
Referenz: Integration of Pub/Sub (SBC:PubSub)

Thema: Integration von Publish/Subscribe Systemen wie Hermes, Rebecca und Siena in die MozartSpaces Implementierung

LVA-Typ: Praktikum

Start: Ab sofort

Ende: Nach Vereinbarung

Kontakt: Richard Mordinyi (richard@complang.tuwien.ac.at)

Eva Kühn (eva@complang.tuwien.ac.at)

Background

Content-based networking is a message-oriented communication service in which a message is delivered to all destinations that have declared a selection predicate matching the content of that message. Event notification service has to support notification selection and delivery.

A promising approach to support component-based software architectures is the so-called event-based style whereby the interaction of components is modeled with events. Components emit events to inform other components of a change in their internal state or to request services from other components. Upon detecting the occurrence of events, components react by executing some actions and possibly emitting other events. The glue that ties components together in an event-based architecture is an infrastructure that we call event service. The event service registers the interests of components and then dispatches event notifications accordingly. The advantage of using an event service instead of other "classical" integration mechanisms such as direct or remote invocation is that this method increases the degree of de-coupling among components thus eliminating static dependencies and improving interoperability.

Task description

The responsibility in this topic is to integrate the event-based notification systems Hermes, Rebecca, and Siena into the MozartSpaces framework. The topic contains the following tasks

- A detailed description of the integrated notification systems
- Design and implementation of a binding between the notification system and MozartSpaces
- A scenario that presents the advantages of the connection of the two paradigms
 - e.g. single master container replication

The aim is to achieve a higher value by combining the power of event notification services with the concept of containers in the Space-based computing paradigm.

Qualification

- Experience with MozartSpaces (XVSM)
- Good programming skills in java