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HD-WSComp: Hypergraph Decomposition for Web Services Composition Based on QoS

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Abstract : The increasing number of Web service (WS)providers throughout the globe, have produced numerous Web services providing the same or similar functionality. Therefore, there is a need of tools developing the best answer of queries by selecting and composing services with total transparency. This paper reviews various QoS based Web service selection mechanisms and architectures which facilitate qualitatively optimal selection, in other fact Web service composition is required when a request cannot be fulfilled by a single web service. In such cases, it is preferable to integrate existing web services to satisfy user's request. We introduce an automatic Web service composition method based on hypergraph decomposition using hypertree decomposition method. The problem of selection and the composition of the web services is transformed into a resolution in a hypertree by exploring the relations of dependency between web services to get composite web service via employing an execution order of WS satisfying global request.

Keywords : web service, web service selection, web service composition, QoS, hypergraph decomposition, BE hypergraph decomposition, hypertree resolution
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