**3GPP TSG- Meeting #**

**, , -**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *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 |  | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  | Procedure to allow dynamic changes of AM Policies based on the application in use |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | SA2 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | This contribution addresses Tasks 2 (procedures) in the TEI17\_DCAMP work plan, those are impacts on 23.502 to introduce dynamic change of AM policies. |
|  |  |
| ***Summary of change:*** | New procedure to allow dynamic change of AM policies based on the application detected. |
|  |  |
| ***Consequences if not approved:*** | Dynamically changing AM policies are not supported by the 5GC. |
|  |  |
| ***Clauses affected:*** | 4.16.x (new), 4.16.x.1 (new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 23.503 CRxxx  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* First change \* \* \* \*

### 4.16.x Management of AM Policies depending on the application in use

#### 4.16.x.1 General

The procedure for management of AM Policies depending on the application in use enables modification of the RFSP index value on detection of the start and stop of an application.

The content of this clause applies to non-roaming and to LBO deployments i.e. to cases where the involved entities (PCF, SMF, UPF) belong to the Serving PLMN. The PCF shall not apply a change RFSP index value for application traffic detected in PDU Sessions established in Home Routed mode.

#### 4.16.x.2 Procedures for management of AM Policies



Figure 4.16.x.2-1: Management of AM Policies at start and stop of application traffic

1. The AMF and PCF establish an AM Policy Association for Access and Mobility Policy Control, e.g. RFSP index value, as described in clause 4.16.1.2. The AMF selects a PCF serving the registered SUPI, when the PCF serving the registered SUPI and the PCF(s) serving its PDU session(s) are the same PCF steps 6 follows.
2. The PCF serving the UE determines that AM Polcies (e.g. RFSP index value) depends on the application in use, the DNN,S-NSSAI used to access an Application Id is configured in the PCF, then subscribes to the BSF to be notified when a PCF serving a PDU session is registered in the BSF, using Nbsf\_Management\_Subscribe (SUPI, DNN, S-NSSAI).
3. The SMF and the PCF establish a SM Policy Association, the allocated UE address/prefix, SUPI, DNN, S-NSSAI and the PCF address is registered in the BSF, as described in clause 6.1.1.2.2 in TS 23.503 [20].
4. The BSF notifies that a PCF serving a PDU session is registered in the BSF, using Nbsf\_Management\_Notify (UE address, PCF address, PCF instance id, PCF Set ID), when there are multiple PDU sessions to the same DNN, S-NSSAI the BSF provides multiple notification to the PCF.
5. The PCF serving the UE subscribes to notifications of event “start/stop of application traffic” as defined in clause 6.1.3.18 in TS 23.503 [20], using Npcf\_PolicyAuthorization\_Subscribe (UE address, EventId, EventFilter set to “ApplicationId/SDF filters”) to the PCF serving the PDU session to the DNN,S-NSSAI. The PCF serving the PDU session performs session binding then generates PCC Rules including the Application Id/SDF filters in the SDF template. The response includes the NotificationCorrelationId.
6. The PCF installs PCC Rules and the PCRT to detect “start/stop of application traffic” in the SMF.
7. The SMF detects that the Policy Control Request Trigger is met, then reports the start/stop of application traffic to the PCF serving the PDU session and the related PCC Rules, when the PCF serving the registered SUPI and the PCF(s) serving its PDU session(s) are the same PCF steps 9 follows.
8. The PCF serving the UE is notified using Npcf\_PolicyAuthorization\_Notify (NotificationCorrelationId, EventId set to “start/stop of application traffic”, EventInformation including the ApplicationId.
9. The PCF changes AM Policies (e.g. RFSP index value) based on the reporting of start/stop of application traffic.

\* \* \* \* End of changes \* \* \* \*