

ABSTRACT: Today a large amount of RDF data is published on the Web. However, the openness of the Web and the ease to combine RDF data from different sources creates new challenges. The Web of data is missing a uniform way to assess and to query the trustworthiness of information. In this paper we present tSPARQL, a trust-aware extension to SPARQL. Two additional keywords enable users to describe trust requirements and to query the trustworthiness of RDF data. Hence, tSPARQL allows adding trust to RDF-based applications in an easy manner. As the foundation we propose a trust model that associates RDF statements with trust values and we extend the SPARQL semantics to access these trust values in tSPARQL. Furthermore, we discuss opportunities to optimize the execution of tSPARQL queries.