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基于容器中间件的组件系统体系结构性能评价

张 勇, 黄 涛, 魏 峻, 陈宁江

张 勇1,2, 黄 涛1,2, 魏 峻1,2, 陈宁江3
1(中国科学院 软件研究所 软件工程技术研发中心,北京 100080)
2(中国科学院 软件研究所 计算机科学重点实验室,北京 100080)
3(广西大学 计算机与电子信息学院,广西 南宁 530004)
作者简介: 张勇(1975－),男,山东宁阳人,博士生,主要研究领域为网络分布计算,软件工程.黄涛(1965－),男,博士,研究员,博士生导师,CCF高级会员,主要研究领域为软件工程,网络分布式计算.魏峻(1970－),男,博士,研究员,主要研究领域为软件工程,网络分布式计算.陈宁江(1975－),男,博士,讲师,主要研究领域为软件工程,网络分布式计算.
联系人: 张 勇 Phn: +86-10-62630989 ext 208, E-mail: yzhang@otcaix.iscas.ac.cn, http://otc.iscas.ac.cn

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Abstract
This paper analyzes the effect of Container style middleware on the structure and performance of Component-based system based on architectural patterns, and proposes an approach integrating Container style middleware components and their interaction relation into the application UML (unified modeling language) models. The performance model derived from the integrated UML models can reflect the impact of middleware. So, analysts do not have to know the internal details of middleware at performance modeling. The architectural pattern-based method can be extended to deal with various style middlewares. In the paper, the proposed approach is illustrated by a case study.

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摘要
对组件系统性能建模时,需要考虑中间件平台的影响.基于体系结构模式,分析了容器风格中间件对组件系统结构和性能的影响,并提出了一种在组件系统UML描述中集成中间件组件及交互关系的方法.从该集成UML模型导出的性能模型,能够有效地反映中间件的影响.这样,在对组件系统性能建模时,无须了解中间件内部细节.这种基于体系结构模式的方法可以方便扩展以处理不同风格的中间件,且易于实现自动化.以EJB容器中间件为例说明并验证了所提出方法的有效性.

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