

3GPP TSG SA WG2 Meeting #162
Changsha, China, April 15 – April 19, 2024
Agenda item: 4.1

S2-2404364
revision of S2-24xxxxx

Discussion on Provisioning ATSSS rules to the UE in EPC

NEC

Introduction

- CT1 sends a LS (S2-2403870/C1-241721) LS on provisioning ATSSS rules to the UE in EPC to SA2:

Regarding UE establishing a PDN connection as a user-plane resource of an MA PDU session, there are following facts:

1. In Rel-17, ATSSS_Ph2 introduces support of MA PDU session establishment with 3GPP access connected to EPC and non-3GPP access connected to 5GC. It specifies that ATSSS rules **are not** provided via the EPC (see clause 4.22.2.3.1 in TS 23.502).
2. In Rel-18, ATSSS_Ph3 introduces support of MA PDU session establishment with untrusted non-3GPP access connected to EPC and 3GPP access connected to 5GC. It specifies that ATSSS rules **may be** provided via the EPC (see clause 4.22.2.4.1 in TS 23.502).

Based on the above, CT1 would like to ask SA2 to provide an answer to following question:

Why can ATSSS rules be provided via untrusted non-3GPP access to EPC but not via 3GPP access?

Problem Statement

◆ The following specifications are from SA2 TS 23.502(v18.5.0) in different clauses:

4.22.2.3 MA PDU Session establishment with 3GPP access connected to EPC and non-3GPP access connected to 5GC

4.22.2.3.1 General

...

The ATSSS rules are provided from the PGW-C+SMF to the UE via SM NAS signalling over 5GC, as described in clause 5.32.2 of TS 23.501 [2]. ATSSS rules are not provided via the EPC.

4.22.2.4 MA PDU Session establishment with non-3GPP access connected to EPC and 3GPP access connected to 5GC

4.22.2.4.1 General

...

The ATSSS rules are provided from the PGW-C+SMF to the UE via SM NAS signalling over 5GC, as described in clause 5.32.2 of TS 23.501 [2]. ATSSS rules may be provided via the EPC.

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4.22.2.4.2 PDN Connections and Multi Access PDU Sessions

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- The PGW-C+SMF provides the following information via the APCO in the Create Session Response message to the ePDG:
 - ATSSS rules
- The ePDG forwards the received above information to the UE via IKE signalling.

As commented by CT1, the differences between Rel-17 ATSSS_Ph2 and Rel-18 ATSSS_Ph3 are:

- Rel-17 ATSSS_Ph2: ATSSS rules are not provided via 3GPP access connected to EPC
- Rel-18 ATSSS_Ph3: ATSSS rules may be provided via untrusted non-3GPP access connected to EPC

The conditions (as above) for ATSSS rules provided or not provided via EPC are not clear and need to be clarified in TS 23.502(v18.5.0) .

Discussion

- According to the requirement and technical discussion, SA2 (Stage2) defined different objectives and scopes in Rel-17 ATSSS_Ph2 and Rel-18 ATSSS_Ph3.
- From Stage2's perspective, at least up to now, there are no controversial issues on provisioning ATSSS rules to the UE in EPC between Rel-17 ATSSS_Ph2 and Rel-18 ATSSS_Ph3.
- SA2 has no problems that ATSSS rules may be provided via untrusted non-3GPP access to EPC but not via 3GPP access to EPC as TS 23.502(v18.5.0).
- The CT1 question in the LS is not clear what the technical problem from stage3's perspective is.

Observations

- Since Rel-18 is frozen, if there is a request to remove the Rel-18 feature “*ATSSS rules may be provided via untrusted non-3GPP access to EPC*”, the strong justifications including technical arguments are needed, but they have not been proposed.
- Since Rel-18 is frozen and Rel-19 Study on Multi-Access (DualSteer and ATSSS_Ph4) (FS_MASSS) does not include the feature “*ATSSS rules may be provided via 3GPP access to EPC*”, a revision to Rel-19 FS_MASSS or a new TEI-19 WID will be needed for this potential new feature.
- Since Rel-19 FS_MASSS (including ATSSS_Ph4) TUs are overloaded with current KIs, it may be difficult to squeeze this potential new feature into FS_MASSS. A new TEI-19 WID is realistic and preferred.

Proposals

- Clarifications on provisioning ATSSS rules to the UE in EPC are proposed in the CR to TS 23.502v18.5.0 (S2-2404369).
- Discuss the way forward with a new TEI-19 WID (proposed in S2-2404366) for the feature “*ATSSS rules may be provided via 3GPP access to EPC*”.
- Send LS reply (proposed in S2-2404365) to CT1 to reply the question.

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