

The RDF framework has gained popularity in recent years, as it makes semantic data easily accessible and queryable on the Web. However, RDF data management systems are facing certain challenges, particularly that of scalability. NoSQL databases, which are known for their ability to store large amounts of unstructured data, could be exploited for this purpose to gain more efficient systems. Even more interesting would be the use of Multi-Model NoSQL databases, which incorporate several different data models within a single database management system, and were created as a response to Polyglot Persistence and its challenges. As of yet, semantic data is not well supported in such database systems. In this thesis, we present approaches for transforming and storing RDF data within the Multi-Model database ArangoDB, as well as propose a query transformation algorithm that enables us to query RDF data in ArangoDB using SPARQL. The functionality of these data transformation and query transformation algorithms is experimentally evaluated on sample data and queries, using our prototype implementation.