

## Functionality Based Composition of Web Services to Attain Maximum Quality of Service

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**Abstract :** Web service composition is an effective approach to complete the web based tasks with desired quality. A single web service with limited functionality is inadequate to execute a specific task with series of action. So, it is very much required to combine multiple web services with different functionalities to reach the target. Also, it will become more and more challenging, when these services are from different providers with identical functionalities and varying QoS, so while composing the web services, the overall QoS is considered to be the major factor. Also, it is not true that the expected QoS is always attained when the task is completed. A single web service in the composed chain may affect the overall performance of the task. So care should be taken in different aspects such as functionality of the service, while composition. Dynamic and automatic service composition is one of the main option available. But to achieve the actual functionality of the task, quality of the individual web services are also important. Normally the QoS of the individual service can be evaluated by using the non-functional parameters such as response time, throughput, reliability, availability, etc. At the same time, the QoS is not needed to be at the same level for all the composed services. So this paper proposes a framework that allows composing the services in terms of QoS by setting the appropriate weight to the non-functional parameters of each individual web service involved in the task. Experimental results show that the importance given to the non-functional parameter while composition will definitely improve the performance of the web services.

**Keywords :** composition, non-functional parameters, quality of service, web service

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