**3GPP TSG-SA3 Meeting #116 *S3-242198***

**Jeju, South Korea, 20th - 24th May 2024** **(revision of xx-yyxxxx)**

**Source: Ericsson**

**Title: New WID on 5G Security Assurance Specification (SCAS) for the Container-based Products**

**Document for: Agreement**

**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: 5G Security Assurance Specification (SCAS) for the Container-based Product

Acronym: SCAS\_5G\_CP

Unique identifier:

Potential target Release: Rel-19

# 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 …

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

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

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

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

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| SCAS\_5G\_Maint | Security Assurance Specification for maintenance of 5G features | Rel-19 work item of SCAS |
| SCAS\_5G\_Ph3 | Security Assurance Specification for 5G (SCAS\_5G\_Ph3) | Rel 18 work item of SCAS |
| SCAS\_5G\_Ph2 | Security Assurance Specification for 5G (SCAS\_5G\_Ph2) | Rel 18 work item of SCAS |
| eSCAS\_5G | Security Assurance Specification for 5G (eSCAS\_5G) | Rel 17 work item of SCAS |
| SCAS\_5G | Security Assurance Specification for 5G | Rel 16 work item of SCAS |
| VNP\_SECAM\_SCAS | SECAM and SCAS for 3GPP virtualized network products | Rel-18 work item on SECAM and SCAS for 3GPP virtualized network products |
| FS\_VNP\_SECAM\_SCAS | Study on SECAM and SCAS for 3GPP virtualized network products | Rel-17 study item on SECAM and SCAS for 3GPP virtualized network products |
| FS\_SIV | Study on Security Impacts of Virtualisation | Rel-18 study item on security impacts of virtualisation |

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

[**ETSI GR NFV-IFA 029**](https://www.etsi.org/deliver/etsi_gr/NFV-IFA/001_099/029/03.03.01_60/gr_NFV-IFA029v030301p.pdf) **: Report on the Enhancements of the NFV architecture towards "Cloud-native" and "PaaS"**

[**ETSI GS NFV 006**](https://www.etsi.org/deliver/etsi_gs/NFV/001_099/006/04.04.01_60/gs_NFV006v040401p.pdf) **: Network Functions Virtualisation (NFV) Release 4; Management and Orchestration; Architectural Framework Specification**

# 3 Justification

As 5G technology becomes more widespread, more attention is being paid to ensuring the security of network products. The 3GPP has established the SCAS specification for various components of a 5G network, including gNB, AMF, SMF, UDM, AUSF, NRF, NEF, SEPP and UPF, as well as newer components such as N3IWF, NWDAF, IPUPS, SCP, MnF, split gNB, PCF, AAnF.

First generation Network function virtualization (NFV) implementations were based on Virtual Machine (VM) architectures. Current generation Network function virtualization implementations are using a container-based implementation architecture as either full replacement to VMs, or through groups of containers running with Virtual Machines.

SCAS for 3GPP virtualized network products was studied in Rel-17 and test cases were captured in TS 33.527. The scope of that work was limited to first generation Network function virtualization (NFV) implementations based on Virtual Machine (VM) architectures. Current generation Network functions are container-based, which needs to be reflected in the security assurance test cases.

# 4 Objective

The objective is to develop the SCAS for the Container-based network products, with the aims to:

- WT1: Identify critical assets and threats of the Container-based network products not already identified in TR 33.926 and TR 33.927

- WT2: Develop and/or adapt Container network products specific test cases

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Work Task ID | TU Estimate(Study) | TU Estimate(Normative) | RAN Dependency(Yes/No/Maybe)  | Inter Work Tasks Dependency  |
| 1. | NA | 1 TU (5 meeting cycles) | No |  |
| 2. | NA | 1 TU (5 meeting cycles) | No |  |

Total TU estimates for the normative phase: 2 TUs (5 meeting cycles)

Total TU estimates: 2

# 5 Expected Output and Time scale

|  |
| --- |
| New specifications  |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
| NA | NA | NA | NA | NA | NA |

|  |
| --- |
| Impacted existing TS/TR  |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TR 33.927 | The critical assets and threats discovered during the work of 5G Container-based Product SCAS | TSG#107(Mar 2025) |  |
| TS 33.527 | Add or update test cases to cover Container-based network products | TSG#107(Mar 2025) |  |

# 6 Work item Rapporteur(s)

Tbd

# 7 Work item leadership

SA3

# 8 Aspects that involve other WGs

None

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Ericsson |
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