**3GPP TSG-SA4 Meeting #129-e S4-241616**

**Electronic Meeting, 19th Aug – 23rd Aug 2024**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **26**.**804** | **CR** | 0021 | **rev** |  | **Current version:** | **18.1.0** |  |
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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:***  | **[FS\_AMD] Multi-Access Media Delivery – Gap on dynamic policy** |
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| ***Source to WG:*** | Samsung Electronics Co. Ltd., |
| ***Source to TSG:*** | S4 |
|  |  |
| ***Work item code:*** | FS\_AMD |  | ***Date:*** | 2024-05-10 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19  |
|  | *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-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)* *Rel-18 (Release 18)* |
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| ***Reason for change:*** | Document S4-241252 was endorsed during SA4#128 meeting with initial draft on multi-access media delivery. The study of this topic is ongoing. This contribution discusses existing policy management aspects supported in 5G Media Streaming, and proposes a gap when multi-access media delivery is chosen for the media streaming session. |
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| ***Summary of change:*** | Add a gap analysis and requirement for multi-access media delivery study based on existing dynamic policy support |
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| ***Consequences if not approved:*** | One of the study topics will be incomplete |
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| ***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 ...  |
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| ***Other comments:*** | TS 26.501 and TS 26.510 specify the stage-2 and stage-3 procedures and data model definitions for dynamic policy feature in 5G Media Streaming. Specified as part of high-level procedure for service provisioning in clause 5.3.2 of TS 26.501, when the dynamic policy feature is offered and selected, the 5GMSd Application Provider specifies a set of policies which can be invoked for the unicast downlink streaming session. The data model for PolicyTemplate resource in specified in clause 8.7.3 of TS 26.510. The UE becomes aware of the selected policies in the form of a list of valid Policy Template Ids.When the Media Session Handler intends to activate dynamic policy for the media session, the MSH sends a Dynamic Policy API request to the 5GMSd AF. As specified in clause 5.7.3 of TS 26.501, the request includes at least the Provisioning Session identifier, the Service Data Flow Description(s) and the Policy Template identifier to be applied to the described transport session. The details of the Dynamic Policy API are specified in clause 9.3 of TS 26.510, and the data model for DynamicPolicy resource is specified in clause 9.3.3 of TS 26.510.The “applicationFlowBindings” property in the DynamicPolicy data model specify the bindings between application flows at reference point M4 managed within the scope of the Dynamic Policy Instance and their network QoS requirements. This property includes three sub-properties that allow for specification of application flows to which the dynamic policy QoS specification is to be applied:* componentIdentifier that references a particular service component in the Policy Template
* applicationFlowDescription which provides a specification of an application flow to be used by the 5G Core for application traffic identification purposes
* qosSpefication that provides network QoS requirements for the application flow(s) described by applicationFlowDescription

The applicationFlowDescription type is specified in clause 7.3.3.2 of TS 26.510 which includes the following information:* filterMethod: Of type SdfMethod (details in clause 7.3.4.2 of TS 26.510), provides details about how the Service Data Flow is described
* packetFilter: Of type IPPacketFilterSet (details in clause 7.3.3.1 of TS 26.510), provides details about different properties to describe a flow
* domainName: Description of application flow in terms of FQDN of Media AS
* mediaType: Type of media carried by this application flow
* mediaTransportParameters: Of type ProtocolDescription (specified in clause 5.5.4.13 of TS 29.571), describes set of media transport protocol parameters to be used by the 5G Core for the purpose of PDU Set identification and/or end of data burst detection on this application flow.

In the context of Multi-access using ATSSS architecture specified in TS 23.501, if the Media Streaming session is conveyed over a Multi-Access PDU Session, the application flow between the Media Access Client and the Media AS (5.g., 5GMS AS) may use two different access networks.Clause 5.32.6 of TS 23.501 specifies the supported steering functionalities in an example UE model with ATSSS. For ATSSS procedures, the UE may be provided with 5 different IP addresses – one IP address/prefix for the Multi-Access PDU session (allocated regardless of type of steering functionality), two IP addresses/prefixes called the “MPTCP link specific multipath” addresses (if UE and network agree on using MPTCP steering functionality), and two IP addresses/prefixes called the “MPQUIC link-specific multipath” addresses (if UE and network agree on using MPQUIC steering functionality). The MPTCP link specific multipath addresses and the MPQUIC link specific multipath addresses may not be routable via N6.When UE and network agree to use a Mult-Access PDU Session during a Media Streaming session, it is unclear how the dynamic policy feature specified in TS 26.501 and TS 26.510 work. It is unclear * If M4 application flows are carried over two access networks, what does activate dynamic policy with QoS requirements mean – whether one, or more, or all access paths are to be applied with requested QoS?
* Is it feasible to request application of QoS for a subset of access paths over a specific access network?
* Are any enhancements to the applicationFlowDescription type necessary to support identification of M4 application flows over specific access networks?

To study the above questions, propose to add the following to the gap analysis and requirements clause 5.15.5:* Whether and how dynamic policy procedures and data model definitions specified in TS 26.501 and TS 26.510 are to be enhanced to support M4 application flows in a Multi-Access PDU session.
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| ***This CR's revision history:*** | S4-241252: Endorsed CR on initial draft for multi-access media delivery |

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

### 5.15.5 Gap analysis and requirements

The following potential open issues are identified:

1. Document potential open issues to split, switch, and steer M4 application flows based on methods specified in ATSSS architecture.

2. Whether and how dynamic policy procedures and data model definitions specified in TS 26.501 [26501] and TS 26.510 [26510] are to be enhanced to support M4 application flows in a Multi-Access PDU session.

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