

Knowledge Graph Construction

W3C - Community Group

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RDF Mapping Language

3

- **Reference** specification(s) addressing **identified challenges**
- **6 independent modules** based on different functionalities
- Maintaining **backwards compatibility** with R2RML
- All resources in all modules use **same namespace and prefix**
 - `rm1: https://w3id.org/rm1/`
- More than 5 years of work:
 - 77 online meetings
 - 3 annual face2face meetings
 - [7 workshop & 4 challenges](#) at ESWC
 - [3 tutorials](#) (ESWC, ECAI, K-CAP)
 - [Several papers published](#)







































*KGC W3C-CG Annual face2face Meeting 2023
Santiago de Compostela (SPAIN)*

RML Modules Overview

RML Ontology Modules

Here you can find the list of modules of the mapping language RML.

Ontology	Serialization	License	Language	Links	Description
RML-Core	rdf+xml ttl	CC-BY	en	 Repository  Issues  Requirements  Specification  Shapes  Test cases	Core ontology that defines the necessary resources to create a mapping.
RML-IO: Source and Target	rdf+xml ttl	CC-BY	en	 Repository  Issues  Requirements  Specification  Shapes  Test cases	Ontology module that allows the description of input data sources and target outputs.
RML-CC: Collections and Containers	rdf+xml ttl	CC-BY	en	 Repository  Issues  Requirements  Specification  Shapes  Test cases	Ontology module that allows the generation of collections and containers.
RML-FNML: Functions	rdf+xml ttl	CC-BY	en	 Repository  Issues  Requirements  Specification  Shapes  Test cases	Ontology module that allows the application of data transformation functions.
RML-Star	rdf+xml ttl	CC-BY	en	 Repository  Issues  Requirements  Specification  Shapes  Test cases	Ontology module that allows the construction of RDF-star graphs.
RML-LV: Logical Views	rdf+xml ttl	CC-BY	en	 Repository  Issues  Requirements  Specification  Shapes  Test cases	Ontology module that allows the description of views over data sources.

Composed of **6 modules**:

- **RML-Core**: schema transformations
- **RML-IO**: source and target data
- **RML-FNML**: transformation functions
- **RML-CC**: collections & containers
- **RML-LV**: views over data sources
- **RML-star**: to be adapted for RDF 1.2





Generated Resources

Specifications

- Feature details, examples of use and implementation instructions

w3id.org/rml/core/spec

w3id.org/rml/star/spec

w3id.org/rml/fnml/spec

w3id.org/rml/cc/spec

w3id.org/rml/io/spec

w3id.org/rml/lv/spec

Ontologies

- Implemented in OWL2
- Available in multiple serializations
- Human readable documentation

w3id.org/rml/core

w3id.org/rml/star

w3id.org/rml/fnml

w3id.org/rml/cc

w3id.org/rml/io

w3id.org/rml/lv

Test cases

- Language coverage by processing engines
- Total test-cases: 259

w3id.org/rml/core/test-cases

w3id.org/rml/star/test-cases

w3id.org/rml/fnml/test-cases

w3id.org/rml/cc/test-cases

w3id.org/rml/io/test-cases

w3id.org/rml/lv/test-cases

SHACL shapes

- Restrictions of module constructs
- Usable to test correctness of mappings

w3id.org/rml/core/shapes

w3id.org/rml/star/shapes

w3id.org/rml/fnml/shapes

w3id.org/rml/cc/shapes

w3id.org/rml/io/shapes

w3id.org/rml/lv/shapes



Tooling and Support

Tooling

More than 8 implementations ([SDM-RDFizer](#), [CARML](#), [BURP](#), [RMLMapper](#), [Morph-KGC](#), [FlexRML](#), [typhon-rml](#), Bloomberg, [RMLStreamer](#), and more...)

Conformance challenge every year over the test-cases

Support for W3C-WG

Bloomberg, CITIC, Logic, SIEMENS, Digst, WU, imec, Inria, UPM, VITO, Digitaal Vlaanderen, Orange, Metaphacts, Ontopic, EU Commission, NTT Data, KULeuven, Telefónica, Meaningfy, and more...

Give us support at: <https://github.com/w3c/strategy/issues/443>

