基于虚拟化的云中心性能分析

刘晓东，王　淼

(河南工程学院 计算机学院, 河南 郑州 451191)

摘　要： 云计算是一种按需提供服务的新范式，利用虚拟化技术，多个虚拟机可以运行在同一物理服务器上.针对多个虚拟机共享同一底层物理资源这一云特征，提出一种面向基于虚拟化技术的云中心性能分析模型，该模型考虑了云中心资源共享这一特点，并将服务请求划分为多个子任务，这与云中心服务特征更加吻合.通过求解该模型，可以获取阻塞概率、服务响应时间等一些性能参数.

关键词： 云计算；资源共享；性能分析

Performance Analysis of Virtualization-based Cloud Centers

LIU Xiao-dong, WANG Miao

(School of Computer, Henan Institute of Engineering, Zhengzhou 451191, China)

Abstract： Cloud computing is a novel paradigm for the provision of service on demand. Through the use of virtualization, multiple virtual machines(VMs) are allowed to run on the same physical server. Aiming at the problem that multiple VMs shares the same underlying physical resources, this paper presents a model for performance analysis of virtualization-based cloud centers. The model considers the resources sharing among VMs. In addition, a service request is divided into many subtasks, which is much closer to the reality of a cloud system. The performance indicators such as blocking probability, the average response time are obtained.

Key words： cloud computing; resources sharing; performance analysis

作者简介：

刘晓东　男，(1981-)，博士，讲师.研究方向为云计算、虚拟化.E-mail:liuxiaodongxht@qq.com.

王　淼　男，(1981-),博士,副教授.研究方向为空间查询、空间推理.