3GPP TSG RAN WG3 Meeting #129-bis R3-257276

Prague, CZ, 13 - 17 October, 2025

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.413** | **CR** | **1327** | **rev** | **1** | **Current version:** | 19.0.0 |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correction on AIoT | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE Corporation, China Telecom | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | Ambient\_IoT\_Solutions-Core | | | | |  | ***Date:*** | | | 2025-10-16 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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:*** | | **Issue: Explicit indicaition of command type**  In RAN2#130 meeting, RAN2 discussed the timing of AS/NAS interaction when a command is sent to the A-IoT device. RAN2 understands that the device may, for example, receive a write command message from the reader, pass the command message to NAS layer, then send LS R2-2504967 to CT1.  In RAN2 #131 meeting, RAN2 further discussed this issue and made some agreement, e.g., the reader, in response to 0 SDU in the device’s MAC response, may send a follow-up R2D Upper Layer Data Transfer message at a later time to schedule another D2R Upper Layer Data Transfer message from the device.  Based on the above discussion, the reader shall know the command type. In case of “write” of command type, the reader can send more than one D2R Upper Layer Data Transfer message from the device. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add an explicit indicaition of command type. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The reader cannot know which kind of command type. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.3.6.5, 9.4.5, 9.4.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Rev0: R3-256708, only keep the change of Command type. | | | | | | | | |

////////////////////////////////////////////////////////////// Start of change /////////////////////////////////////////////////////////////////////

#### 9.3.6.5 Command Request Transfer

This IE provides the command request related information from the AIOTF to the NG-RAN node.

In indirect communication, this IE is transparent to the AMF.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| A-IoT Correlation Identifier | M |  | 9.3.3.69 |  | YES | reject |
| RAN A-IoT Device NGAP ID | M |  | 9.3.3.74 |  | YES | reject |
| A-IoT NAS PDU | M |  | OCTET STRING |  | YES | reject |
| Command Assistance Information | O |  | 9.3.3.75 |  | YES | reject |
| Command Type | O |  | ENUMERATED (write, read, disable, ...) |  | YES | ignore |

////////////////////////////////////////////////////////////// Next of change /////////////////////////////////////////////////////////////////////

### 9.4.5 Information Element Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Information Element Definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NGAP-IEs {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

id-AdditionalDLForwardingUPTNLInformation,

id-AdditionalULForwardingUPTNLInformation,

id-AdditionalDLQosFlowPerTNLInformation,

id-AdditionalDLUPTNLInformationForHOList,

id-AdditionalNGU-UP-TNLInformation,

id-AdditionalRedundantDL-NGU-UP-TNLInformation,

id-AdditionalRedundantDLQosFlowPerTNLInformation,

id-AdditionalRedundantNGU-UP-TNLInformation,

id-AdditionalRedundantUL-NGU-UP-TNLInformation,

id-AdditionalUL-NGU-UP-TNLInformation,

id-AIOTFIdentifier,

id-AIoT-CorrelationIdentifier,

id-AIoT-DeviceIdentificationRequested,

id-AIoT-RequestedServiceAreaInformation,

id-AIoT-InventoryAssistanceInformation,

id-AIoT-FollowonCommandIndication,

id-RAN-AIOT-Device-NGAP-ID,

id-AIoT-CommandAssistanceInformation,

id-AIoT-NASPDU,

id-AIoT-Commandtype,

id-AlternativeQoSParaSetList,

id-AssistanceInformationQoE-Meas,

id-AdditionalCancelledlocationReportingReferenceIDList,

id-BurstArrivalTimeDownlink,

id-Cause,

id-CNPacketDelayBudgetDL,

id-CNPacketDelayBudgetUL,

id-CNTypeRestrictionsForEquivalent,

id-CNTypeRestrictionsForServing,

<Skip unchanged part>

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

...

}

AIOTSessionReleaseRequestTransfer ::= SEQUENCE {

correlationIdentifier AIoT-CorrelationIdentifier,

cause Cause,

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

...

}

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

...

}

AIoT-Support ::= ENUMERATED {aIoT-only, aIoT-and-NRUu, ...}

AIoT-Commandtype ::= ENUMERATED {read, write, disable, ...}

AllocationAndRetentionPriority ::= SEQUENCE {

priorityLevelARP PriorityLevelARP,

pre-emptionCapability Pre-emptionCapability,

pre-emptionVulnerability Pre-emptionVulnerability,

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

...

}

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

...

}

<Skip unchanged part>

CNTypeRestrictionsForServing ::= ENUMERATED {

epc-forbidden,

...

}

CommandRequestTransfer ::= SEQUENCE {

protocolIEs ProtocolIE-Container { { CommandRequestTransferIEs} },

...

}

CommandRequestTransferIEs NGAP-PROTOCOL-IES ::= {

{ ID id-AIoT-CorrelationIdentifier CRITICALITY reject TYPE AIoT-CorrelationIdentifier PRESENCE mandatory }|

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

{ ID id-AIoT-NASPDU CRITICALITY reject TYPE AIoT-NASPDU PRESENCE mandatory }|

{ ID id-AIoT-CommandAssistanceInformation CRITICALITY reject TYPE AIoT-CommandAssistanceInformation PRESENCE optional }|

{ ID id-AIoT-Commandtype CRITICALITY ignore TYPE AIoT-Commandtype PRESENCE optional },

...

}

CommandResponseTransfer ::= SEQUENCE {

correlationIdentifier AIoT-CorrelationIdentifier,

rAN-AIOT-Device-NGAP-ID RAN-AIOT-Device-NGAP-ID,

aIoT-NASPDU AIoT-NASPDU,

criticalityDiagnostics CriticalityDiagnostics OPTIONAL,

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

...

}

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

...

}

<Skip unchanged part>

### 9.4.7 Constant Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Constant definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

<Skip unchanged part>

id-Indication-of-bitrate-adaptation ProtocolIE-ID ::= 491

id-SCGActivationTime ProtocolIE-ID ::= 492

id-Aerial-UE-FlightInformationReporting ProtocolIE-ID ::= 493

id-Aerial-UE-FlightInformationReportingContol ProtocolIE-ID ::= 494

id-AIOTF-Commandtype ProtocolIE-ID ::= xxx

////////////////////////////////////////////////////////////// End of change /////////////////////////////////////////////////////////////////////