**3GPP TSG-CT WG3 Meeting #118eC3-215087**

**E-Meeting, 11th – 15th October 2021**

**Source: Huawei**

**Title: Ntsctsf\_QoSandTSCAssistance\_Notify service operation**

**Spec: 3GPP TS 29.565 v0.1.1**

**Agenda item: 17.16**

**Document for: Decision**

**1. Introduction**

<Introduction part (optional)>

**2. Reason for Change**

Ntsctsf\_QoSandTSCAssistance\_Notify service operation needs to be specified.

**3. Conclusions**

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.565.

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

#### 5.3.2.5 Ntsctsf\_QoSandTSCAssistance\_Notify

##### 5.3.2.5.1 General

The Ntsctsf\_QoSandTSCAssistance\_Notify service operation enables notification to NF service consumers that the previously subscribed event for the existing TSC application session context occurred or that the TSC application session context is no longer valid.

The following procedures using the Ntsctsf\_QoSandTSCAssistance\_Notify service operation are supported:

- Notification about TSC application session context event.

- Notification about TSC application session context termination.

##### 5.3.2.5.2 Notification about TSC application session context event

This procedure is invoked by the TSCTSF to notify the NF service consumer when a certain, previously subscribed, application session context event occurs, as defined in 3GPP TS 23.501 [2], 3GPP TS 23.502 [3] and 3GPP TS 23.503 [4].

Figure 5.3.2.5.2-1 illustrates the notification about TSC application session context event.



Figure 5.3.2.5.2-1: Notification about application session context event

When the TSCTSF determines that the event for the existing TSC AF application session context, to which the NF service consumer has subscribed to, occurred e.g. upon reception of an event notification for a PDU session from the PCF as described in 3GPP TS 29.514 [x], the TSCTSF shall invoke the Ntsctsf\_QoSandTSCAssistance\_Notify service operation by sending the HTTP POST request (as shown in figure 5.3.2.5.2-1, step 1) to the NF service consumer using the notification URI received in the subscription creation (or modification), as specified in subclause 5.3.2.6, and appending the "notify" segment path at the end of the URI. The TSCTSF shall provide in the body of the HTTP POST request the "EventsNotification" data type including:

- the notification correlation Id within the "notifCorreId"; and

- the list of the reported events in the "events" attribute. For each reported event, additional event information may be included.

The NF service consumer notification of other specific events using the Ntsctsf\_QoSandTSCAssistance\_Notify request is described in the related clauses.

Upon the reception of the HTTP POST request from the TSCTSF indicating that the PDU session and/or service related event occurred, the NF service consumer shall acknowledge that request by sending an HTTP response message with the corresponding status code.

If the HTTP POST request from the TSCTSF is accepted, the NF service consumer shall acknowledge the receipt of the event notification with a "204 No Content" response to HTTP POST request, as shown in figure 5.3.2.5.2-1, step 2.

##### 5.2.2.5.3 Notification about TSC application session context termination

This procedure is invoked by the TSCTSF to notify the NF service consumer that the TSC application session context is no longer valid, as defined in 3GPP TS 23.501 [2], 3GPP TS 23.502 [3] and 3GPP TS 23.503 [4].

Figure 5.2.2.5.3-1 illustrates the notification about application session context termination.



Figure 5.2.2.5.3-1: Notification about TSC application session context termination

When the TSCTSF determines that the TSF AF application session context is no longer valid, the TSC shall invoke the Ntsctsf\_QoSandTSCAssistance\_Notify service operation by sending the HTTP POST request (as shown in figure 5.2.2.5.3-1, step 1) using the notification URI received in the "Individual TSC Application Session Context" context creation, as specified in clause 5.3.2.2, and appending the "termination" segment path at the end of the URI, to trigger the NF service consumer to request the TSC application session context termination (see subclause 4.2.4.2). The TSCTSF shall provide in the body of the HTTP POST request the "TerminationInfo" data type including:

- the Individual TSC Application Session Context resource identifier related to the termination notification in the "resUri" attribute; and

- the application session context termination cause in the "termCause" attribute of the "TerminationCause" data type.

Upon the reception of the HTTP POST request from the TSCTSF requesting the TSC application session context termination, the NF service consumer shall acknowledge that request by sending an HTTP response message with the corresponding status code.

If the HTTP POST request from the TSCTSF is accepted, the NF service consumer shall acknowledge the receipt of the application session context termination request with a "204 No Content" response to HTTP POST request (as shown in figure 5.2.2.5.3-1, step 2) and shall invoke the Ntsctsf\_QoSandTSCAssistance\_Delete service operation to the TSCTSF as described in clause 5.2.2.4.

