**Source: Tencent Cloud**

**Title: [EDGE] Discussion on edge provisioning signalling and procedures**

**Agenda Item: 8.8**

**Document for: Discussion**

# Introduction

At SA4#117, we discussed two submitted CRs (S4-220292 and S4-220293M5) for M1 and M5 provisioning of the edge services. During one of the MBS Adhoc calls, another contribution (S4aI221335) was provided for the normative language for responding to the proposed M1 edge provisioning operations.

This contribution raises a few questions regarding the provisioning procedure and recommends a few actions based on the provided justifications. The submitted dCRs to this meeting are:

|  |  |  |
| --- | --- | --- |
| S4-220412 | draftCR | [EDGE] Improved CR on M1 edge provisioning |
| S4-220413 | draftCR | [EDGE] Improved CR on signaling edge configuration over M5 |
| S4-220414 | draftCR | [EDGE] Improved CR on edge provisioning procedures |

In addition, a proposal is provided for a minimalistic API for M6 at this meeting:

|  |  |  |
| --- | --- | --- |
| S4-220415 | draftCR | [EDGE] Requesting edge server discovery over M6 |

# Naming difference between 26.501 and 25.512

The app-driven and network-driven modes of edge provisioning in TS 26.512 CRs are differently called in TS 26.501: client-driven and AP-driven. We believe that app-driven and network-driven are more appropriate and suggest a CR on 501 fixing the name. But it is too difficult, then align the names in the TS 26.512 CR with TS 26.501.

2022-04-07 Offline:

* client-driven and AF-driven
* Do a CR on 501 to correct AF-driven
* Use the above in CR for 512

# EAS status

Does the current EdgeResourcesConfiguration resource reflect the current status of the allocated EAS? For instance, if an EAS is allocated and its KPIs have changed due to an increase in traffic, does retrieval of EdgeResourceConfiguration provide the updated status of EAS to ASP?

This is not clear. It is also not clear how the ASP knows whether 5GMS AF has activated any EAS or not.

Recommendations:

1. Make it clear that EASResourceConfiguration only indicates the desired EAS requirement and not the current status of an allocated EAS.
2. Adding easId to EdgeResourcesConfiguration which allows retrieval of easId and therefore being able to find the EAS if it is allowed (See S4-220412).

# M1 EASRequirement vs M5 EASDiscovery

The M5 EASDiscovery currently lists only easProvidersIds, easType and easFeatures properties, while the M1 EASRequirement list more parameters such as ServiceKPIs.

In the case of client-driven, if 5GMS AF applies the EASRequirements properties before EES starts the discovery of EASes, then the request ASP requirements are satisfied. However, the edge specification 24.558 clause 5.3.2 does not include any EES filtering of EEC requests before the EAS discovery. In other words, if we want to use EDGE-1, to discover EAS, then all parameters of EASRequiremenrs should be provided through EASDiscovery to the MSH and be included in EAS discovery through EDGE-1. Otherwise, we need to add a requirement to 5GMS AF to apply the EASRequiremens whenever it gets a request from the MSH for EAS discovery. But this process is incompatible with 24.558.

Recommendation: Deliver the EASRequirement through M5 and use the standard EDGE-1 process (See S4-220413).

2022-04-07 offline agreement: Adding more clarification in the client discovery regarding using M1 easrequirements as part of properties of discovery.

# EES and EEC functionalities

Currently, in the 26.512 CRs, it is not clear that the following 26.501 requirements are supported:

1. 5GMS AF support of EES functionalities and APIs
2. MSH support of EEC functionalities and APIs.

Particularly, the proposed 4.3.10 does not mention any requirements for supporting EES and EEC functionalities and the corresponding APIs.

We have two choices:

1. Align 4.3.10 with approved 26.501 CR and update 4.3.10 based on EES and EEC features and APIs
2. Only defines the requirements for 5GMS AF and MSH for edge discovery, and allows the EES and EEC as one possible instantiation.

Recommendation: Since we already approved the EEC and EES (and EAS) requirements for MSH, AF, and AS, choice 1 is recommended (See S4-220414).

# EAS update

The current design allows the “eligibilitycriteria” for an eligible media stream for starting off by enabling an edge server. It seems it means that when the criteria are met (even with the lack of the property), the instantiation or discovery of a new 5GMS AS occurs with the first eligible media stream that satisfies the criteria.

**Question:** Do this test and possible instantiation/discovery occur each time with each new media stream? or with the first eligible media steam only?

It seems even if an EAS has been already allocated due to the previous eligible media streams, the current EAS may not be able to accommodate the start of a new eligible media stream or it may surpass its limits. Therefore, it seems with each new media stream, the current EAS profile must be checked and if it doesn’t meet the EASRequirements, a request for the discovery or instantiation of a new EAS is made. In this case:

1. For the network-driven edge case, it is the job of 5GMS AF to monitor the EAS service KPIs and see if a new EAS is needed or not.
2. For the client-driven edge case, the application can monitor the EAS current service KPIs and request a new EAS if needed.

Recommendations:

1. Require the entity (5GMS AF or MSH) to check the EAS status with each new eligible stream (S4-220414).
2. If the current EAS profile doesn’t satisfy the desired one, then the responsible entity (5GMS AF or MSH) is to look for a new EAS (S4-220414).

# Proposal

1. Discuss the above issues
2. Discuss the corresponding CRs and consider approving them if acceptable.