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**Abstract**

Web Services are built on service-oriented architecture which is based on the notion of building applications by discovering and orchestrating services available on the web. Complex business processes can be realized by discovering and orchestrating already available services on the web. In order to make these orchestrated web services resilient to faults, we proposed a simple and elegant checkpointing policy called "Call based Global Checkpointing of Orchestrated web services" which specifies that when a web service calls another web service the calling web service has to save its state. But performance of the web services implementing this policy reduces due to checkpointing overhead. In an effort to improvise this policy, we propose in this paper, a checkpointing policy which uses Predicted Execution Time and Mean Time Between Failures of the called web services to make checkpointing decisions. This policy aims at reducing the required number of Call based Checkpoints but at the same time maintains the resilience of web services to faults.

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### Index Terms

Computer Science

Distributed Computing

**Keywords**

Checkpoints  
Time Between Failures

Web Services

Mean

Orchestration