基于工作流引擎的构件组装体系结构

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Abstract

Nowadays, SA (software architecture) and CBSD (component-based software development), have shown great advantage in software development. CBSD is a successfully applied down-top methodology to software development; whereas SA still lacks a top-down component composition methodology, especially in process component. Based on workflow and the background of Web application, a component composition method is investigated. Being started with the key elements of business process, such as business object, control flow and data flow, characteristics and interactions between them are formalized. A workflow engine based SA of process component composition is proposed. Except for the control flow, the SA can deal with data flow between business activities, and provide a reference to others in applying archive workflow to component composition.

摘要

近年来,软件体系结构(SA)、基于构件的软件开发技术(CBSD)等开始在软件开发中发挥出重要的作用.CBSD应用的成功主要体现在自底向上构造系统的方法上.目前,对SA的研究还缺乏一种自顶向下的构件动态组装方法,尤其是过程构件的组装.以工作流技术为基础,以基于Web应用为背景,研究了基于工作流引擎的构件组装方法.从业务过程的基本要素——业务对象、控制流和数据流入手,详细分析了这些要素在构件环境下的特点和交互模式,并以此为基础提出了一种基于工作流的引擎的过程构件组装体系结构.该体系结构中除了考虑常规的控制流驱动的构件组装外,还深入研究了文档型的数据流驱动的构件组装机制,能够为其他研究者将文档型工作流技术应用于软件构件组装提供借鉴和参考.

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