**3GPP TSG-RAN3 Meeting #107-e *R3-200391***

**E-Meeting, 24 February – 6 March, 2020**

**Title:** (TP for WWC BL CR for TS 38.413) Support for interfacing trusted non-3GPP access networks to the 5GC

**Source:** Huawei, Telecom Italia, BT, Broadcom, CMCC

**Agenda item:** 21.2.2

**Document for:** Other

# Annex – TP

|  |
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| **1st Change** |

# 2 References

[y] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces; Stage 3".

[z] 3GPP TS 29.510: "5G System; Network Function Repository Services; Stage 3".

9.2.5.3 UPLINK NAS TRANSPORT

This message is sent by the NG-RAN node and is used for carrying NAS information over the NG interface.

Direction: NG-RAN node → AMF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| NAS-PDU | M |  | 9.3.3.4 |  | YES | reject |
| User Location Information | M |  | 9.3.1.16 |  | YES | Ignore |
| W-AGF Identity List | O |  | 9.3.1.bb |  | YES | reject |
| TNGF Identity List | O |  | 9.3.1.cc |  | YES | reject |
| TWIF Identity List | O |  | 9.3.1.dd |  | YES | reject |

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| **2nd Change** |

9.3.1.16 User Location Information

This IE is used to provide location information of the UE.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| CHOICE *User Location Information* | M |  |  |  | - |  |
| >*E-UTRA user location information* |  |  |  |  |  |  |
| >>E-UTRA CGI | M |  | 9.3.1.9 |  | - |  |
| >>TAI | M |  | 9.3.3.11 |  | - |  |
| >>Age of Location | O |  | Time Stamp9.3.1.75 | Indicates the UTC time when the location information was generated. | - |  |
| >>PSCell Information | O |  | NG-RAN CGI9.3.1.73 |  | YES | ignore |
| >*NR user location information* |  |  |  |  |  |  |
| >>NR CGI | M |  | 9.3.1.7 |  | - |  |
| >>TAI | M |  | 9.3.3.11 |  | - |  |
| >>Age of Location | O |  | Time Stamp9.3.1.75 | Indicates the UTC time when the location information was generated. | - |  |
| >>PSCell Information | O |  | NG-RAN CGI9.3.1.73 |  | YES | ignore |
| >*N3IWF user location information* |  |  |  |  |  |  |
| >>IP Address | M |  | Transport Layer Address 9.3.2.4 | UE's local IP address used to reach the N3IWF | - |  |
| >>Port Number | O |  | OCTET STRING(SIZE(2)) | UDP or TCP source port number if NAT is detected. | - |  |
| >*TNGF user location information* |  |  |  |  |  |  |
| >>TNAP ID | M |  | OCTET STRING | TNAP Identifier used to identify the TNAP. Details in TS 29.571 [y]. | - |  |
| >>IP Address | M |  | Transport Layer Address 9.3.2.4 | UE's local IP address used to reach the TNGF. | - |  |
| >>Port Number | O |  | OCTET STRING(SIZE(2)) | UDP or TCP source port number if NAT is detected. | - |  |
| *>TWIF user location information* |  |  |  |  |  |  |
| >>TWAP ID | M |  | OCTET STRING | TWAP Identifier used to identify the TWAP. Details in TS 29.571 [y]. | - |  |
| >>IP Address | M |  | Transport Layer Address 9.3.2.4 | Non-5G-Capable over WLAN device's local IP address used to reach the TWIF. | - |  |
| >>Port Number | O |  | OCTET STRING(SIZE(2)) | UDP or TCP source port number if NAT is detected. | - |  |
| >*W-AGF user location information* |  |  |  | Indicates the location information via wireline access as specified in TS 23. 316 [x]. |  |  |
| >>Global Line Identifier | O |  | FFS | Encoded as defined in TS 23.003 [23]. | - |  |
| >>Global Cable Identifier | O |  | FFS | Encoded as defined in TS 23.003 [23]. | - |  |

Editor’s Note: It is FFS on the detailed format and composition of the Global Line Identifier and the Global Cable Identifier.

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| **3rd Change** |

9.3.1.yy Global TNGF ID

This IE is used to globally identify a TNGF.

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| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| PLMN Identity | M |  | 9.3.3.5 |  |
| CHOICE *TNGF ID* | M |  |  |  |
| >*TNGF ID* |  |  |  |  |
| >>TNGF ID | M |  | BIT STRING (SIZE(32, …)) |  |

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| **4th Change** |

9.3.1.aa Global TWIF ID

This IE is used to globally identify a TWIF.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| PLMN Identity | M |  | 9.3.3.5 |  |
| CHOICE *TWIF ID* | M |  |  |  |
| >*TWIF ID* |  |  |  |  |
| >>TWIF ID | M |  | BIT STRING (SIZE(32, …)) |  |

9.3.1.cc TNGF Identity List

This IE indicates a list of TNGF identities.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| IP Address | O |  | Transport Layer Address9.3.2.4 |  |
| FQDN | O |  | OCTET STRING | The details of the IE definition is specified in TS 29.510 [z]. |

9.3.1.dd TWIF Identity List

This IE indicates a list of TWIF identities.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** |
| IP Address | O |  | Transport Layer Address9.3.2.4 |  |
| FQDN | O |  | OCTET STRING | The details of the IE definition is specified in TS 29.510 [z]. |

