**3GPP TSG-CT WG1 Meeting #128-eC1-21xxxx**

**Electronic meeting, 25 February - 5 March 2021 *was* C1-211104**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.193** | **CR** | **0025** | **rev** | **1** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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:*** | Enable report the availability and unavailability of an access network | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc17, ATSSS | | | | |  | ***Date:*** | | | 2021-02-26 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | For PMFP, in order to enable the UPF to discover the UDP port/IPv6 address of the PMF in the UE, the UE shall perform a access availability or unavailability report procedure over an access immediately after the MA PDU session is established.  On the other hand, the network privides measurement assistance information (MAI) including an indicator ("access availability reporting indicator (AARI)") to report the availability and unavailability of an access network to the UE during the MA PDU session establishment.  Based on above, for the network, "AARI" should be set to "Report the access availability" when providing to the UE. Even if AARI is set to "Do not report the access availability" during the MA PDU session establishment procedure, the UE still needs to perform access availability or unavailability report procedure over an access immediately after the MA PDU session is established.  Otherwise, the UPF is not able to discover the addressing information of the UE in time. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Clarify that even if AARI is set to "Do not report the access availability" during the MA PDU session establishment procedure, the UE still needs to perform access availability or unavailability report procedure over an access immediately after the MA PDU session is established to enable the UPF to determine the UDP port of the PMF in the UE or the UDP port and the IPv6 address of the PMF in the UE, as specified in subclause 5.4.2.1.1. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The UPF may not be able to discover the addressing information of the UE in time. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.5.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\* \* \* 1st Change \* \* \* \*

#### 6.1.5.2 Encoding of measurement assistance information

The measurement assistance information contains addressing information for the PMF in the UPF and is encoded as shown in figure 6.1.5.2-1 and figure 6.1.5.2-2 and table 6.1.5.2-1 and table 6.1.5.2-2.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| PMF IP address type | | | | | | | | octet a+1 |
| PMF IP address | | | | | | | | octet a+2  octet b-5 |
| PMF 3GPP port | | | | | | | | octet b-4  octet b-3 |
| PMF non-3GPP port | | | | | | | | octet b-2  octet b-1 |
| 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | AARI | octet b |

Figure 6.1.5.2-1: ATSSS parameter contents including one PMF IP address information

Table 6.1.5.2-1: PMF IP address type

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PMF IP address type (octet a+1) is set as follows:  Bits | | | | | | | | | | |
| 8 | 7 | | 6 | 5 | 4 | 3 | 2 | 1 |  |  |
| 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 1 |  | IPv4 |
| 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 0 |  | IPv6 |
| 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 1 |  | IPv4IPv6 |
| All other values are spare. | | | | | | | | | | |
|  | | | | | | | | | | |
| If the PMF IP address type indicates IPv4, then the PMF IP address field contains an IPv4 address in 4 octets. | | | | | | | | | | |
|  | | | | | | | | | | |
| If the PMF IP address type indicates IPv6, then the PMF IP address field contains an IPv6 address in 16 octets. | | | | | | | | | | |
|  | | | | | | | | | | |
| If the PMF IP address type indicates IPv4IPv6, then the PMF IP address field contains two IP addresses. The first PMF IP address is an IPv4 address in 4 octets and the second PMF IP address is an IPv6 address in 16 octets. | | | | | | | | | | |
|  | | | | | | | | | | |
| PMF 3GPP port (octets b-4 – b-3) is allocated port number associated with the 3GPP access network. | | | | | | | | | | |
|  | | | | | | | | | | |
| PMF non-3GPP port (octets b-2 – b-1) is allocated port number associated with the non-3GPP access network. | | | | | | | | | | |
|  | | | | | | | | | | |
| AARI (access availability reporting indicator) (octet b, bit 1) is set as follows:  Bit | | | | | | | | | | |
| **1** | |  | | | | | | | | |
| 0 | | Do not report the access availability | | | | | | | | |
| 1 | | Report the access availability (NOTE) | | | | | | | | |
| NOTE: Even if AARI is set to "Do not report the access availability" during the MA PDU session establishment procedure, the UE still needs to perform access availability or unavailability report procedure over an access immediately after the MA PDU session is established to enable the UPF to determine the UDP port of the PMF in the UE or the UDP port and the IPv6 address of the PMF in the UE, as specified in clause 5.4.2.1.1. | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| PMF 3GPP MAC address | | | | | | | | octet a+1  octet a+6 |
| PMF non-3GPP MAC address | | | | | | | | octet a+7  octet a+12 |
| 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | 0  Spare | AARI | octet a+13 |

Figure 6.1.5.2-2: ATSSS parameter contents including one PMF MAC address information

Table 6.1.5.2-2: PMF MAC address type

|  |  |
| --- | --- |
| PMF 3GPP MAC address contains a 6 octets MAC address associated with the 3GPP access network. | |
|  | |
| PMF non-3GPP MAC address contains a 6 octets MAC address associated with the non-3GPP access network. | |
|  | |
| AARI (access availability reporting indicator) (octet a+13, bit 1) is set as follows:  Bit | |
| **1** |  |
| 0 | Do not report the access availability |
| 1 | Report the access availability (NOTE) |
| NOTE: Even if AARI is set to "Do not report the access availability" during the MA PDU session establishment procedure, the UE still needs to perform access availability or unavailability report procedure over an access immediately after the MA PDU session is established to enable the UPF to determine the UDP port of the PMF in the UE or the UDP port and the IPv6 address of the PMF in the UE, as specified in clause 5.4.2.1.1. | |

\* \* \* End of Change \* \* \* \*