**3GPP TSG- Meeting #**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **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 |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | User Plane event subscriptions targetting any UE | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | , UPEAS | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | |  |
|  | *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:*** | | S2-2410793 specified that an SMF receiving Nsmf\_EventExposure Subscription request to subscribe to UPF data for Any UE, it does not consider PDU sessions for which it is acting as I-SMF. This was done to avoid duplicate subscriptions/notifications. The current definition of the “anyUeInd” attribute is not aligned with this and needs to be updated. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Updated the definition of the “anyUeInd” attribute to specify that PDU Sessions for which the SMF is acting as I-SMF are not considered. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Not fulfilled stage 2 requirements and performance issues via double subscriptions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.6.2.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 23.502 CR 5108 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR does not impact any OpenAPI file. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* First Change \*\*\*

5.6.2.2 Type NsmfEventExposure

**Table 5.6.2.2-1: Definition of type NsmfEventExposure**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Attribute name** | | **Data type** | | | **P** | **Cardinality** | | | **Description** | | | **Applicability** | |
| supi | | Supi | | | C | 0..1 | | | Subscription Permanent Identifier (NOTE 1) | | |  | |
| gpsi | | Gpsi | | | C | 0..1 | | | Generic Public Subscription Identifier (NOTE 1)  This IE is not applicable to "SMCC\_EXP" event. | | |  | |
| anyUeInd | | boolean | | | C | 0..1 | | | This IE shall be present if the event subscription is applicable to any UE. It indicates whether the event subscription is applicable to any UE:  - "true": the event subscription is applicable to any UE;  - "false"(default): the event subscription is not applicable to any UE.  (NOTE 1) (NOTE 4)(NOTE 7) | | |  | |
| groupId | | GroupId | | | C | 0..1 | | | Identifies a group of UEs. (NOTE 1) | | |  | |
| pduSeId | | PduSessionId | | | C | 0..1 | | | PDU session ID (NOTE 1) | | |  | |
| dnn | | Dnn | | O | 0..1 | | | Data Network Name. | | |  | | |
| snssai | | Snssai | | O | 0..1 | | | A single Network Slice Selection Assistance Information. (NOTE 4) | | |  | | |
| dnai | | Dnai | | O | 0..1 | | | Data network access identifier. | | | UPEAS | | |
| ssId | | string | | O | 0..1 | | | SSID that the PDU session is related to. | | | UPEAS | | |
| bssId | | string | | O | 0..1 | | | BSSID that the PDU session is related to. | | | UPEAS | | |
| upfId | | string | | O | 0..1 | | | Identifies the UPF. | | | UPEAS | | |
| nfId | | NfInstanceId | | C | 0..1 | | | Indicates the instance identity of the NF creating the subscription. It shall be provided if the "eventSubs" attribute contains an entry with the "event" set to the value "UPF\_EVENT". | | | UPEAS | | |
| subId | | SubId | | | C | 0..1 | | | Subscription ID. This parameter shall be supplied by the SMF in HTTP responses that include an object of NsmfEventExposure type. | | |  | |
| notifId | | string | | | M | 1 | | | Notification Correlation ID provided by the NF service consumer. (NOTE 2) | | |  | |
| notifUri | | Uri | | | M | 1 | | | Identifies the recipient of Notifications sent by the SMF. | | |  | |
| altNotifIpv4Addrs | | array(Ipv4Addr) | | | O | 1..N | | | Alternate or backup IPv4 Address(es) where to send Notifications. | | |  | |
| altNotifIpv6Addrs | | array(Ipv6Addr) | | | O | 1..N | | | Alternate or backup IPv6 Address(es) where to send Notifications. | | |  | |
| altNotifFqdns | | array(Fqdn) | | | O | 1..N | | | Alternate or backup FQDN(s) where to send Notifications. | | |  | |
| eventSubs | | array(EventSubscription) | | | M | 1..N | | | Subscribed events. (NOTE 4) | | |  | |
| eventNotifs | | array(EventNotification) | | | O | 1..N | | | Represents the SMF Events to be reported in the Nsmf\_EvenExposure\_Subscribe response.  May be present when the "ERIR" feature is supported and the "ImmeRep" attribute set to true is included in the subscription request. | | | ERIR | |
| ImmeRep | | boolean | | | O | 0..1 | | | It is included and set to true if the immediate reporting of the current status of the subscribed event, if available is required.  (NOTE 6) | | |  | |
| notifMethod | | NotificationMethod | | | O | 0..1 | | | If "notifMethod" is not supplied, the default value "ON\_EVENT\_DETECTION" applies. (NOTE 4) (NOTE 5) | | |  | |
| maxReportNbr | | Uinteger | | | O | 0..1 | | | If omitted, there is no limit. (NOTE 4) (NOTE 5) | | |  | |
| expiry | | DateTime | | | C | 0..1 | | | This attribute indicates the expiry time of the subscription, after which the SMF shall not send any event notifications and the subscription becomes invalid. It may be included in an event subscription request and may be included in an event subscription response based on operator policies. If an expiry time was included in the request, then the expiry time returned in the response should be less than or equal to that value. If the expiry time is not included in the response, the NF service consumer shall not associate an expiry time for the subscription. (NOTE 4) | | |  | |