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| **5th Change** |

### 9.4.4 PDU Definitions

<Unchanged Text Omitted>

 WarningMessageContents,

 WarningSecurityInfo,

 WarningType,

 RIMInformationTransfer,

 RGLevelWirelineAccessCharacteristics,

 W-AGFIdentityList,

 AuthenticatedIndication,

 TNGFIdentityList,

 TWIFIdentityList

<Unchanged Text Omitted>

 id-WarningSecurityInfo,

 id-WarningType,

 id-RIMInformationTransfer,

 id-RGLevelWirelineAccessCharacteristics,

 id-W-AGFIdentityList,

 id-AuthenticatedIndication,

 id-TNGFIdentityList,

 id-TWIFIdentityList

<Unchanged Text Omitted>

UplinkNASTransport-IEs NGAP-PROTOCOL-IES ::= {

 { ID id-AMF-UE-NGAP-ID CRITICALITY reject TYPE AMF-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-RAN-UE-NGAP-ID CRITICALITY reject TYPE RAN-UE-NGAP-ID PRESENCE mandatory }|

 { ID id-NAS-PDU CRITICALITY reject TYPE NAS-PDU PRESENCE mandatory }|

 { ID id-UserLocationInformation CRITICALITY ignore TYPE UserLocationInformation PRESENCE mandatory }|

 { ID id-W-AGFIdentityList CRITICALITY reject TYPE W-AGFIdentityList PRESENCE optional }|

 { ID id-TNGFIdentityList CRITICALITY reject TYPE TNGFIdentityList PRESENCE optional }|

 { ID id-TWIFIdentityList CRITICALITY reject TYPE TWIFIdentityList PRESENCE optional },

 ...

}

<Unchanged Text Omitted>

### 9.4.5 Information Element Definitions

<Unchanged Text Omitted>

 id-UL-NGU-UP-TNLModifyList,

 id-ULForwarding,

 id-ULForwardingUP-TNLInformation,

 id-UserLocationInformationTNGF,

 id-UserLocationInformationTWIF,

 id-UserLocationInformationW-AGF,

 maxnoofAllowedAreas,

<Unchanged Text Omitted>

TimeUEStayedInCellEnhancedGranularity ::= INTEGER (0..40950)

TNAP-ID ::= OCTET STRING

TWAP-ID ::= OCTET STRING

TNGF-ID ::= CHOICE {

 tNGF-ID BIT STRING (SIZE(32, ...)),

 choice-Extensions ProtocolIE-SingleContainer { {TNGF-ID-ExtIEs} }

}

TNGF-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

 ...

}

<Unchanged Text Omitted>

TWIF-ID ::= CHOICE {

 tWIF-ID BIT STRING (SIZE(32, ...)),

 choice-Extensions ProtocolIE-SingleContainer { {TWIF-ID-ExtIEs} }

}

TWIF-ID-ExtIEs NGAP-PROTOCOL-IES ::= {

 ...

}

<Unchanged Text Omitted>

UserLocationInformation-ExtIEs NGAP-PROTOCOL-IES ::= {

 { ID id-UserLocationInformationTNGF CRITICALITY ignore TYPE UserLocationInformationTNGF PRESENCE mandatory}|

 { ID id-UserLocationInformationTWIF CRITICALITY ignore TYPE UserLocationInformationTWIF PRESENCE mandatory}|

 { ID id-UserLocationInformationW-AGF CRITICALITY ignore TYPE UserLocationInformationW-AGF PRESENCE mandatory},

 ...

}

<Unchanged Text Omitted>

UserLocationInformationTNGF ::= SEQUENCE {

 tNAP-ID TNAP-ID,

 iPAddress TransportLayerAddress,

 portNumber PortNumber OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {UserLocationInformationTNGF-ExtIEs} } OPTIONAL,

 ...

}

UserLocationInformationTNGF-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

UserLocationInformationTWIF ::= SEQUENCE {

 tWAP-ID TWAP-ID,

 iPAddress TransportLayerAddress,

 portNumber PortNumber OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {UserLocationInformationTWIF-ExtIEs} } OPTIONAL,

 ...

}

UserLocationInformationTWIF-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

<Unchanged Text Omitted>

TNGFIdentityList ::= SEQUENCE {

 iPAddress TransportLayerAddress OPTIONAL,

 fQDN FQDN OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {TNGFIdentityList-ExtIEs} } OPTIONAL,

 ...

}

TNGFIdentityList-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

TWIFIdentityList ::= SEQUENCE {

 iPAddress TransportLayerAddress OPTIONAL,

 fQDN FQDN OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {TWIFIdentityList-ExtIEs} } OPTIONAL,

 ...

}

TWIFIdentityList-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

 ...

}

<Unchanged Text Omitted>

### 9.4.7 Constant Definitions

<Unchanged Text Omitted>

id-TNGFIdentityList ProtocolIE-ID ::= xxx

id-TWIFIdentityList ProtocolIE-ID ::= yyy

id-UserLocationInformationTWIF ProtocolIE-ID ::= zzz

<Unchanged Text Omitted>

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| --- |
| **Change Ends** |