**3GPP TSG-CT WG3 Meeting #117eC3-214147**

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

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

**Title: Ntsctsf\_TimeSynchronization\_ConfigCreate service operation**

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

**Agenda item: 17.16**

**Document for: Decision**

**1. Introduction**

<Introduction part (optional)>

**2. Reason for Change**

Ntsctsf\_TimeSynchronization\_ConfigCreate service operation needs to be specified.

**3. Conclusions**

**4. Proposal**

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

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

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

PTP Precision Time Protocol

TSC Time Sensitive Communication

TSCAI TSC Assistance Information

TSCTSF Time Sensitive Communication and Time Synchronization function

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

#### 5.2.2.5 Ntsctsf\_TimeSynchronization\_ConfigCreate

##### 5.2.2.5.1 General

This service operation is used by an NF service consumer to create a time synchronization configuration and activate the time synchronization service with the configuration.

The following procedures using the Ntsctsf\_TimeSynchronization\_ConfigCreate service operation are supported:

- creating a new configuration..

##### 5.2.2.5.2 Creating a new configuration

Figure 5.2.2.5.2-1 illustrates the creation of a configuration.



Figure 5.2.2.5.2-1: Creation of a configuration

To create a configuration, the NF service consumer shall send an HTTP POST message to the TSCTSF to the URI "{apiRoot}/ntsctsf-time-sync/<apiVersion>/subscriptions/{subscriptionId}/configurations". The HTTP POST message shall include the TimeSyncExposureConfig data structure as request body, as shown in figure 5.2.2.5.2-1, step 1. The TimeSyncExposureConfig data structure shall include:

- the user plane node Id within the "upNodeId" attribute;

- the time synchronization distribution methode within the "reqDisMethod" attribute;

- the notification URI within the "configNotifUri" attribute;

- the notification correlation Id within the "configNotifId" attribute;

and may include:

* the "gmEnable" attribute set to true if the AF requests 5GS to act as a grandmaster for PTP or gPTP;
* the gandmaster priority with the "gmPrio" attribute;
* the time domian within the "timeDom" attribute;
* the PTP profile within the "ptpProfiles" attribute; and
* the temporal validity condition within the "tempValidity" attribute.

Upon receipt of the HTTP request from the NF service consumer, if the request is authorized, the TSCTSF shall:

- create a new resource, which represents a new "Individual Time Synchronization Exposure Configuration" instance, addressed by a URI as defined in subclause 6.1.3.5 and containing a TSCTSF created resource identifier;

- send an HTTP "201 Created" response with TimeSyncExposureConfig data structure as response body and a Location header field containing the URI of the created Individual Time Synchronization Exposure Configuration resource, i.e. "{apiRoot}/ntsctsf-time-sync/<apiVersion>/subscriptions/{subcriptionId}/configuration/{configurationId}", as shown in figure 5.2.2.5.2-1, step 2.

Editor's Note: Error responses are FFS.

Editor's Note: Interaction with the PCF is FFS.

Editor's Note: Whether time synchronization distribution methode is a mandatory parameter is FFS.

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

#### 6.1.6.1 General

This clause specifies the application data model supported by the API.

Table 6.1.6.1-1 specifies the data types defined for the N<NF> service based interface protocol.

Table 6.1.6.1-1: N<NF> specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
|  |  |  |  |

Table 6.1.6.1-2 specifies data types re-used by the N<NF> service based interface protocol from other specifications, including a reference to their respective specifications and when needed, a short description of their use within the N<NF> service based interface.

Table 6.1.6.1-2: N<NF> re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| TimeSyncExposureConfig | 3GPP TS 29.522 [a] | Contains the parameters of time synchronization configuration. |  |

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