**3GPP TSG-SA5 Meeting #143-e *S5-223516***

e-meeting, 9 - 17 May 2022

**Title: [DRAFT] Reply LS on Issues Network Slice information delivery to a 3rd party**

**Response to: LS (S6-220975) on Issues Network Slice information delivery to a 3rd party from SA6**

**Release: Rel-18**

**Work Item: Study on Network Slice Capability Exposure for Application Layer Enablement (FS\_NSCALE)**

**Source: SA5**

**To: SA6**

**Cc: SA1, SA2, SA**

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**Attachments:** none

# 1 Overall description

SA5 thanks SA6 for their LS and questions.

SA5 clarifies to SA6 how network slice provisioning functionality defined by SA5 should be used. All of the questions from SA6 appear to assume that the NSCE server/AF exposes an inventory of the already-existing network slice instances. SA5 notes that it is also possible to expose capabilities for allocating a new network slice instance(s). Network slice management is intended to be used as follows: a network slice customer requests allocation of a network slice, can view the status/performance/faults of this network slice, can reconfigure the network slice (based on the concluded contracts/agreements and the access rights) and can deallocate the network slice. SA5 emphasizes that the management of a network slice should be available to any authorized entity.

SA6 asked the following questions:

Q1: Is the SA5 understanding, that an authorized by the MNO trusted 3rd party (NSCE server / AF) can consume on behalf of the vertical and re-expose network slice information of existing slices towards third-party slice consumer/customer?

Based on MNO policy, any authorized (trusted) third-party (e.g. NSCE server / AF, third-party slice consumer/customer) can consume OAM exposed interfaces.

OAM interfaces and/or network slice information may be exposed to an authorized (trusted) third-party only after a contract has been signed between the MNO and this third-party. Network slices can be offered by CSPs as Products to their customers. One example business arrangement is given by the following example: Prior to exposing OAM information to a third-party, such a Product has to be ordered by the third-party. This product ordering goes through the BSS. Other arrangements are possible, as customers and consumers differ, for example between two network operators.

There may be other aspects that are identified for network slice information exposure in the ongoing FS\_NSCE study.

The specifics of possible business arrangement and their implications for network slice information exposure are not expressed in this LS reply; these would require further study for charging aspects.

Q2: Is SA5 working on network slice information exposure of existing and possible slices towards third-party slice consumer/customer?

Yes we work on FS\_NSCE in SA5 in the Release 18 time frame. One aspect of FS\_NSCE is to expose network slice information towards an authorized trusted consumer. SA5 currently studies whether and how CAPIF can be used to expose management services (MnS), please see TR 28.824 clause 7.9. We will inform SA6 as soon as there are conclusions.

The charging aspects of network slice in the context exposure towards 3rd party has already been considered and is indicated in the answer to Q5. Depending on FS\_NSCE conclusion by OAM on a mechanism that will expose management services, charging aspects could be further studied in SA5.

Q3: If answer to Q2 is “yes”, does it include information about ServiceProfile?

Based on agreement between MNO and authorized (trusted) third-party, the ServiceProfile may be exposed.

Q4: If answer to Q2 is “no”, is the SA5 understanding that NSCALE (given that it is an authorized by the MNO trusted 3rd party) can expose network slice information of existing slices towards third-party slice consumer/customer or BSS should be responsible for such exposure and this is out of SA6 scope?

SA5 is working on FS\_NSCE in the Release 18 time frame. One aspect of FS\_NSCE is to expose network slice information towards an authorized trusted consumer via BSS. Another aspect of FS\_NSCE is to expose network slice information to authorized trusted consumers via OSS. There may be other aspects that are identified for network slice information exposure in the ongoing FS\_NSCE study. Depending on FS\_NSCE conclusion by OAM on a mechanism that will expose management services, charging aspects could be further studied in SA5.

Q5: SA6 asks SA5 whether the charging aspects (e.g. slice offering/creation/modification) triggered by the NSCALE layer will be handled by SA5.

Since Rel-16 specifies TS 28.202 the Converged Charging description for network slice management charging in the 5G System (5GS) which includes the following management operations on

- Network Slice Instance creation, modification and termination;

- Network Slice Instance activation and deactivation.

Note although this charging solution does not explicitly refer to when the MnS Producer of such management operations is an exposure function, it can be considered as applicable.

We do not understand the term ‘slice offering’.

# 2 Actions

**To SA6**

**ACTION:** SA5 asks SA6 to take these answers into account. SA5 will send additional information pertaining to these questions when it is available.

# 3 Dates of next TSG SA WG 5 meetings

SA5#144e 27 June - 01 July 2022 Electronic meeting

SA5#145e 15 - 19 August 2022 (TBC) Gothenburg (Sweden)