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A Systematic Literature Review of Cloud Brokers for Autonomic Service Distribution

(2024) *IEEE Access*, .

DOI: 10.1109/ACCESS.2024.3458829

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Abstract

In recent years, cloud computing has become an essential distributed computing platform and has achieved enormous popularity. Within cloud computing, the Cloud service broker creates an abstraction layer between provider and consumer so that customers notice the cloud service providers' offered services' solitary view. The brokers of cloud service help connect the cloud's substantial resources and select the data centres of the cloud that meet the user's requirement while maximizing the entire response time and reducing cost. The landscape of autonomic cloud brokers has been reviewed in this systematic literature review study, while the PRISMA approach is used to analyze the literature. This comprehensive review of cloud brokerage mechanisms is tailored towards the autonomic distribution of services. To emphasize autonomic computing and cloud-access security brokers, the evolving paradigms of cloud service selection are detailed and critically analyzed to enhance service distribution efficiency. Further, the role of cloud brokers in load-balancing services is also highlighted in this study. A new taxonomy for the structured framework of cloud brokerage mechanisms is introduced based on functionalities, deployment models, and architecture for the autonomic service distribution. Finally, the study offers valuable insights for future research challenges and best practices in cloud security. © 2013 IEEE.

Author Keywords

Cloud Broker; Cloud Computing; Cloud Service Broker; Data Center; load balancing; virtual machines

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Publisher: Institute of Electrical and Electronics Engineers Inc.

ISSN: 21693536

Language of Original Document: English

Abbreviated Source Title: IEEE Access

2-s2.0-85204159887

Document Type: Article

Publication Stage: Article in Press

Source: Scopus

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