



Trust-based Discovery and Interactions in Mixed Service-Oriented Systems

Vienna University of Technology
Information Systems Institute
Distributed Systems Group

Daniel Schall, Florian Skopik,
Schahram Dustdar
lastname@infosys.tuwien.ac.at

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Web-based collaborations and processes have become essential in today's business environments. Such processes typically span interactions between people and services across globally distributed companies. Web services and SOA are the de facto technology to implement compositions of humans and services. The increasing complexity of compositions and the distribution of people and services require adaptive and context-aware interaction models. To support complex interaction scenarios, we introduce a mixed service-oriented system composed of both human-provided and software-based services interacting to perform joint activities or to solve emerging problems. However, competencies of people evolve over time, thereby requiring approaches for the automated management of actor skills, reputation, and trust. Discovering the right actor in mixed service-oriented systems is challenging due to scale and temporary nature of collaborations. We present a novel approach addressing the need for flexible involvement of experts and knowledge workers in distributed collaborations. We argue that the automated inference of trust between members is a key factor for successful collaborations. Instead of following a security perspective on trust, we focus on dynamic trust in collaborative networks.

Keywords: mixed service-oriented systems, human-provided services, dynamic interactions, discovery, trust