

## Tool for materializing OWL ontologies in a column-oriented database

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**Resumen(Abstract).** Big data technologies enable people to store, analyze, and utilize large amounts of complex data effectively. In this context, NoSQL (Not only Structured Query Language) databases have emerged as the most commonly used infrastructure for handling big Resource Description Framework data. In this paper, we present our proposal to materialize classified OWL (Web Ontology Language) ontologies in a NoSQL database. This materialization process enables the distributed storage of Resource Description Framework data by exploiting the inherent distribution of the NoSQL database nodes. Furthermore, this approach supposes the first step toward a novel approach to scalable OWL reasoning, which enables scalable Linked Data reasoning. To validate our proposal, we developed a prototype for a tool that stores an OWL ontology in a Cassandra database following our approach. Finally, we introduce our reasoning strategy to compute the ontology closure using this Cassandra database.