**3GPP TSG-S4 Meeting #110e *S4-201220***

**Home Office, Everywhere, 19. – 28. August 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **Pseudo CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **<Spec#>** | **CR** | **<CR#>** | **rev** | **<Rev#>** | **Current version:** | **<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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Correction of the Policy Template resource state transitions | | | | | | | | | |
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| ***Source to WG:*** | Ericsson LM | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GMS3 | | | | |  | ***Date:*** | | | <Res\_date> |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **<Cat>** |  | | | | | ***Release:*** | | | <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 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)* | |
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| ***Reason for change:*** | | The document contains changes to the M1 Policy Template API and the M5 Dynamic Policy Invocation API based on the discussion in S4-AHI999 (now S4-AHIa14) and the discussion on available application flow detection mechanisms (in S4-AHIa13). The document is a first draft and may not contain all parameters. | | | | | | | | |
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| ***Summary of change:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**\*\*\*\* First Change \*\*\*\***

### 4.3.7.1 General

These procedures are used by the 5GMS Application Provider to configure the Policy Templates for streaming sessions of a particular Provisioning Session.

Since Policy Templates require 5GMS System operator verification, a Policy Template that is newly created cannot be used immediately. Upon creation, a Policy Template shall be in the pending state. Once all mandatory properties are provided, the 5GMS AF triggers validation. If the Policy Template is not deemed to be valid by the operator of the 5GMS System, it shall move to the invalid state, from where it can be updated to remedy the defect. Once it has been successfully validated by the 5GMS System operator, a Policy Template shall take the ready state, indicating that it may be applied to streaming sessions. If it is subsequently updated by the 5GMS Application Provider, a Policy Template shall return to the pending state, awaiting revalidation by the operator of the 5GMS System. Finally, a Policy Template may be suspended by the 5GMS System operator, e.g. in case of a violation of the usage terms or for some other reasons, which renders it unusable. The update of any property moves the state into pending and triggers revalidation. A Policy Template may be destroyed when it is in any of the abovementioned states.

The 5GMSd/5GMSu AF shall verify the status of a Policy Template prior to allowing a Dynamic Policy Instance to instantiate it. Only Policy Templates in the ready state are eligible to be instantiated in this way.

Figure 4.3.7.1‑1 below is a state diagram showing the life-cycle of a Policy Template:



Figure 4.3.7.1‑1: Policy Template State Diagram

### 4.3.7.2 Create Policy Template

This procedure is used by the 5GMS Application Provider to create a new Policy Template. The HTTP POST method shall be used for this purpose.

If the procedure is successful, the 5GMSd/5GMSu AF shall generate a resource identifier to uniquely identify the newly created Policy Template. In that case, it shall respond with a 201 (Created) HTTP response message and provide the URL to the newly created resource in the Location header field.

The default state of a newly created Policy Template is pending. If all mandatory property values have been provided, the Policy Template is eligible for validation.

### 4.3.7.3 Read Policy Template

This procedure is used by the 5GMS Application Provider and other 5GMSd/5GMSu AFs to query the properties of an existing Policy Template resource from the 5GMSd/5GMSu AF. The HTTP GET method shall be used for this purpose.

If the procedure is successful, the 5GMSd/5GMSu AF shall respond with a 200 (OK) response that includes the Policy Template in the response message body.

### 4.3.7.4 Update Policy Template

The update operation is invoked by the 5GMS Application Provider to modify the properties of an existing Policy Template. All available properties except state may be updated. The HTTP PATCH or HTTP PUT methods shall be used for the update operation.

Any update to the Policy Template resource will change its state back to pending, which makes it temporarily unusable. If all mandatory property values have been provided, the Policy Template is eligible for revalidation.

Editor’s Note: It is FFS, whether ANY update or SOME updates of the Policy Template will trigger a state change to *pending*.

If the procedure is successful, the 5GMSd/5GMSu AF shall respond with a 200 (OK) response message that includes the Policy Template in the response message body. Modifications to read-only properties, such as changes to the state of a Policy Template, shall be rejected with a 403 (Forbidden) HTTP response.

### 4.3.7.5 Delete Policy Template

This operation is used by the 5GMS Application Provider to destroy a Policy Template resource. The HTTP DELETE method shall be used for this purpose. As a result, the 5GMSd/5GMSu AF will remove the Policy Template from any Provisioning Sessions that reference it.

Currently active streaming sessions using the destroyed Policy Template, if any exist, shall be stopped by the removal of the Policy Template.

If the procedure is successful, the 5GMSd/5GMSu AF shall respond with a 200 (OK) response message.

\*\*\*\* End of Changes \*\*\*\*