**3GPP TSG-CT WG3 Meeting #117eC3-214143**

**E-Meeting, 18th – 27th August 2021**

**Source: Huawei, Nokia, Nokia Shanghai Bell**

**Title: Description of Network Functions and Service Operations**

**Spec: 3GPP TS 29.abc**

**Agenda item: 17.16**

**Document for: Decision**

**1. Introduction**

<Introduction part (optional)>

**2. Reason for Change**

Descriptions of NF service consumer and TSCTSF need to be specified.

**3. Conclusions**

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.abc.

\* \* \* First Change \* \* \* \*

### 5.2.1 Service Description

#### 5.2.1.1 Overview

This service provides:

- Authorization of NF Service Consumer requests for the subscription to the notification of the capability of time synchronization service.

- NF Service Consumer request to create and update time synchronization configuration, and to activate and deactivate the time synchronization service as described in clause 5.27.1.8 of TS 23.501 [2].

\* \* \* Next Change \* \* \* \*

##### 5.2.1.2.1 TSCTSF

The TSCTSF supports to:

- receive the request to create the subscription to the notification of the capability of time synchronization service from the NEF or AF and store it in the UDR;

- receive the request to delete the subscription to the notification of the capability of time synchronization service from the NEF or AF and remove the information from the UDR;

- receive the notification of the availability of the user plane node information from the PCF and subscribe the notification of user plane node related events at the PCF;

- determine the capability of time synchronization service based on the capability information received from the DS-TT(s) and NW-TT and notify the NEF or AF of the capability;

- receive the request to create or modify the time synchronization configuration from the NEF or AF, construct a PMIC to each DS-TT/UE to activate the time synchronization service in DS-TT, constructs PMIC(s) and UMIC to NW-TT to activate the time synchronization service in NW-TT and provision them to the PCF;

- Notify the NEF or AF of the current state of the time synchronization service configuration;

- receive the request of time synchronization deactivation from the NEF or AF and remove the time synchronization service configuration.

##### 5.2.1.2.2 NF service consumer

The NF service consumer supports to:

- send the request to create and delete the subscription to the notification of the capability of time synchronization service to TSCTSF;

- receive the notification of the capability of time synchronization service;

- send the request to create, modify and delete the time synchronization configuration to the TSCTSF.

\* \* \* Next Change \* \* \* \*

### 5.2.2 Service Operations

#### 5.2.2.1 Introduction

Service operations defined for the Ntsctsf\_TimeSynchronization service are shown in table 5.2.2.1-1.

Table 5.2.2.1-1: Ntsctsf\_TimeSynchronization Service Operations

|  |  |  |
| --- | --- | --- |
| Service Operation Name | Description | Initiated by |
| Ntsctsf\_TimeSynchronization\_CapsSubscribe | Allows the NF service consumer to create a subscription to the notification about the capability of time synchronization service for a list of UEs or a DNN/S-NSSAI combination. | NF service consumer (e.g. AF, NEF) |
| Ntsctsf\_TimeSynchronization\_CapsUnsubscribe | Allows the NF service consumer to delete the subscription to the notification about capability of time synchronization service for a list of UEs or a DNN/S-NSSAI combination. | NF service consumer (e.g. AF, NEF) |
| Ntsctsf\_TimeSynchronization\_CapsNotify | Allows the TSCTSF to notify the NF service consumer of the capability of time synchronization service. | TSCTSF |
| Ntsctsf\_TimeSynchronization\_ConfigCreate | Allows the NF service consumer to create a time synchronization configuration. | NF service consumer (e.g. AF, NEF) |
| Ntsctsf\_TimeSynchronization\_ConfigUpdate | Allows the NF service consumers to update the time synchronization configuration. | NF service consumer (e.g. AF, NEF) |
| Ntsctsf\_TimeSynchronization\_ConfigDelete | Allows the NF service consumer to delete the time synchronization configuration. | NF service consumer (e.g. AF, NEF) |
| Ntsctsf\_TimeSynchronization\_ConfigUpdateNotify | Allows the TSCTSF to notify the NF service consumer of the state of time synchronization configuration. | TSCTSF |

NOTE: The NEF and the AF use the Ntsctsf\_TimeSynchronization service in the same way.

\* \* \* End of Changes \* \* \* \*