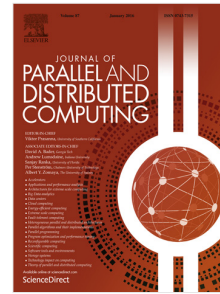


Accepted Manuscript

A proactive approach based on online reliability prediction for adaptation of service-oriented systems

Hongbing Wang, Lei Wang, Qi Yu, Zibin Zheng, Zhengping Yang



PII: S0743-7315(17)30337-4
DOI: <https://doi.org/10.1016/j.jpdc.2017.12.006>
Reference: YJPDC 3797

To appear in: *J. Parallel Distrib. Comput.*

Received date : 19 March 2015
Revised date : 23 August 2017
Accepted date : 12 December 2017

Please cite this article as: H. Wang, L. Wang, Q. Yu, Z. Zheng, Z. Yang, A proactive approach based on online reliability prediction for adaptation of service-oriented systems, *J. Parallel Distrib. Comput.* (2017), <https://doi.org/10.1016/j.jpdc.2017.12.006>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

(1) This paper identifies the critical problem of predicting the online reliability time series for a service-oriented SoS under the dynamic and uncertain running environment;

(2) We first integrate Dynamic Bayesian Networks (or DBNs) with time series motifs and propose a motifs-based DBNs, or m DBNs model to accomplish one-step-ahead time series reliability prediction;

(3) To further improve the prediction accuracy, a multi-steps trajectories DBNs, (or multi DBNs) is proposed based on the cumulative effects of previous predicted time series;

(4) We present an proactive adaption strategy based on the prediction results and other QoS constraints for significant SoS components;

(5) We conduct extensive experiments over real world Web services to verify the effectiveness of the proposed approach.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات