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| CHANGE REQUEST | |
| Meeting ID:\* | SDS #64 |
| Source:\* | Andreas Kraft, Exacta GSS, [andreas.kraft@exactagss.com](mailto:andreas.kraft@exactagss.com)  Luke Hawksworth, BT, [luke.hawksworth@bt.com](mailto:luke.hawksworth@bt.com)  Rana Kamill, BT, [rana.kamill@bt.com](mailto:rana.kamill@bt.com) |
| Date:\* | 2024-04-18 |
| Reason for Change/s:\* | TS-0004: Clarification for SPARQL query result serialization format |
| CR against: Release\* | Release 5 |
| CR against: WI\* | Active WI-xxxx  MNT maintenance / < Work Item number(optional)>  Is this a mirror CR? Yes  No  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 v.4.19.0 |
| Clauses \* | 7.3.3.19.0 |
| Type of change: \* | Editorial change  Bug Fix or Correction  Change to existing feature or functionality  New feature or functionality  Only ONE of the above shall be ticked |
| Impacted other TS/TR(s) |  |
| Post Freeze checking:\* | This CR contains only essential changes and corrections? YES  NO  This CR may break backwards compatibility with the last approved version of the TS? YES  NO |
| 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

TS-0004 defines in clause 7.3.3.19 the handling of different semantic query options. The results of the queries that involve SPARQL queries can be encoded in different formats, as defined by W3C specifications. This is specified in clause 7.3.3.19.0 “Introduction”, but it is not immediately clear from the text how the serialization format is selected by the CSE.

From the available W3C specified serialization formats only XML and JSON are supported by oneM2M. The selection of the format is as follows:

* XML serialization is used in case the oneM2M response will be encoded as XML
* JSON serialization is used in case the oneM2M response will be encoded as JSON or CBOR.

The proposed changes in Change 1 try to clarify the procedure.

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 7.3.3.19 Semantic query

##### 7.3.3.19.0 Introduction

Semantic queries enable the retrieval of both explicitly and implicitly derived information based on syntactic, semantic and structural information contained in data (such as RDF data). The result of a semantic query is the semantic information/knowledge for answering/matching the query. The SPARQL query result shall use the XMLor JSON formats defined by the W3C [[57](#REF_W3CSPARQLXML)], [[58](#REF_W3CSPARQLJSON)] for semantic queries and their result serializations. The XML result format shall be used if the oneM2M response primitive is serialized as XML. The JSON result format shall be used if the oneM2M response primitive is serialized as JSON or CBOR. Note that, in the following descriptions, the general term semantic resource is used to refer to <semanticDescriptor> resources and any other future resources containing semantic information.

A given semantic query needs to be executed on a set of RDF triples (called the "RDF data basis"), which may be distributed in the resource tree and stored in different semantic resources. The Receiver shall perform semantic graph scoping, which is the process of establishing the "query scope" for this semantic query in order to build its RDF data basis. The following two approaches may be used to decide the semantic query scope of a semantic query:

Approach-1: The scope of the semantic query is provided implicitly.

Approach-2: The scope of the semantic query is provided explicitly

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*