**3GPP SA WG2 Meeting #137ES2-2001930**

**February 24 - 27, 2020, Electronic meeting (rev. of S2-2001197, merged with S2-2002129)**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **23.503** | **CR** | **0400** | **rev** | **2** | **Current version:** | **16.3.0** |  |
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| *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 |  | Core Network | **X** |

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| ***Title:***  | Replace the reference to 23.203 to the clause in 23.503 in 4.3.6 |
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| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | S2 |
|  |  |
| ***Work item code:*** | 5GS\_Ph1, TEI16 |  | ***Date:*** | 2020-02-17 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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 canbe 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)* |
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| ***Reason for change:*** | Based on the agreement addressed in the DP “TS 23.203 Endorsement” (S2-1903636), any reference to 23.203 shall be replaced by the referenced content. However, 4.3.6 still references TS 23.203.Changes in rev.2 (revision of Nokia and Nokia Shangai-Bell CR):* Replace the list of procedures defined in 23.502 by requirements as for other features described in 23.503.
* Requirements for Service Capability Exposure are split into both those capabilities related to non session management but related to UE configuration and those capabilities related to session management.
* The list of capabilities is completed including Rel-16 features for TSN support, negotiation of BDT policies, provisioning of 5G VN Group Data.
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| ***Summary of change:*** | Update 4.3.6 to include content defined in clause 4.7 of TS 23.203.Changes in rev.2:* New subclause to define requirements for service capability exposure of non session management policy control functionality.
* Replace the list of procedures by requirements for service capability exposure of session management policy control functionality.
* Extend UE Policy requirements to include V2X Policies.
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| ***Consequences if not approved:*** | Incomplete description of the Service Capability Exposure of Policy control. |
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| ***Clauses affected:*** | 4.2.x (new), 4.3.6, 4.2.2 |
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|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

*First Change*

### 4.2.x Support for service capability exposure for non-session management policy control

Support for service capability exposure refers to the capability to enable an external ASP to request the NEF non-session management policy control functionality and then distribution from the NEF to the UDR first, then to the PCF and finally to the UE.

For non session management policies capabilties exposed by NEF are:

* Negotiations for background data transfer policy;
* Request to apply a previously negotiated BDT Policy to a UE or group of UEs as defined in clause 4.15.6.8 of TS 23.502 [3]. This capability allows the ASP to request the NEF to apply a a previously negotiated BDT Policy to a UE or group of UEs, the UE is notified of the BDT policy to be used. It also allows the NEF to inform that ASP that the BDT policy needs to be re-negotiated. The feature is be used together with the UE policy feature.
* Capability to create, update and remove 5G VN Group Data for a Group of UEs via NEF that is stored in the UDR and later retrieved by the PCF when a member of the group registers. The PCF uses the 5G VN Group Data as input to generate URSP rules for the members of the 5G VN group. The feature is be used together with the UE policy feature.
* Capability to create, update and remove Service specific parameters for V2X communication by a V2X ASP to NEF to store it in the UDR and later retrieved by the PCF when UE supporting V2X policies registers, as defined in clause 4.15.6.7 of TS 23.502 [3]. The feature is be used together with the UE policy feature.
* Management of PFDs;

*Next Change*

### 4.3.6 Support for service capability exposure for session management policy control

Support for service capability exposure refers to the capability to enable an external ASP to request the NEF policy and charging control functionality and then distribution from the NEF to the PCF, for connected UE or from the NEF to the UDR first, then to the PCF and then to the SMF for enforcement session based policies.

For session-based policies the Policy and Charging capabilties exposed by NEF are:

* Capability to request resource allocation for an AF session as defined in clause 4.15.6.6 of TS 23.502 [3]. This capability allows the AF to request the PCF via NEF and finally to the SMF to allocate, update or release resources for an AF session. The AF receives confirmation of the resource allocation, update or release procedure. The AF can also request notifications of events related to the AF session. This capability is also applicable to a TSN AF.
* Capability to set or change the chargeable party for an AF session, as defined in clause 4.15.6.4 and clause 4.15.6.5 of TS 23.502 [3].
* Capability to request routing application traffic to a local Data Network identified by a DNAI as defined in clause 4.3.7.
* Transfer of traffic characteristics of Time Sensitive Communication from the TSN AF to the eNB via NEF, then PCF and SMF.
* Transfer of port management information in both directions from TSN AF to DS-TT Ethernet port in the UE or the NW-TT in the UPF via NEF, PCF and SMF and from DS-TT Ethernet port in the UE and NW-TT Ethernet port in the UPF to TSN AF via SMF, PCF, NEF and then TSN AF.

Support for service capability exposure can also be performed to an AF within the operator domain, the same list of capabilities can be exposed by the PCF to the AF without NEF. In addition, the PCF provides the capability to expose events for bulk subscription for an Internal Group Identifier or all UEs within a DNN, S-NSSAI.

*END OF CHANGES*

### 4.2.2 UE policy control requirements

The 5GC shall be able to provide policy information from the PCF to the UE. Such policy information includes:

- Access Network Discovery & Selection Policy (ANDSP): It is used by the UE for selecting non-3GPP accesses network.

- UE Route Selection Policy (URSP): This policy is used by the UE to determine how to route outgoing traffic. Traffic to an established PDU Session, can be offloaded to non-3GPP access outside a PDU Session, or can trigger the establishment of a new PDU Session.

- V2X Policy (V2XP): This policy provides configuration parameters to the UE for V2X communication over PC5 reference point or over PC5 reference point or both. V2X Policies are defiend in TS 23.287 [28].

*End of changes*