**3GPP TSG-CT WG1 Meeting #131-eC1-21xxxx was C1-214475**

**E-meeting, 19-27 August 2021**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.587** | **CR** | **0208** | **rev** | **1** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network |  | Core Network | **X** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Update on UE 5G ProSe Policy Request based on UE 5G ProSe Capability | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | CATT, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_ProSe | | | | |  | ***Date:*** | | | 2021-07-07 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | In TS 23.304 v0.3.0, it is proposed that UE may indicate UE capacity in 5G ProSe Policy Provisioning Request message and PCF may reply the 5G ProSe Policy/Parameters for the UE based on the received UE capabilities. In other words, UE only needs to request the 5G ProSe Policy/Parameter(s) that is related to UE 5G ProSe capabilities. But in clause 8.3.2, TS 24.587 v17.2.0, the defination of Requested UE policies IE does not reflect all UE 5G ProSe capabilities. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Change the Requested UE policies IE in alignment with the defined multipe UE ProSe capabilities in Stage 2. 2. Specify that UE policy provisioning procedure also be used to manage ProSeP. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | 1. Current description about UE ProSe capabilities in Requested UE policies IE is non-exhaustive. 2. The description of UE policy provisioning procedure is misleading. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.2, 7.2.1.1, 7.2.2.1, 8.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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's revision history:*** | |  | | | | | | | | |

\*\*\*\*\* Change \*\*\*\*\*

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] , 3GPP TS 24.501 [6] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1] and 3GPP TS 24.501 [6].

E-UTRA Evolved Universal Terrestrial Radio Access

FQDN Fully Qualified Domain Name

LSB Least Significant 8 Bits

MSB Most Significant 8 Bits

NR New Radio

NRPEK NR PC5 Encryption Key

NRPIK NR PC5 Integrity Key

V2X Vehicle-to-Everything

V2XP V2X Policy

PQFI PC5 QoS Flow ID

PQI PC5 5QI

ProSeP 5G ProSe Policy

\*\*\*\*\* Change \*\*\*\*\*

#### 7.2.1.1 Message definition

The UE POLICY PROVISIONING REQUEST message is sent by the UE to the PCF to request the PCF to manage V2XP, ProSeP or both, see table 7.2.1.1.1

Message type: UE POLICY PROVISIONING REQUEST

Significance: dual

Direction: UE to network

Table 7.2.1.1.1: UE POLICY PROVISIONING REQUEST message content

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IEI | Information Element | Type/Reference | Presence | Format | Length |
|  | PTI | Procedure transaction identity  TS 24 501 [4] clause 9.6 | M | V | 1 |
|  | UE POLICY PROVISIONING REQUEST message identity | UE policy delivery service message type  TS 24 501 [4] clause D.6.1 | M | V | 1 |
|  | Requested UE policies | Requested UE policies  8.3.2 | M | LV | 2-3 |

\*\*\*\*\* Change \*\*\*\*\*

#### 7.2.2.1 Message definition

The UE POLICY PROVISIONING REJECT message is sent by the PCF to the UE to report that the PCF rejects request to manage V2XP, ProSeP or both, see table 7.2.2.1.1

Message type: UE POLICY PROVISIONING REJECT

Significance: dual

Direction: network to UE

Table 7.2.2.1.1: UE POLICY PROVISIONING REJECT message content

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IEI | Information Element | Type/Reference | Presence | Format | Length |
|  | PTI | Procedure transaction identity  TS 24 501 [4] clause 9.6 | M | V | 1 |
|  | UE POLICY PROVISIONING REJECT message identity | UE policy delivery service message type  TS 24 501 [4] clause D.6.1 | M | V | 1 |
|  | UPDS cause | UPDS cause  8.3.1 | M | V | 1 |

\*\*\*\*\* Change \*\*\*\*\*

### 8.3.2 Requested UE policies

The purpose of the Requested UE policies information element is to enable the UE to request the PCF to provide certain UE policies or certain UE policy subsets.

