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Editorial

Workflow Correctness Checking for Testing Cloud Service

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Context

Testing cloud allows measuring the software engineering artifacts through event- computed behavior. The executable behavior is capable to store data from outside-in on the orchestrated services via the implementations somewhere online. By this implementation, the collaborators in a System Under Test (SUT) should enable the state object to store the data passing from the service composition. When composing collaborated object, the interface binds the demand-driven quality aspects.

Problem

With that, however, it is a need to guarantee the correctness of quality assurance for each work flow composed that enables to view the data retrieved from inside-out for each object behavior.

Gaps

There are several related work with little, but no significant outputs on the area especially from the perspectives of optimization on the input data modeling to define measuring the cloud service.

Approach

In this paper, the approach is to define workflow correctness for validating the state space of the cloud service. The aim is to use YAWL language for input data modeling to measure the cloud computing with a covering array algorithm such as ACTS IpoG.

Evaluation

As evaluation, a test case management with Junit de-facto standard Junit 4 with JunitParams framework in java is developed. Then, a demo application and its adapted test model (or Xtext internal evaluated CitLab Model) populated with the test stub methods, which are sourced from the test case generated, are tested and measured with coverage analysis.

Result

A data-driven YAWL enabled specification with Feature IDE Eclipse Plugin is modeled to use the sample CitLab Model with workflow correctness which validates each node of the specified feature model to preserve the soundness property without knowledge of the implementation.

Outlook

As conclusion, the findings support the software developers for maintaining the cloud services (or specification), thus improving the test coverage measurement of the cloud computing. This research work is intended to initialize the need for developing a new way of testing strategy for improving big data workflow correctness without knowledge of the implementation.