

# 改进贪婪算法的云任务调度研究

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**摘要:** 为了提高云计算环境中系统整体调度效率, 同时更好地模拟云计算实际应用场景, 提出一种改进贪婪算法的任务调度策略. 该算法综合考虑云环境下任务与虚拟机资源的特征, 据此改进贪婪选择策略, 使其较其他算法更好体现任务与资源之间的调度分配关系. 通过在 CloudSim 仿真平台上进行实验分析, 该算法在云环境下能够比其他常用调度算法具有更好的执行效率; 同时, 该算法较其更具均衡负载的能力, 实验结果显示任务分配的均衡度优于基本调度算法.

**关键词:** 云计算; 任务调度; 贪婪算法; 负载均衡

## Research on Cloud Task Scheduling with Improved Greedy Algorithm

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**Abstract:** For the purpose of improving the overall efficiency of the system in the cloud computing environment, and to better simulate the actual application scenarios of cloud computing, a task scheduling strategy to improve the greedy algorithm is proposed. The algorithm takes into account the characteristics of tasks and virtual machine resources in the cloud environment, and improves the greedy selection strategy so as to better reflect the mapping relationship between tasks and resources. Through the experimental analysis on the CloudSim simulation platform, the algorithm can perform better than other commonly used scheduling algorithms in the cloud environment. At the same time, the algorithm has the ability of balanced load, and the experimental results show the balance of task assignment better than common algorithms.

**Key words:** clouding computing; task scheduling; greedy algorithm; load balance

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