**3GPP TSG-SA3 Meeting #108e *draft\_S3-222254-r1***

**e-meeting, 22 – 26 August 2022** (revision of S3-yyxxxx)

**Source: Nokia**

**Title: WID on eSBA security**

**Document for: Approval**

**Agenda Item: 6**

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: Security Aspects of the 5G Service Based Architecture

## Acronym: 5G\_eSBA

## Unique identifier: *{A number to be provided by MCC at the plenary}*

Potential target Release: Rel-18

## Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **Yes** |  |  |  | x |  |
| **No** | x | x | x |  |  |
| **Don’t know** |  |  |  |  |  |

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

This work item is a …

|  |  |
| --- | --- |
| x | Feature |
|  | Building Block |
|  | *Work Task* |
|  | Study Item |

### 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 Items (if any) |
| Unique ID | Title | Nature of relationship |
|  |  | *{optional free text}*  |

**Dependency on non-3GPP (draft) specification**:

*{This section is to be typically used to identify the IETF dependencies. Delete the header “Dependency on non-3GPP (draft) specification:” if no such dependency.}*

## 3 Justification

The purpose of TR 33.875 “ Study on enhanced security aspects of the 5G Service Based Architecture (SBA)” was to make conscious decisions whether 5G SBA security needs to be enhanced to address specific threats and to evaluate to which price (complexity versus security gain) this is possible.

The study analysed potential threats, study necessary security enhancements, and documented decisions of solutions to be adopted or not adopted after evaluating the risks versus the complexity. In particular, the following topics were addressed:

- Need and mechanism of enabling end to end authentication in roaming case if no cross-certification between operators is enabled;

- Need and mechanism of enabling NF Service Consumer authentication of NRF and the NF Service Producer;

- Need for addressing potential security impact of different deployment scenarios including the several SCPs;

- Verification of URI in subscription/notification;

- Dynamic authorization between SCPs or NF and SCP;

- End-to-End Critical HTTP headers/body parts integrity protection;

- Security of NRF service management;

- N32 roaming security considerations for deployments not mentioned in 3GPP TS 33.501 so far.

In relation to the conclusive statements per key issue in clause 7, i.e., whether and how to move forward with normative work and, if yes, which solutions are endorsed, this WID will adopt the decisions and implement the conclusions accordingly into TS 33.501 in a normative way.

## 4 Objective

Implement the conclusions of TR 33.875 into TS 33.501.

## 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 |
|  |  |  |  |  |  |

|  |
| --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| *TS 33.501* | *In line with conclusions in 33.875 updates in clause 13, 4 and 5.9 expected.* *Possibly*  | TSG#99 |  |

## 6 Work item Rapporteur(s)

*anja.jerichow@nokia.com*

## 7 Work item leadership

*SA WG3*

## 8 Aspects that involve other WGs

*CT4 for stage 3 work.*

## 9 Supporting Individual Members

*{At least 4 supporting Individual Members are needed. There is an expectation that these companies will provide resources to progress the work. Note that having 4 supporting companies is a necessary but not sufficient condition: the usual TSG approval process by consensus is needed for the WID approval.}*

|  |
| --- |
| Supporting IM name |
| Nokia |
| Nokia Shanghai Bell |
| Mavenir |
| CableLabs |
| Interdigital |