Capability as a Service in digital enterprises (CaaS)

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Project Description

The capabilities of an enterprise determine competitive advantage and provide business value. Capabilities refer to essential functions of the enterprise that link business goals to business processes, resources and actors. These capabilities are mapped onto IT solutions, such as software services, that are delivered to customers. Aligning an enterprise's capabilities to its service provision is far from a straightforward task especially nowadays that the dominance and volatility of the Internet shifts the problem solving focus, from upfront predictable designs to identifying and capitalizing on emerging and instantaneous business opportunities. Operating in the modern digital business world increases the importance of business agility, for example, in terms of customization, availability and scalability. The requirement for modern information systems is to have the capability of delivering business value considering contextual variations such as, business models of the suppliers, user preferences and past activities, location, resource pricing and demand forecast, as well as local legislation and practices.

The main goal of the CaaS project is to bring about a shift from the service-oriented paradigm to a capability delivery paradigm. This puts particular focus on the context in which digital enterprises make their business, requiring customization of the business offerings as the context of delivery changes. The CaaS project aims to facilitate configuration of business services and development of executable software to monitor the fitness of purpose of these services to evolving business contexts and where necessary to adjust these services according to the context. To this end, the CaaS project will deliver the Capability Driven Development (CDD) approach that will allow digital enterprises to exploit the notion of 'capability' as a means of both designing for services and with services.

The CDD will be in the form of (1) modeling languages for representing enterprise designs, context models, and patterns, (2) a methodology for detailing how capabilities may be specified and how these may be used for designing new services, (3) reusable best practices and capability delivery patterns, (4) algorithms for dealing with business context awareness and service re-configuration, (5) a tool environment for modeling, design and delivery, and (6) a set of case studies demonstrating the applicability of the CDD. The project is driven by three use cases from different business domains namely, energy, compliance, and e-government. These use cases act as the means of guiding the development of CDD, validating CDD and revising CDD in a project lifecycle involving three major iterations. It is expected that on completion, the CaaS project will deliver results that will be theoretically sound and practically relevant with the potential for making a big impact on the delivery of software for the digital enterprise of tomorrow.

Partners:

Stockholm University, Sweden (Coordinator)
Riga Technical University, Latvia
University of Rostock, Germany
Everis, Spain
CROZ d.o.o., Croatia
Portugal Telecom Comunicacoes, Portugal
SIV AG, Germany
Fresh T Limited, UK
Universitat Politecnica de Valencia, Spain