The Requested UE policies information element is coded as shown in figure 8.3.2.1 and table 8.3.2.1.

The Requested UE policies is a type 4 information element with a minimum length of 3 octets and a maximum length of 4 octets.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Requested UE policies IEI | | | | | | | | octet 1 |
| Length of Requested UE policies contents | | | | | | | | octet 2 |
| 5P2RMI | 5P3RMI | 5P2UNRI | 5P3UNRI | 5PDCI | 5PDDI | V2XUUI | V2XPC5I | octet 3 |
| 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | octet 4\* |

Figure 8.3.2.1: Requested UE policies information element

Table 8.3.2.1: Requested UE policies information element

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| UE policies for V2X communication over PC5 indicator (V2XPC5I) (octet 3, bit 1) | | | | |
| Bit | | | | |
| **1** |  |  |  |  |
| 0 |  |  |  | UE policies for V2X communication over PC5 not requested |
| 1 |  |  |  | UE policies for V2X communication over PC5 requested |
|  | | | | |
| UE policies for V2X communication over Uu indicator (V2XUUI) (octet 3, bit 2) | | | | |
| Bit | | | | |
| **2** |  |  |  |  |
| 0 |  |  |  | UE policies for V2X communication over Uu not requested |
| 1 |  |  |  | UE policies for V2X communication over Uu requested |
| UE policies for 5G ProSe direct discovery indicator (5PDDI) (octet 3, bit 3) (see NOTE) | | | | |
| Bit | | | | |
| **3** |  |  |  |  |
| 0 |  |  |  | UE policies for 5G ProSe direct discovery not requested |
| 1 |  |  |  | UE policies for 5G ProSe direct discovery requested |
|  | | | | |
| UE policies for 5G ProSe direct communications indicator (5PDCI) (octet 3, bit 4) (see NOTE) | | | | |
| Bit | | | | |
| **4** |  |  |  |  |
| 0 |  |  |  | UE policies for 5G ProSe direct communications not requested |
| 1 |  |  |  | UE policies for 5G ProSe direct communications requested |
|  | | | | |
| UE policies for 5G ProSe Layer-3 UE-to-network relay indicator (5P3UNRI) (octet 3, bit 5) (see NOTE) | | | | |
| Bit | | | | |
| **5** |  |  |  |  |
| 0 |  |  |  | UE policies for 5G ProSe Layer-3 UE-to-network relay not requested |
| 1 |  |  |  | UE policies for 5G ProSe Layer-3 UE-to-network relay requested |
| UE policies for 5G ProSe Layer-2 UE-to-network relay indicator (5P2UNRI) (octet 3, bit 6) (see NOTE)  Bit | | | | |
| **6** |  |  |  |  |
| 0 |  |  |  | UE policies for 5G ProSe Layer-2 UE-to-network relay not requested |
| 1 |  |  |  | UE policies for 5G ProSe Layer-2 UE-to-network relay requested |
| UE policies for 5G ProSe Layer-3 Remote UE indicator (5P3RMI) (octet 3, bit 7) (see NOTE) | | | | |
| **7** |  |  |  |  |
| 0 |  |  |  | UE policies for 5G ProSe Layer-3 Remote UE not requested |
| 1 |  |  |  | UE policies for 5G ProSe Layer-3 Remote UE requested |
| UE policies for 5G ProSe Layer-2 Remote UE indicator (5P2RMI) (octet 3, bit 8) (see NOTE) | | | | |
| **8** |  |  |  |  |
| 0 |  |  |  | UE policies for 5G ProSe Layer-2 Remote UE not requested |
| 1 |  |  |  | UE policies for 5G ProSe Layer-2 Remote UE requested |
| Bits of octet 4 are spare and shall be coded as zero if included. | | | | |
| NOTE: Usage of this bit is not specified in the present specification and is specified in 3GPP TS 24.554 [27]. | | | | |

\*\*\*\*\* End of change \*\*\*\*\*