Abstract

Service-oriented architecture (SOA) is a software architecture design pattern based on discrete pieces of software providing application functionality as services to other applications. Before application of SOA, if a model of problem is drawn and analyzed, then possible flaws in architecture implementation phase could be prevented. This paper presents a method for evaluating SOA based on formal models. To achieve this goal, products of C4ISR framework are calculated, then are marked on UML diagrams to get the real model. For this purpose, the UML elements should be indexed according to efficiency. Following that the UML elements based on presented algorithm are transformed to GSPN. The results suggest that the ATM is
done on a case study demonstrates that modeling and evaluation in the design phase prevents the high cost of implementation phase.

References


Index Terms

Computer Science Software Engineering

Keywords

Service-Oriented Architecture Non-Functional Requirement Software Architecture
Performance Evaluation

Formal Model.