Journal on Communications



首页 |期刊简介 |编委会 |投稿须知 |期刊订阅 |资料下载 |编委论坛

王海艳,李思瑞.基于组合上下文的服务替换方法[J].通信学报,2014,(9):57~66

基于组合上下文的服务替换方法

Service substitution method based on composition context

投稿时间: 2013-06-10

DOI: 10.3969/j.issn.1000-436x.2014.9.006

中文关键词: 服务替换 组合上下文 着色petri网 编辑距离

英文关键词:service substitution composition context colored petri net levenshtein distance

基金项目:国家自然科学基金资助项目(61201163); 江苏省自然科学基金资助项目(BK2011072)

作者 单位

王海艳,李思瑞 南京

南京邮电大学 计算机学院, 江苏 南京 210003

摘要点击次数:207

全文下载次数:83

中文摘要:

随着用户需求的多样性和网络环境的日益复杂性,组合服务的复杂程度越来越高,在对失效服务进行替换时,为了减少被替换服务的冗余信息和提高替换方法的准确性,提出以待替换服务的组合上下文为研究对象,通过以下2个步骤完成替换:第一,基于已有的着色petri网服务工作流建模方法,提出服务的组合上下文信息采集算法(CCICA, composition context infor mation collection algorithm),以服务的组合上下文为服务信息采集源:第二,提出基于编辑距离的服务替换方法(LDBSSM, levenshtein distance-based service substitution method),并将服务接口的依赖关系加入到了算法中。仿真实验表明,该方法不仅较好地减少了被替换服务的信息冗余,而且有效提高了服务替换的准确性,具有更好的实用价值。

英文摘要:

With the variety of requirements from service requesters and the increasing complexity of network environments, service composition has become more and more complicated. In order to decrease redundant information of the substituted service and improve the accuracy of service substitution, the composition context was regarded as the matching criteria and tried to substitute failed service with the following two steps. First, a composition context information collecting algorithm (CCICA) was proposed based on the color petri net model of the service workflow, and regarded the composition context as the collecting source of service information. Second, a levenshtein distance-based service substitution method (LDBSSM) was given, which was integrated with dependencies between service interfaces. Simulation results show that the proposed LDBSSM method is practical because it can not only reduce redundancy of substituted service information but also effectively improve the accuracy of service substitution.

查看全文 查看/发表评论 下载PDF阅读器

关闭

版权所有: 《通信学报》 地址:北京市丰台区成寿寺路11号邮电出版大厦8层 电话: 010-81055478, 81055479 81055480, 81055482 电子邮件: xuebao@ptpress.com.cn 技术支持:北京勤云科技发展有限公司