|  |
| --- |
|  |

|  |
| --- |
| CHANGE REQUEST |
| Meeting ID:\* | PRO 32 |
| Source:\* | Dale Seed, Convida Wireless, Seed.Dale@ConvidaWireless.comBob Flynn, Convida Wireless, Flynn.Bob@ConvidaWireless.com  |
| Date:\* | 2017-11-09 |
| Reason for Change/s:\* | See the introduction  |
| CR against: Release\* | Release 3 |
| CR against: WI\* | [x]  Active - WI-0058 - 3GPP & Cellular IoT Interworking [ ]  MNT maintenance / < Work Item number(optional)>Is this a mirror CR? Yes [ ]  No [x] mirror CR number: (Note to Rapporteur - use latest agreed revision)[ ]  STE Small Technical Enhancements / < Work Item number (optional)>Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0004 Version 3.4.0 |
| Clauses \* | Annex B |
| Type of change: \* | [ ]  Editorial change[ ]  Bug Fix or Correction[ ]  Change to existing feature or functionality[x]  New feature or functionalityOnly ONE of the above shall be ticked |
| Impacted other TS/TR(s) | <TS/TR number>, <Version Number>, and <Description on which aspect should be reflected in this TS/TR> |
| Post Freeze checking:\* | This CR contains only essential changes and corrections? YES [x]  NO [ ] This CR may break backwards compatibility with the last approved version of the TS? YES [ ]  NO [x]  |
| Template Version: January 2017 (Do not modify) |

**oneM2M Notice**

The document to which this cover statement is attached is submitted to oneM2M. Participation in, or attendance at, any activity of oneM2M, constitutes acceptance of and agreement to be bound by terms of the Working Procedures and the Partnership Agreement, including the Intellectual Property Rights (IPR) Principles Governing oneM2M Work found in Annex 1 of the Partnership Agreement.

GUIDELINES for Change Requests:

Provide an informative introduction containing the problem(s) being solved, and a summary list of proposals.

Each CR should contain changes related to only one particular issue/problem.

In case of a correction, and the change apply to previous releases, a separate “mirror CR” should be posted at the same time of this CR

Mirror CR: applies only when the text, including clause numbering are exactly the same.

Companion CR: applies when the change means the same but the baselines differ in some way (e.g. clause number).

Follow the principle of completeness, where all changes related to the issue or problem within a deliverable are simultaneously proposed to be made E.g. A change impacting 5 tables should not only include a proposal to change only 3 tables. Includes any changes to references, definitions, and acronyms in the same deliverable.

Follow the drafting rules.

All pictures must be editable.

Check spelling and grammar to the extent practicable.

Use Change bars for modifications.

The change should include the current and surrounding clauses to clearly show where a change is located and to provide technical context of the proposed change. Additions of complete clauses need not show surrounding clauses as long as the proposed clause number clearly shows where the new clause is proposed to be located.

Multiple changes in a single CR shall be clearly separated by horizontal lines with embedded text such as, start of change 1, end of change 1, start of new clause, end of new clause.

When subsequent changes are made to content of a CR, then the accepted version should not show changes over changes. The accepted version of the CR should only show changes relative to the baseline approved text.

## Introduction

This contribution provides parameter data type mappings between oneM2M and 3GPP for Configuration of NIDD, MT NIDD and MO NIDD request response messages . The mappings are w.r.t the T8 interface APIs(3gpp 29.122) defined for NIDD procedures.

### -----------------------Start of change 1-------------------------------------------

B.xx. Non-IP Data Delivery

B.xx.1. Introduction

The 3GPP T8 interface supports NIDD functionality as defined by TS 23.682 [15]. The protocol specification for the T8 interface is described in 3GPP TS 29.122 [45]. Additional details are provided in clause 7.12 of TS-0026[44]. An IN-CSE may use the T8 interface API to exchange oneM2M request and response primitives with an ADN-AE, MN-CSE or ASN-CSE hosted on a UE

B.xx.2. NIDD Configuration Request/Response

The IN-CSE requests a SCEF Configuration for NIDD via sending a message to a 3GPP SCEF to inform it that it expects Non-IP Data exchange to/from the UE hosting an ADN-AE, MN-CSE or ASN-CSE. The following table provides parameter data type mappings between oneM2M and 3GPP.

