

Analyzing Efficient Resource Allocation Strategies in Cloud Computing Systems

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Abstract: *As a result of the exponential growth of cloud computing, resource allocation has emerged as a critical area of study. Cost savings and enhanced performance are outcomes that can result from the effective allocation of cloud computing resources. We present an exhaustive examination of resource allocation in cloud computing environments in this article. The background and fundamental concepts of resource allocation in cloud computing are presented initially. Following this, we undertake a comprehensive analysis of the extant literature concerning resource allocation in cloud computing environments, encompassing a range of facets including load balancing, virtual machine placement, task scheduling, and resource provisioning. We conclude by discussing the prospective research directions and challenges associated with resource allocation in cloud computing environments.*

Keywords: Cloud Computing, Resource Allocation