**3GPP TSG-CT WG4 Meeting #110-eC4-223506**

**E-Meeting, 12th – 20th May 2022**  *Revision of C4-223039, 3501*

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.571** | **CR** | **0353** | **rev** | **2** | **Current version:** | **17.5.0** |  |
|  | | | | | | | | |
| *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:*** |  | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBS | | | | |  | ***Date:*** | | | 2022-04-29 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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:*** | | Currently, the 'MbsSession' data type contains 'ingressTunAddr' attribute of type 'TunnelAddress', which means only one ingress address can be present. Therefore, CreateRspData sent with Nmbsmf\_MBSSession\_Create Response message may contain only one ingress address.  In a scenario when MB-UPF covers small service area (part of TAIs only), the MB-SMF needs to find another MB-UPF(s) to cover the whole service area. In such scenarios, multiple ingress addresses are allocated for an MBS session and multiple response messages need to be sent, which is not an optimal operation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The ' ingressTunAddr' attribute of the ' MbsSession' data type is corrected to become an array of 'TunnelAddress' type. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | If multiple ingress addresses are allocated for an MBS session, multiple response messages need to be sent, which is not an optimal operation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.9.4.6, A.2. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 offers backward compatible changes to OpenAPI. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev1: The 'ingressTunAddr' attribute definition is corrected in Table 5.9.4.6-1 and in A.2.  Rev2: Use case is clarified on the cover sheet and respective note is added to the change in clause 5.9.4.6. | | | | | | | | |

