

Abstract

The Semantic Web is a collection of technologies and standards that allow machines to understand the meaning (semantics) of information on the Web. Some technologies there are RDF, triple store, and RDF query language. One of the triple store that can be used are Sesame, and one of the RDF query language that can be used is a SPARQL query. Problem often occurred in the query process, one of which was a mistake in choosing the characteristics of the SPARQL query to be used, and therefore contributes to the performance of Sesame triple store used.

In this thesis, the method of performance testing of triple store Sesame SPARQL query is implemented by using some files from DBpedia as its data set. From that testing can be analyzed the influence of any SPARQL query used to Sesame performance based on response time and throughput. Using of this method is expected to result a solution such as the good characteristics of SPARQL query to be used on Sesame.

Tests carried out to analyze the effect of SPARQL query to sesame performance based on response time and throughput. Either on the server side or client side, the number of lines shown from the SPARQL queries result are very influential on the sesame performance. Selection of SPARQL query forms also affect the sesame performance. In addition, a growing number of SPARQL query is executed at a time then the sesame performance will decrease, and vice versa.

Keywords: *Triple store, Sesame, SPARQL query, semantic web, RDF, DBpedia*