Abstract

As the business process more complex, it is necessary to merge multiple web services (web services composition) to complete a specific task. Web service can has more than one operations. Those can have inputs / outputs similar to the others or can also have inputs that are the outputs of another operation. This can be modelled as a graph which is called a service dependency graph (SDG).

Composition plan is generated by doing search on SDG. Furthermore, we will see the accuracy, optimal, and processing time and also the influence from the number of web services and the input's incompleteness to the accuracy, optimal, and processing time.

The tests showed that the resulting composition plan is accurate and optimal. The number of web services and the input's incompleteness affect the optimal and processing time, but it does not affect the accuracy. The Composition plan also can dynamically adapt to the change that happen in service provider.

Keywords*: web service, composition, input, output, service dependency graph*