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# Comparative Analysis of Performance in Cloud Computing Platforms Considering Memory and Process Level Metrics with CPU Utilization

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**Abstract:** *Cloud computing has revolutionized the way organizations and individuals access and manage their computing resources. With the increasing number of cloud service providers, it has become crucial to assess the performance of various platforms to ensure optimal resource allocation. In this comparative analysis, we focus on memory, process-level metrics, and CPU utilization, as these factors significantly impact the overall performance of cloud computing platforms. By examining these metrics across multiple platforms, we aim to provide valuable insights into their respective strengths and weaknesses, aiding users in making informed decisions regarding resource allocation and platform selection. Cloud computing has emerged as a fundamental technology for businesses and individuals workloads. This study aims to compare the performance of various cloud computing platforms, focusing on memory, process-level metrics, and CPU utilization. Memory is a critical component in cloud computing, by measuring these factors across multiple platforms, we can identify the platforms that offer efficient memory management, resulting in enhanced application performance. Process-level metrics helps us understand how platforms handle concurrent processes and their impact on overall performance. Based on our comparative analysis, we find thathighlight the diversity in performance strengths across different cloud computing platforms. We conducted a comparative analysis of memory, process-level metrics, and CPU utilization across various cloud computing platforms. The findings emphasize the importance of evaluating performance metrics to ensure optimal resource allocation. Each platform demonstrates unique performance strengths, and users should select platforms based on their specific workload requirements. This analysis provides valuable insights into the performance landscape of cloud computing platforms, enabling users to make informed decisions and maximize the efficiency.*

**Keywords:** Cloud computing


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