| repPeriod | | DurationSec | | | C | 0..1 | | | This attribute indicates the reporting period. Shall be provided if the notification method is set to "PERIODIC". | | |  | |
| guami | | Guami | | | C | 0..1 | | | The Globally Unique AMF Identifier (GUAMI) shall be provided by an AMF as NF service consumer. | | |  | |
| serviceName | | ServiceName | | | O | 0..1 | | | If the NF service consumer is an AMF, it should provide the name of a service produced by the AMF that makes use of the notification about subscribed events. | | |  | |
| supportedFeatures | | SupportedFeatures | | | C | 0..1 | | | List of Supported features used as described in clause 5.8.  This parameter shall be supplied by NF service consumer and SMF in the POST request that request the creation of an SMF Notification Subscriptions resource and the related reply, respectively. | | |  | |
| sampRatio | | SamplingRatio | | | O | 0..1 | | | Indicates the ratio of the random subset to target UEs, event reports only relates to the subset. | | |  | |
| partitionCriteria | | array(PartitioningCriteria) | | | O | 1..N | | | Defines criteria for partitioning the UEs in order to apply the sampling ratio for each partition. It may only be included in event subscription requests when the "sampRatio" attribute is also provided. (NOTE 3) | | | EneNA | |
| grpRepTime | | DurationSec | | | O | 0..1 | | | Indicates the time for which the SMF aggregates the event reports detected by the UEs in a group and report them together to the NF service consumer. | | |  | |
| notifFlag | | NotificationFlag | | | O | 0..1 | | | Indicates the notification flag, which is used to mute/unmute notifications and to retrieve events stored during a period of muted notifications.  Default: "ACTIVATE" | | | EneNA | |
| notifFlagInstruct | | MutingExceptionInstructions | | | O | 0..1 | | | Contains instructions to be executed upon the occurrence of an event muting exception (e.g. full buffer). It may only be provided if the "notifFlag" is provided and set to "DEACTIVATE". | | | EnhDataMgmt | |
| mutingSetting | | MutingNotificationsSettings | | | O | 0..1 | | | Contains settings related to the muting of notifications. It may only be provided in the NF service producer response and only if the muting instructions provided in the "notifFlag" and/or the "notifFlagInstruct" attributes are accepted. | | | EnhDataMgmt | |
| defQosSupp | | boolean | | O | | 0..1 | | | Indicates whether the NF service consumer requests to receive QoS Flow performance information for the QoS Flow associated with the default QoS rule if there are no measurements available for the provided Application Identifier included within the "appIds" attribute.  True: NF service consumer requests to receive QoS Flow performance information for the QoS Flow associated with the default QoS rule.  False (default): NF service consumer does not request to receive QoS Flow performance information for the QoS Flow associated with the default QoS rule. | | | UPEAS | | |
| qosMonPending | | boolean | | O | | 0..1 | | | Indicates that the reporting will be activated when the measurements are enabled by a PCC rule. It shall be always set to true when present.  It may only be provided in the response.  Default value is false. | | | UPEAS | | |
| NOTE 1: If the event subscription applies for a specific PDU session, the PDU session of a single UE (pduSeId, and gpsi/supi) shall be included; otherwise one and only one of a single UE (gpsi/supi), a group of UEs (groupId), or anyUeInd set to true shall be included.  NOTE 2: If the UDM as NF service consumer subscribes to event (e.g. downlink data delivery status, PDU Session Establishment, PDU Session Release) on behalf of AF/NEF, "notifId" shall be set the same as "referenceId" received from the AF/NEF as defined in clause 6.4.6.2.4 of 3GPP TS 29.503 [14].  NOTE 3: For a given type of partitioning criteria, the UE shall belong to only one single partition as long as it is served by the NF service producer.  NOTE 4: If EneNA feature is supported, when the "snssai" attribute is presented together with "anyUeInd" attribute and the "eventSubs" attribute contains "PDU\_SES\_EST" and "PDU\_SES\_REL", then only the "ON\_EVENT\_DETECTION" value is applicable in the "notifMethod" attribute together with "maxReportNbr" attribute and/or "expiry"attribute presence.  NOTE 5: The attribute "maxReportNbr" is not applicable when the value of "notifMethod" is set to "ONE\_TIME".  NOTE 6: The attribute does not follow the related naming convention (i.e. "lowerCamel") defined in clause 5.1.4 of 3GPP TS 29.501 [7]. This attribute is however kept as currently defined in this specification for backward compatibility considerations.  NOTE 7: When the "anyUeInd" attribute is set to true for User Plane events, the SMF does not consider PDU sessions for which it is acting as I-SMF. | | | | | | | | | | | | | |

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