

Web Service Composition based K-d Tree

Tahereh Davodi

Sima Emadi

Faculty of Engineering, Yazd Branch, Islamic Azad University, Yazd, Iran

ABSTRACT

In Services composition when concrete services are selected, functional and un-functional requirements have to be considered, when many functionally equivalent services are available, Quality of Service (QoS) attributes such as latency, price and availability, are highly regarded. By rapid increasing the number of distributed services in cloud, the impacts of service quality in networks are growing up fast too. However, existing approaches give no difference between the QoS of services themselves and network. Therefore, the computed latency is different from the actual latency, so service quality would be less than what was expected. Different resolves are suggested such as conscious approach of network quality parameters. In mentioned approach there are some problems like incompatibility of services in Composition and time-consuming algorithm execution. In this paper we use K-D tree and nearest neighbor to resolve problems. K-D tree considers latency QoS parameters, location coordinates of the user and the use of linear lists of services. These will help a better search for best neighbor in order to composition. Also in compatibility of services are considered. Results show the compatibility of services and dynamic Composition with lowest time for execution

Keywords: Service Composition, Quality of Service, K-D Tree, Incompatible Service.