Abstract

Web services selection and composition is a new software development paradigm to achieve service oriented computing. QoS of compound service is a key factor for satisfying the users’ needs. The services selection algorithm based on quality of services is a combinatorial optimization problem. For Web services selection for composition based on QoS, the optimization algorithms can solve it well. Genetic Algorithm and Gravitational Search Algorithm are proposed to solve this issue. In order to meet the QoS requirements of consumers, this paper presents the QoS calculation of non functional requirements such as cost, availability, reliability and execution time. To verify the effectiveness in latency of Web Services selection the above two algorithms are compared. Results indicate the Gravitational Search Algorithm improves the latency over the Genetic algorithm.

References

- B. Zibanezhd, K. Zamanifar, N. Nematbakhsh, F. Mardukhi &quot;An Approach for Web Services Composition Based on QoS and Gravitational Search Algorithm&quot;.
- Xi Chen, Xudong Liu, Zicheng Huang, and Hailong Sun. "Web Services Composition and Optimizing Algorithm Based on QoS".
- Esmat Rashedi, Hessien Nezamabadi-pour, Saeid Saryazdi, Malihe M. Farsangi.
- B Prashanth and Y Narahari. "Efficient Algorithm for Combinatorial Auctions with Volume Discounts Arising in Web Service Composition".
- Yves Vanrompay, Peter Rigole, Yolande Berbers. "Genetic Algorithm-Based Optimization of Service Composition and Deployment".
- Demian Antony Dapos;Mello, V. S. Ananthanaranyana. "A Tree Structure for Web Service Composition". @2009.

**Index Terms**

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