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Title Photo and Icons: Members of the CloudSocket Consortium

CloudSocket

Business and IT-Cloud Alignment using a Smart Socket

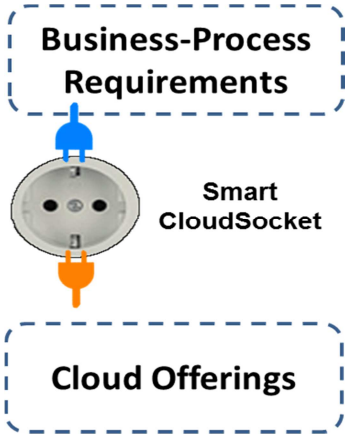
"Script your business into the Cloud"

European Commission

funded by the European Commission

VISION

Business-to-IT alignment ensures that IT investments are aligned with business. At the same time, business specialists are excluded from the Cloud due to missing IT expertise and the mismatch between business requests and IT-offerings. Especially SMEs are thus in danger to fall behind in Cloud usage for covering their business needs.



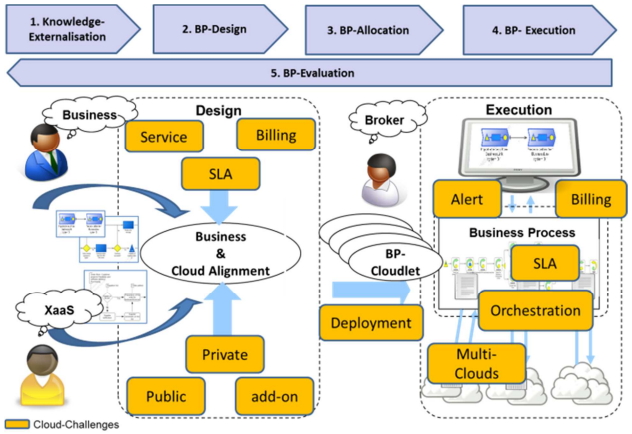
CloudSocket Vision

To this end, the goal of CloudSocket is to introduce Cloud Computing to SMEs in a way such that the latter can easily use the Cloud, benefit from the respective reduced prices and flexible IT infrastructures, as well as reduce the administrative burden.

Particular use cases have been selected to validate the achievement of the project goals which include: (a) a business incubator with Cloud computing and (b) a business process broker focusing on the Robotics sector. These use cases impose a specific set of challenges that the project aims to address with its business-to-Cloud IT alignment approach.

APPROACH

The project will follow a model-based approach for the realization of a Smart Cloud Business Process as a Service Broker platform which enables the discovery, orchestration, deployment and execution of services in the Cloud. This approach lifts the level of integration from the technical to the business layer and employs a learning cycle to improve the Cloud services.

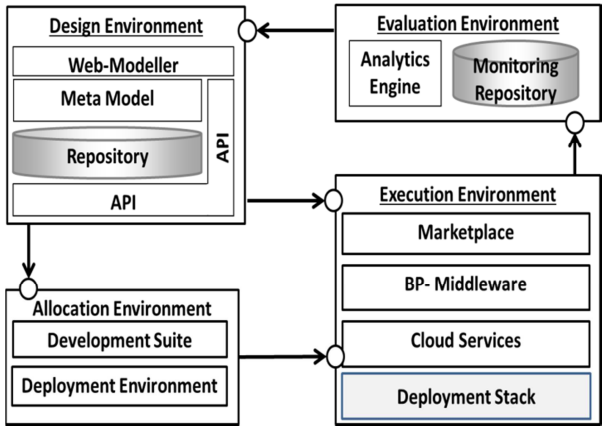


CloudSocket Concept and Approach

The platform will operate in five main phases: (a) knowledge externalization following a model-based approach to enable the understanding of the Cloud service features required, (b) BP design to map business processes to technical solutions in the form of a Cloud service-based workflow, (c) BP allocation to configure the technical solution as a BP-Cloudlet and specify deployment rules, (d) BP execution via a messaging platform for the solution orchestration and lifecycle management, multi-cloud monitoring and adaptation, and (e) evaluation for assessing whether the business requirements and Service Level Objectives are fulfilled via conceptual analytics.

REALISATION

CloudSocket will be integrated into existing marketplaces, middleware or brokerage frameworks, it does not reinvent the wheel but provides extensions to existing components in order to realize the concept of BP in the Cloud. Each platform operation phase will be supported by the respective building blocks.



CloudSocket Building Blocks

The main architecture components envisaged are the following: (a) a BP-design environment offering meta-model and semantic kernels, (b) a BP-allocation environment based on model-driven and rapid Cloud development environment; (c) an BP-execution environment comprising a workflow engine for cloud orchestration, a middleware for cloud service discovery, a process data mediator, as well as a rule engine for self-adaptation of the service workflows; (d) a BP-evaluation environment based on a conceptual analytics engine operating over a semantic monitoring repository and complemented by a cockpit for visualization.