Table B.xx.2-1: NIDD Configuration Mapping

|  |  |  |
| --- | --- | --- |
| **3GPP parameter** | **oneM2M attribute/dataType** | **References and notes** |
| scsAsId | m2m:ID | Identifier of the SCS/AS. Pre-provisioned to IN-CSE. |
| tltrId | xs:positiveInteger | Long term transaction identifier. Assigned by IN-CSE based on internal policies/pre-provisioning. |
| ttrId | xs:positiveInteger | Short-term transaction identifier to correlate request and response.Assigned by IN-CSE based on internal policies/pre-provisioning. |
| self | xs:anyURI | Assigned by SCEF and returned in NIDD Configuration response.  |
| externalId | m2m:externalID | Configured by IN-CSE with the M2M-Ext-ID of the UE for which the NIDD configuration is carried out.  |
| msisdn | - | Not currently used by IN-CSE |
| duration | m2m:timestamp | This parameter is configured with the absolute time at which the NIDD Configuration is considered to expire. Assigned by IN-CSE based on internal policies/pre-provisioning. |
| reliableDataService | xs:boolean | This parameter may be included to Indicate if a reliable data service acknowledgement is enabled or not. Also present in the NIDD configuration response indicating if the reliable data service is enabled within the underlying 3GPP network.Within a NIDD Configuration Request this parameter is assigned by IN-CSE based on internal policies/pre-provisioning. Within a NIDD Configuration Request this parameter is assigned by SCEF. |
| pdnEstablishmentOption | xs:positiveInteger | Indicates SCEF of the preferred option if the UE has not established the PDN connection and a MT non-IP data needs to be sent.Permitted Values:WAIT\_FOR\_UE,INDICATE\_ERRORSEND\_TRIGGER Assigned by IN-CSE based on internal policies/pre-provisioning |
| notificationDestination | xs:anyURI | Set to a URI of the IN-CSE to which the SCEF should forward the NIDD MO requests to.Assigned by IN-CSE based on internal policies/pre-provisioning |
| maximumPacketSize | xs:positiveInteger | This shall be present in the NIDD configuration response message from SCEF to IN-CSE. Indicates the maximum NIDD packet size allowed. |
| status | xs:positiveInteger | This may be present in the NIDD configuration response message from SCEF to IN-CSE. Indicates the status of the NIDD configuration request.Permitted values:ACTIVETERMINATED\_UE\_NOT\_AUTHORIZEDTERMINATED |

Editor’s Note: There are discrepancies between TS 23.682 [15], TS-0026 [44] and TS 29.122 [45] for the NIDD Configuration parameters such as Requested Action, naming conventions and data types which needs to be resolved.

B.xx.3. NIDD MT Request/Response

The IN-CSE uses the T8 interface to send non-IP data to a UE hosting an ADN-AE, MN-CSE or ASN-CSE. The following table provides parameter data type mappings between oneM2M and 3GPP.

