6 | EneNA | This feature indicates support for the enhancements of network data analytics requirements. |
| 7 | UserDataCongestion | This feature indicates support for the event related to User Data Congestion Analytics related information. |
| 8 | PerformanceData | This feature indicates support for the event related to performance data information. |
| 9 | Dispersion | This feature indicates support for the event related to Dispersion Analytics related information. |
| 10 | CollectiveBehaviour | This feature indicates support of collective behaviour information associated with the UEs and its applications. |
| 11 | MSQoeMetrics | This feature indicates support for the event related to Media Streaming QoE metrics for UE Application collected via the Data Collection AF. |
| 12 | MSConsumption | This feature indicates support for the event related to Media Streaming Consumption reports for UE Application collected via the Data Collection AF. |
| 13 | MSNetAssInvocation | This feature indicates support for the event related to Media Streaming Network Assistance invocation for UE Application collected via the Data Collection AF. |
| 14 | MSDynPolicyInvocation | This feature indicates support for the event related to Media Streaming Dynamic Policy invocation for UE Application collected via the Data Collection AF. |
| 15 | MSAccessActivity | This feature indicates support for the event related to Media Streaming access activity for UE Application collected via the Data Collection AF. |
| 16 | DataAccProfileId | This feature indicates support for Data Access Profile Identifier. |
| 17 | GNSSAssistData | This feature indicates the support of the GNSS Assistance Data Collection functionality as part of the enhancements to the 5G LCS functionality.  The following functionalities are supported:  - GNSS Assistance Data Collection. |
| 18 | UeMobility\_Ext | This feature indicates support for further extensions to the event related to UE mobility supporting AIML including support of list of application service area collection. Supporting this feature also requires the support of feature UeMobility. |
| 19 | PerformanceDataExt\_AIML | This feature indicates the support for the extensions of the analytics related to DN performance supporting AIML, including support of Max/Min UL/DL data collection on packet delay, pack loss and throughput. Supporting this feature also requires the support of feature PerformanceData. |
| 20 | ServiceExperienceExt\_eNA | This feature indicates support for the extensions to service experience supporting eNA, including Service Experience Contribution Weights. Supporting this feature also requires the support of feature ServiceExperience. |
| 21 | EnPerformanceData | This feature indicates support for the enhancements of performance data. It requires the support of the PerformanceData feature. |
| 22 | EnhDataMgmt | Indicates the support of enhanced data management mechanisms. Supporting this feature also requires the support of feature EneNA. |
| 23 | ExtEventFilters | Indicates supported of extended AF event filters. |
| 24 | DataVolTransferTime | This feature indicates support for the event related to data volume transfer time. |
| 25 | MSEventExposure | This feature indicates the support for Media Streaming event exposure.  This feature is recommended to be implemented to avoid the usage of the deprecated attributes. |
| 26 | PerEventRepReq | This feature indicates the support of the per-event reporting requirements management functionality.  The following functionalities are supported:  - Provisioning/updating the reporting requirements on a per subscribed event granularity. |
| 27 | RelativeProximity | This feature indicates the support of providing confidence information of the relative proximity data. |

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