**\*\*\*\*\*\*\***

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

#### 5.9.4.6 Type: MbsSession

Table 5.9.4.6-1: Definition of type MbsSession

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| mbsSessionId | MbsSessionId | C | 0..1 | MBS session identifier (TMGI and/or SSM, and NID for an SNPN)  (NOTE) |
| tmgiAllocReq | boolean | C | 0..1 | TMGI allocation request indication.  This IE shall be present if the mbsSessionId IE is absent. This IE may also be present if the mbsSessionId IE is present and it does not contain a TMGI.  When present, it shall be set as follows:  - true: a TMGI is requested to be allocated  - false (default): no TMGI is requested to be allocated  Write-Only: true  (NOTE) |
| tmgi | Tmgi | C | 0..1 | This IE shall be present in an MBS session creation response if the tmgiAllocReq IE was present and set to "true" in the MBS session creation request.  When present, it shall indicate the TMGI allocated to the MBS session.  Read-Only: true |
| expirationTime | DateTime | C | 0..1 | This IE shall be present in an MBS session creation response if the tmgiAllocReq IE was present and set to "true" in the in the MBS session creation request.  When present, it shall indicate the expiration time for the TMGI allocated to the MBS session.  Read-Only: true |
| serviceType | MbsServiceType | M | 1 | Service Type (either multicast or broadcast service)  Write-Only: true |
| locationDependent | boolean | C | 0..1 | Location dependent MBS session indication.  This IE shall be present and set to true for a Location dependent MBS session. It may be present otherwise.  When present, it shall be set as follows:  - true: this is a Location dependent MBS session  - false (default): this is not a Location dependent MBS session |
| areaSessionId | AreaSessionId | C | 0..1 | This IE shall be present in a successful response to a request to create a Location dependent MBS session.  When present, it shall contain the Area Session ID assigned by the MB-SMF to the location dependent MBS session in the MBS Service Area.  Read-Only: true |
| ingressTunAddrReq | boolean | O | 0..1 | Ingress transport address request indication (for unicast transport over N6mb/Nmb9).  When present, it shall be set as follows:  - true: an ingress transport address is requested  - false (default): no request  Write-Only: true |
| ingressTunAddr | array(TunnelAddress) | C | 1..N | Ingress tunnel address (UDP/IP tunnel).  This IE shall be present in an MBS session creation response if the ingressTunAddrReq IE was present and set to "true" in the in the MBS session creation request.  When present, it shall indicate the allocated ingress tunnel address(es).  Read-Only: true  (NOTE x) |
| ssm | Ssm | C | 0..1 | Source specific IP multicast address  This IE shall be present if multicast transport applies over N6mb/Nmb9 and the MBS session is not identified by the SSM, e.g. for a location-dependent MBS session with multicast transport over N6mb/Nmb9.  Write-Only: true |
| mbsServiceArea | MbsServiceArea | O | 0..1 | MBS Service Area  Write-Only: true |
| extMbsServiceArea | ExternalMbsServiceArea | O | 0..1 | This IE may be present only over the N33 and Nmb10 interfaces; it shall not be present over other interfaces.  When present, it shall indicate the MBS Service Area information which shall either be geographical area information or civic address information.  Write-Only: true |
| dnn | Dnn | O | 0..1 | DNN  Write-Only: true |
| snssai | Snssai | O | 0..1 | S-NSSAI  Write-Only: true |
| activationTime | DateTime | O | 0..1 | MBS session activation time |
| terminationTime | DateTime | O | 0..1 | MBS session termination time |
| qosInformation | FFS | O | 0..1 | QoS information |
| mbsSessionSubsc | MbsSessionSubscription | O | 0..1 | Subscription to one or more MBS session events |
| activityStatus | MbsSessionActivityStatus | O | 0..1 | Session activity status (active or inactive)  This IE may be provided if the serviceType indicates a multicast MBS session. |
| anyUeInd | Boolean | O | 0..1 | Indication that any UE may join the MBS session.  This IE may be provided if the serviceType indicates a multicast MBS session.  When present, it shall be set as follows:  - true: any UE may join the MBS session  - false (default): the MBS session is not open to any UE  Write-Only: true |
| NOTE 1: At least one of the mbsSessionId IE and tmgiAllocReq IE shall be present. Both may be present if the mbsSessionId IE does not contain a TMGI (i.e. if it only contains a SSM).  NOTE x: In a scenario when MB-UPF covers small service area (part of TAIs only), the MB-SMF needs to find another MB-UPF(s) to cover the whole service area. In such scenarios, multiple ingress addresses of all MB-UPFs need to be allocated for an MBS session. These multiple ingress tunnel addresses are used to receive the same copy of the MBS session data from the AF/MBSTF. | | | | |

Editor's Note: the definition of the qosInformationattribute is FFS.

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

## A.2 Data related to Common Data Types

openapi: 3.0.0

info:

version: '1.3.0-alpha.5'

title: 'Common Data Types'

description: |

Common Data Types for Service Based Interfaces.

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externalDocs:

description: 3GPP TS 29.571 Common Data Types for Service Based Interfaces, version 17.5.0

url: 'https://www.3gpp.org/ftp/Specs/archive/29\_series/29.571/'

## Skipped for clarity ##

MbsSession:

description: Individual MBS session

type: object

properties:

mbsSessionId:

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

tmgiAllocReq:

type: boolean

default: false

writeOnly: true

tmgi:

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

readOnly: true

expirationTime:

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

readOnly: true

serviceType:

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

writeOnly: true

locationDependent:

type: boolean

default: false

areaSessionId:

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

readOnly: true

ingressTunAddrReq:

type: boolean

default: false

writeOnly: true

ingressTunAddr:

type: array

items:

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

minitems: 1

readOnly: true

ssm:

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

writeOnly: true

mbsServiceArea:

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

writeOnly: true

extMbsServiceArea:

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

writeOnly: true

dnn:

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

writeOnly: true

snssai:

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

writeOnly: true

activationTime:

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

terminationTime:

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

mbsSessionSubsc:

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

activityStatus:

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

anyUeInd:

type: boolean

default: false

writeOnly: true

required:

- serviceType

anyOf:

- required: [ mbsSessionId ]

- required: [ tmgiAllocReq ]

## Skipped for clarity ##

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