Table B.xx.3-1: NIDD MT Mapping

|  |  |  |
| --- | --- | --- |
| **3GPP parameter** | **oneM2M attribute/dataType** | **References and notes** |
| scsAsId | m2m:ID | Identifier of the SCS/AS. Pre-provisioned to IN-CSE. |
| tltrId | xs:positiveInteger | Long term transaction identifier. Assigned by IN-CSE based on internal policies/pre-provisioning. |
| ttrId | xs:positiveInteger | Short-term transaction identifier to correlate request and response.Assigned by IN-CSE based on internal policies/pre-provisioning. |
| self | xs:anyURI | Assigned by SCEF and returned in NIDD response.  |
| externalId | m2m:externalID | Configured by IN-CSE with the M2M-Ext-ID of the UE for which the NIDD configuration is carried out.  |
| msisdn | - | Not currently used by IN-CSE |
| data | xs:anySimpleType | Non-IP data that needs to be delivered to the UE. This parameter shall contain the request or response primitive to be sent to the ADN-AE, ASN or MN-CSE hosted on the UE. |
| reliableDataService | xs:boolean | This parameter may be included to Indicate if a reliable data service acknowledgement is enabled or not. Assigned by IN-CSE based on internal policies/pre-provisioning. |
| pdnEstablishmentOption | xs:positiveInteger | Indicates to SCEF of the preferred option if the UE has not established the PDN connection and a MT non-IP data needs to be sent. Permitted Values:WAIT\_FOR\_UE,INDICATE\_ERRORSEND\_TRIGGER Assigned by IN-CSE based on internal policies/pre-provisioning |
| maximumLatency | xs:positiveInteger | Indicates the maximum delay acceptable for the MT data. IN-CSE may derive this setting from the request Expiration Time if provided in the request else will be assigned by IN-CSE based on internal policies/pre-provisioning |
| priority | xs:positiveInteger | Inidicates the priority of the non-IP data to be sent.Assigned by IN-CSE based on internal policies/pre-provisioning |
| deliveryStatus | xs:positiveInteger | This may be present in the NIDD MT response message from SCEF to IN-CSE. Indicates the status of the NIDD downlink data deliveryPermitted values:SUCCESSSUCCESS\_NEXT\_HOP\_ACKNOWLEDGEDSUCCESS\_NEXT\_HOP\_UNACKNOWLEDGEDSUCCESS\_ACKNOWLEDGEDSUCCESS\_UNACKNOWLEDGEDTRIGGERINGBUFFERINGBUFFERING\_TEMPORARILY\_NOT\_REACHABLESENDINGSTOPPED\_BUT\_TRIGGERINGFAILUREFAILURE\_QUOTA\_EXCEEDEDFAILURE\_RATE\_EXCEEDEDFAILURE\_DATA TOO\_LARGEFAILURE\_TEMORARILY\_NOT\_REACHABLEFAILURE\_NEXT\_HOPFAILURE\_TIMEOUT |
| requestedRetransmissionTime | - | Not currently used by IN-CSE |

Editor’s Note: There is a discrepancy between TS 23.682 [15], TS-0026 [44] and TS 29.122 [45] for the NIDD MT parameters such as BufferedIndication, TriggerIndication,Hop-by-Hop Acknowledgment Indication and data types which needs to be resolved.

B.xx.4. NIDD MO Request/Response

Non-IP data from a UE hosting ADN-AE, MN-CSE or ASN-CSE is received at the IN-CSE via SCEF. SCEF sends a notification to the IN-CSE to indicate NIDD uplink data delivery. The following table provides parameter data type mappings between oneM2M and 3GPP.

Table B.xx.4-1: NIDD MO Mapping

|  |  |  |
| --- | --- | --- |
| **3GPP parameter** | **oneM2M attribute/dataType** | **References and notes** |
| tltrId | xs:positiveInteger | Long term transaction identifier. Assigned by IN-CSE based on internal policies/pre-provisioning. |
| ttrId | xs:positiveInteger | Short-term transaction identifier to correlate request and response.Assigned by IN-CSE based on internal policies/pre-provisioning. |
| externalId | m2m:externalID | Configured by IN-CSE with the M2M-Ext-ID of the UE for which the NIDD configuration is carried out.  |
| msisdn | - | Not currently used by IN-CSE |
| data | xs:anySimpleType | Non-IP data received from the UE. This parameter shall contain the request or response primitive to be processed by the IN-CSE. |
| reliableDataService | xs:boolean | This parameter may be included to Indicate if a reliable data service acknowledgement is enabled or not.  |

Editor’s Note: There is a discrepancy between TS 23.682 [15], TS-0026 [44] and TS 29.122 [45] for the NIDD MO parameters such as data types which needs to be resolved.

### -----------------------End of change 1 --------------------------------------------

CHECK LIST

* Does this Change Request include an informative introduction containing the problem(s) being solved, and a summary list of proposals.?
* Does this CR contain changes related to only one particular issue/problem?
* Have any mirror CRs been posted?
* Does this Change Request make **all** the changes necessary to address the issue or problem? E.g. A change impacting 5 tables should not include a proposal to change only 3 tables?Does this Change Request follow the drafting rules?
* Are all pictures editable?
* Have you checked the spelling and grammar?
* Have you used change bars for all modifications?
* Does the change include the current and surrounding clauses to clearly show where a change is located and to provide technical context of the proposed change? (Additions of complete clauses need not show surrounding clauses as long as the proposed clause number clearly shows where the new clause is proposed to be located.)
* Are multiple changes in this CR clearly separated by horizontal lines with embedded text such as, start of change 1, end of change 1, start of new clause, end of new clause.?