

Introduction: First International Workshop on Quality of Service Concerns in Service Oriented Architectures (QoSCSOA 2008)

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1 Workshop Description

Service-Oriented Architecture (SOA) is having a substantial impact on the way software systems are developed. Today many systems are being designed and developed that use an SOA style. Although some progress has been made on several fronts on addressing Quality-of-Service (QoS) concerns in SOAs much research is still needed in addressing QoS issues in the design, development and operation of SOA-based systems. This workshop focuses on techniques and approaches for managing QoS concerns throughout the entire lifecycle of SOA-based systems. The following topics are of interest in this workshop:

- Techniques for determining quality requirements for SOA-based systems
- Techniques, patterns and approaches for handling specific quality attribute requirements in the design of SOA-based systems
- Techniques, patterns and approaches for handling specific quality attribute requirements in the implementation of SOA-based systems
- Deployment and Monitoring of SOA-based systems
- Resourcing models to guarantee specific QoS requirements (virtualisation, grid, etc)
- QoS aspects of virtualised SOA-based systems
- Assessment techniques and approaches for specific qualities of SOA-based systems including modeling and simulation of specific qualities
- Service Level Agreements (SLAs) in an SOA context including their development and negotiation
- Validation of properties/service qualities in SOA-based systems
- Economics of handling specific QoS requirements in SOA-based systems
- Managing QoS concerns for SOA-based systems throughout the entire software life cycle
- Autonomic QoS management in SOA-based systems
- Relationship of QoS of SOA-based systems to the underlying business processes

2 Workshop Objectives

The objective of this workshop is to bring together researchers and practitioners with experience in QoS issues in SOAs. The workshop aims to determine the current state of the practice in determining, using and managing QoS and non-functional requirements throughout the entire life cycle of an SOA-based system. It is proposed to determine the current state of the art in this area and outline a roadmap of potential research directions.

3 Motivation

As SOA technology matures and organisations are adopting and building business and mission critical systems using the SOA approach there is a growing need to make sure that such systems meet their non-functional and QoS requirements as well as their functional requirements. It is important that the non-functional and QoS requirements of such SOA-based systems are determined early in the life cycle and the systems are designed, built, and deployed in such a way so as to meet these requirements. The aim of this workshop is to examine how non-functional and QoS requirements are captured, used and managed throughout the entire life cycle of SOA-based systems.

4 Workshop Format

The half-day workshop consists of a keynote by Adrian Mos on the theme of “*Challenges in Integrating Tooling and Monitoring for QoS Provisioning in SOA Systems*”.

The following technical papers were accepted for presentation at the workshop:

- *Challenges for Assuring Quality of Service in a Service-Oriented Environment*, Sriram Balasubramaniam, Grace A. Lewis, Ed Morris, Soumya Simanta, and Dennis B. Smith (*paper not included in proceedings*)
- *A Scalable Approach for QoS-based Web Service Selection*, Mohammad Alrifai, Thomas Risse, Peter Dolog, and Wolfgang Nejdl
- *Towards QoS-based Web Services Discovery*, Jun Yan and Jingtai Piao
- *A Redundancy Protocol for Service-Oriented Architectures*, Nicholas May
- *A Context-aware Trust Model for Service-oriented Multi-agent Systems*, Kaiyu Wan and Vasu Alagar

The workshop also includes a discussion session led by Vladimir Tosic on the topic “*Three Common Mistakes in Modeling and Analysis of QoS of Service-Oriented Systems*”.