3GPP TSG SA WG5 Meeting 137-e S5-213160

electronic meeting, online, 10 - 19 May 2021

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.541** | **CR** | **0491** | **rev** | **-** | **Current version:** | **17.2.1** |  |
|  | | | | | | | | |
| *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 | **X** | Core Network | **X** |

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| ***Title:*** | Improve the readability of EP\_Transport | | | | | | | | | |
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| ***Source to WG:*** | S5 | | | | | | | | | |
| ***Source to TSG:*** | Huawei | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | adNRM | | | | |  | ***Date:*** | | | 2021-04-20 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
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| ***Reason for change:*** | | Transport EP NRM fragment relationship is descrirbed in Figure 6.2.1-2, and  EP\_Transport IOC is introduced in Clause 6.3.17 to describe the logical transport interface or endpoin, However, it is not clear how to utilize such IOC when deploy a network slice, for example, which parameters need to be configured to 3gpp management system, and which parameters need to be sent to transport management system from 3gpp management system. | | | | | | | | |
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| ***Summary of change:*** | | Improve the readability of EP\_Transport IOC and epTransportRef attribute in NetworkSlice IOC | | | | | | | | |
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| ***Consequences if not approved:*** | | The utilization of EP\_transport IOC is not clear. | | | | | | | | |
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| ***Clauses affected:*** | | 6.3.2.1, 6.3.17.1, 6.3.18.1,6.4.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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's revision history:*** | |  | | | | | | | | |

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| **1st Change** |

### 6.3.2 NetworkSliceSubnet

#### 6.3.2.1 Definition

This IOC represents the properties of a network slice subnet in a 5G network. For more information about the network slice subnet instance, see 3GPP TS 28.530 [70].

The attribute epTransportRef is used to specify a list of EP\_Transport instance as transport resources to be aggregated to a NetworkSliceSubnet instance. The MnS consumer determines the EP\_Transport instance(s) to support EP\_Application instances as part of the NetworkSliceSubnet instance and request the MnS producer to configure the attribute epTransportRef of the NetworkSliceSubnet.

The EP\_Transport is name contained by SubNetwork, and an EP\_Transport instance can be a new instance created for the EP\_Application instances as part of NetworkSliceSubnet instance or an existing instance reused for EP\_Application instance.

#### 6.3.2.2 Attributes

The NetworkSliceSubnet IOC includes attributes inherited from SubNetwork IOC (defined in TS 28.622[30]) and the following attributes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| operationalState | M | T | F | F | T |
| administrativeState | M | T | T | F | T |
| nsInfo | CM | T | F | F | T |
| sliceProfileList | M | T | T | F | T |
| **Attribute related to role** |  |  |  |  |  |
| managedFunctionRef | M | T | F | F | T |
| networkSliceSubnetRef | M | T | F | F | T |
| epTransportRef | O | T | T | F | T |

#### 6.3.2.3 Attribute constraints

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| --- | --- |
| Name | Definition |
| nsInfo Support Qualifier | Condition: It shall be supported if the NSS instance is realized in the virtualized environment. Otherwise this attribute shall be absent. |

#### 6.3.2.4 Notifications

The common notifications defined in subclause 6.5 are valid for this IOC, without exceptions or additions.

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| **2nd Change** |

### 6.3.17 EP\_Transport

#### 6.3.17.1 Definition

This IOC represents the logical transport interface or endpoint which including transport level information, e.g. transport address, reachability information and QoS profiles, etc.

MnS consumer can request MnS producer to create an EP\_transport instance for one or multiple EP\_Application instances of one or multiple NetworkSliceSubnet(s).

The attribute “epApplicationRef” is used to specify a list of EP\_N3 and EP\_NgU instances aggregated to the EP\_transport.

MnS consumer can obtain all the information of the EP\_Transport associated to a NetworkSliceSubnet from MnS producer and send to corresponding TN Management System.

#### 6.3.17.2 Attributes

The EP\_Transport IOC includes attributes inherited from Top IOC (defined in TS 28.622[30]) and the following attributes:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute name | Support Qualifier | isReadable | isWritable | isInvariant | isNotifyable |
| ipAddress | M | T | F | F | T |
| logicInterfaceId | M | T | T | F | T |
| nextHopInfo | O | T | F | F | T |
| qosProfile | O | T | T | F | T |
| **Attribute related to role** |  |  |  |  |  |
| epApplicationRef | M | T | T | F | T |

#### 6.3.17.3 Attribute constraints

None.

#### 6.3.17.4 Notifications

The common notifications defined in subclause 6.5 are valid for this IOC, without exceptions or additions.

### 6.3.18 EP\_Application <<ProxyClass>>

#### 6.3.18.1 Definition

This represents <<IOC>>EP\_N3 or <<IOC>>EP\_NgU associated to EP\_Tranport.

#### 6.3.18.2 Attributes

See that defined in <<IOC>>EP\_N3 or <<IOC>>EP\_NgU.

#### 6.3.18.3 Attribute constraints

See that defined in <<IOC>>EP\_N3 or <<IOC>>EP\_NgU.

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#### 6.3.18.4 Notifications

See that defined in <<IOC>>EP\_N3 or <<IOC>>EP\_NgU.

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| **3rd Change** |

### 6.4.1 Attribute properties

| …… |  |  |
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| serviceType | An attribute specifies the standardized network slice type.  allowedValues: eMBB, URLLC, MIoT, V2X. | type: Enum  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: None  allowedValues: N/A  isNullable: True |
| epApplicationRef | This parameter specifies a list of application level EPs (i.e. EP\_N3 or EP\_NgU) associated with the logical transport interface. | type: DN  multiplicity: \*  isOrdered: N/A  isUnique: True  defaultValue: None  isNullable: False |
| epTransportRef | This parameter specifies a list of transport level EPs associated with the application level EP (i.e. EP\_N3 or EP\_NgU) or network slice subnet. | type: DN  multiplicity: \*  isOrdered: N/A  isUnique: True  defaultValue: None  isNullable: True |
| sliceSimultaneousUse | This attribute describes whether a network slice can be simultaneously used by a device together with other network slices and if so, with which other classes of network slices.  allowedValues: “0”, “1”, “2”, “3”, “4”.  “0”: Can be used with any network slice  “1”: Can be used with network slices with same SST value  “2”: Can be used with any network slice with same SD value  “3”: Cannot be used with another network slice  “4”: Cannot be used by a UE in a specific location | type: ENUM  multiplicity: 1  isOrdered: N/A  isUnique: N/A  defaultValue: False  isNullable: False |
| NOTE 1: There is no direct relationship between localAddress/remoteAddress in EP\_RP and ipAddress in EP\_transport. While the localAddress/remoteAddress in EP\_RP could be exchanged as part of signalling between GTP-u tunnel end points, ipAddress in EP\_transport is used for transport routing.  NOTE 2: void | | |

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| **End of Change** |