Editor's Note: Error and redirection responses are FFS.

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

### 6.2.6 Data Model

#### 6.2.6.1 General

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

Table 6.2.6.1-1 specifies the data types defined for the Ntsctsf\_QoSandTSCAssistance service based interface protocol.

Table 6.2.6.1-1: Ntsctsf\_QoSandTSCAssistance specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Clause defined | Description | Applicability |
| EventsNotification | 6.2.6.2.x | Describes the notification about the events occurred within an Individual TSC Application Session Context resource. |  |
| EventsSubscReqData | 6.2.6.2.3 | Identifies the events the application subscribes to within an Individual TSC Application Session Context resource |  |
| TscAppSessionContextData | 6.2.6.2.2 | Represents the Individual TSC Application Session Context resource data. |  |
| TscEvent | 6.2.6.3.3 | Indicates the subscribed event(s). |  |
|  |  |  |  |
|  |  |  |  |

Table 6.2.6.1-2 specifies data types re-used by the Ntsctsf\_QoSandTSCAssistance 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 Ntsctsf\_QoSandTSCAssistance service based interface.

Table 6.2.6.1-2: Ntsctsf\_QoSandTSCAssistance re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| AccumulatedUsage | 3GPP TS 29.122 [15] | Accumulated Usage. |  |
| Dnn | 3GPP TS 29.571 [15] | The DNN the user is connected to. |  |
| EthFlowDescription | 3GPP TS 29.514 [x] | Defines a packet filter for an Ethernet flow. |  |
| FlowInfo | 3GPP TS 29.122 [y] | Contains the IP data flow information. |  |
| Ipv4Addr | 3GPP TS 29.571 [15] | Identifies a period of time in units of seconds. |  |
| Ipv6Addr | 3GPP TS 29.571 [15] | Identifies an IPv6 address. |  |
| MacAddr48 | 3GPP TS 29.571 [15] | MAC Address. |  |
| QosMonitoringInformation | 3GPP TS 29.122 [y] | Contains Qos Monitoring information. |  |
| QosNotificationControlInfo | 3GPP TS 29.514 [x] | Indicates whether the QoS targets related to certain media component are not guaranteed or are guaranteed again. |  |
| ResourcesAllocationInfo | 3GPP TS 29.514 [x] | Indicates the status of the PCC rule(s) related to certain service data flow. |  |
| Snssai | 3GPP TS 29.571 [15] | Identifies the S-NSSAI. |  |
| SubscribedEvent | 3GPP TS 29.522 [17] | Indicates the subscribed event. |  |
| SupportedFeatures | 3GPP TS 29.571 [15] | Used to negotiate the applicability of the optional features defined in table 5.8-1. |  |
| TerminationInfo | 3GPP TS 29.514 [x] | Includes information related to the termination of the Individual TSC Application Session Context resource. |  |
| TscQosRequirement | 3GPP TS 29.122 [y] | Contains the QoS requirements for time sensitive communication. |  |
| UsageThreshold | 3GPP TS 29.122 [y] | Time period and/or traffic volume in which the QoS is to be applied. |  |
| Uri | 3GPP TS 29.571 [15] | Identifies a referenced resource. |  |

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

##### 6.2.6.2.x1 Type EventsNotification

Table 6.2.6.2.x1-1: Definition of type EventsNotification

| Attribute name | Data type | P | Cardinality | Description | Applicability |
| --- | --- | --- | --- | --- | --- |
| notifCorreId | string | M | 1 | It is used to set the value of Notification Correlation ID in the corresponding notification. |  |
| events | array(TscEvent) | M | 1..N | Contains the reported event(s). |  |
| failedResourcAllocReports | array(ResourcesAllocationInfo) | C | 1..N | Indicates the status of the PCC rule(s) related to certain failed media components. It shall be included when the event trigger is "FAILED\_RESOURCES\_ALLOCATION". |  |
| succResourcAllocReports | array(ResourcesAllocationInfo) | C | 1..N | Indicates the alternative service requirement the NG-RAN can guarantee to certain media components. It may be included when the event trigger is "SUCCESSFUL\_RESOURCES\_ALLOCATION". |  |
| qncReports | array(QosNotificationControlInfo) | C | 1..N | QoS notification control information. It shall be present when the notified event is "QOS\_NOTIF". |  |
| qosMonReports | array(QosMonitoringReport) | C | 1..N | QoS Monitoring reporting information. It shall be present when the notified event is "QOS\_MONITORING". |  |
| usgRep | AccumulatedUsage | C | 0..1 | Indicates the measured volume and/or time for sponsored data connectivity. It shall be present when the notified event is "USAGE\_REPORT". |  |

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