**3GPP TSG-SA3 Meeting #119 draft\_S3-245372**

**Orlando, US, 11 -15 November 2024** **(revision of S3-244683)**

**Source: Cisco Systems**

**Title: New WID on Automatic Certificate Management Environment (ACME) for the Service Based Architecture (SBA)**

**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: Automatic Certificate Management Environment (ACME) for the Service Based Architecture (SBA)

Acronym: ACME\_SBA

Unique identifier:

Potential target Release: Rel-19

# 1 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 …

|  |  |
| --- | --- |
|  | Study |
|  | Normative – Stage 1 |
| x | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | 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) |
| FS\_ACME\_SBA | SA3 | 1020040 | Study of ACME for Automated Certificate Management in SBA |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
|  |  |  |

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

IETF RFC 8555: "Automatic Certificate Management Environment (ACME)".

IETF RFC 8738: "Automated Certificate Management Environment (ACME) IP Identifier Validation Extension".

IETF RFC 8739: "Support for Short-Term, Automatically Renewed (STAR) Certificates in the Automated Certificate Management Environment (ACME)".

IETF RFC 8823: "Extensions to Automatic Certificate Management Environment for End-User S/MIME Certificates".

IETF RFC 9447: "Automated Certificate Management Environment (ACME) Challenges Using an Authority Token".

IETF RFC 9448: "TNAuthList Profile of Automated Certificate Management Environment (ACME) Authority Token".

IETF RFC 7519: " JSON Web Token (JWT)".

IETF RFC 9110: "HTTP Semantics".

IETF RFC 7515: "JSON Web Signature (JWS)".

IETF RFC 4122: "Universally Unique IDentifier (UUID) URN Namespace".

IETF RFC 5280: “Internet X.509 Public Key Infrastructure Certificate and Certificate Revocation List (CRL) Profile”.

IETF RFC 8738: "Automated Certificate Management Environment (ACME) IP Identifier Validation Extension".

# 3 Justification

The TR 33.776: "Study on Automatic Certificate Management Environment (ACME) for the Service Based Architecture (SBA)" is concluding. It is proposed to start the work item based on the conclusions.

# 4 Objective

The objective of this work item is to specify the requirements to support ACME as an automated certificate management protocol for 5G SBA in an informative annex to TS 33.310.

|  |  |  |  |
| --- | --- | --- | --- |
| Work Task ID | **TU Estimate**  **(Study)** | **TU Estimate**  **(Normative)** | **Dependencies** |
| WT#1 |  | 1.0 | WT is self-contained |

# 5 Expected Output and Time scale

***{If this WID covers both stage 2 and stage 3, clearly indicate the different completion dates.}***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 33.310 | Enable use of ACME as an optional protocol for Automated Certificate Management (ACM) for 5GC Service Based Architecture (SBA) | SA #108 |  |

# 6 Work item Rapporteur(s)

# 7 Work item leadership

SA WG3

# 8 Aspects that involve other WGs

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Cisco Systems |
| Johns Hopkins University APL |
| US National Security Agency |
| Charter Communications |
| Google |
| NCSC |
| CableLabs |
| AT&T |
| BT |
| Deutsche Telekom |