**3GPP TSG-SA3 Meeting #123 S3-252531**

**Goteborg, Sweden, 25 – 29 August 2025**

**Source: Nokia**

**Title: New SID on security aspects of CAPIF Phase 4**

**Document for: Approval**

**Agenda Item: 6.2**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: Study on Security aspects of CAPIF Phase 4

Acronym: FS\_CAPIF\_Ph4\_sec

Unique identifier:

Potential target Release: Rel-20

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X |  | X |  |
| No | X |  | X |  |  |
| Don't know |  |  |  |  | X |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
| X | Study |
|  | Normative – Stage 1 |
|  | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
|  |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| SP-250873 | Study on CAPIF Phase 4 | Rel-20 S6 study item |

# 3 Justification

SA6 agreed a new study for enhancement of CAPIF (CAPIF Phase-4). Additionally, in Rel-19 SA6 introduced new features, which present editor’s note regarding possible security issue to be addressed by SA3. The following topic are still open:

1. How to authorize the API Invoker’s when Network Slicing information are included.

Editor's Note: Authorization related to network slice are to be detailed by SA3.   
Section 8.11.3 of TS 23.222.

1. How to provide a collective authorization when one or more API Invokers want to access one or more APIs

Editor's note: The security aspects of this procedure are to be specified in TS 33.122 [12].

Editor's Note: The detailed procedure to obtain the resource owner's authorization information for multiple API invokers in one request requires further investigation and is in scope of SA3. However, it is recommended that the resource owner is provided with at least the option to only grant authorization for only the API invoker initiating the authorization request and then only for the specific service being requested.

Section 8.33 of TS 23.222.

1. How to Authorize multiple API Invokers when identified through the Group ID

Editor’s note: The authorization details for step 4 of how CCF interacts with GRO to obtain authorization which also includes the group identification is FFS and will be specified by SA3. Section 8.34.3 of TS 23.222.

1. The protection of the data exposed through Open Discover Service API

Editor's note: The access credentials the API provider domain provides to the requestor to enable the discovery request from a user not recognized by CAPIF is specified by SA3. Section 8.38.3 of TS 23.222.

NOTE: if SA3 decides that no further study is required for one or more of the above topics, an LS should be sent to SA6 regarding the decision.

# 4 Objective

The objective is to study security enhancement of CAPIF.

WT#1: To study new possible security requirements introduced by the new SA6 functionalities as part of CAPIF Rel-20 (CAPIF Phase 4 - SP-250873)

NOTE 1: SA3 study depends on SA6 study progress.

WT#2: To study whether and how to address open security issue introduced by SA6 functionalities during Rel-19 and not yet analysed in SA3.

* + 1. Network Slicing specific authorizations
    2. Collective authorization of multiple API Invokers and/or for multiple APIs
    3. Group ID Authorization
    4. The protection of the data exposed through Open Discover Service API

NOTE 2: WT2 results will be integrated into CAPIF as part of Rel-20

**TU estimates and dependencies**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Work Task ID | TU Estimate  (Study) | TU Estimate  (Normative) | RAN Dependency  (Yes/No/Maybe) | Inter Work Tasks Dependency |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New specifications {One line per specification. Create/delete lines as needed} | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Rapporteur |
| Internal TR | TBD | Study on security aspects of CAPIF Phase 4 |  | TBD |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
|  |  |  |  |

# 6 Work item Rapporteur(s)

TBD

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

SA6

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Nokia |
| Xiaomi |
|  |
|  |
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|  |