Review Form 3

| Journal Name: | Asian Journal of Research in Computer Science |
|--------------------------|--|
| Manuscript Number: | Ms_AJRCOS_130937 |
| Title of the Manuscript: | KUBERNETES APPLICATION FOR MANAGING MICROSERVICES UNDER HIGH LOAD CONDITIONS |
| Type of the Article | |

PART 1:Comments

| | Reviewer's comment | Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It ismandatorythatauthorsshouldwritehis/her feedback here) |
|--|--|--|
| Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part. | This study examines Kubernetes' role in optimizing microservice management under high-load conditions. It highlights key tools like Horizontal Pod Autoscaler (HPA), Cluster Autoscaler, and Ingress controllers, which enhance scalability, resource allocation, and load balancing. The research emphasizes the importance of security mechanisms such as RBAC, mTLS authentication, and Service Mesh to ensure robust access control and data protection. Performance evaluations confirm that automatic scaling reduces CPU load and response times, improving system efficiency and resilience. By addressing scalability, security, and network optimization challenges, Kubernetes proves to be a powerful solution for building adaptable, high-performance cloud-native applications. | |
| Is the title of the article suitable? (If not please suggest an alternative title) | Dynamic Scaling and Performance Optimization for Microservices Using Kubernetes | |
| Is the abstract of the article comprehensive? Do yousuggest the addition (or deletion) of some points in thissection? Pleasewriteyour suggestions here. | The abstract offers a clear and well-organized overview of the article, highlighting key aspects such as Kubernetes tools for managing microservices, scalability, load balancing, and security. However, while it discusses the potential benefits of Kubernetes on flexibility, stability, and response time, it would be even more insightful with the inclusion of specific research findings to support these claims. | |
| Is the manuscriptscientifically, correct?Pleasewritehere. | Yes. The manuscript exhibits a comprehensive understanding of Kubernetes and its role in managing microservices architecture under high-load conditions. The references are from reputable sources, including IEEE journals and conferences, further reinforcing the manuscript's scientific foundation. | |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. | While the current references are adequate and reasonably recent, expanding the list to include more recent studies and a wider variety of research could enhance the manuscript's comprehensiveness and authority. For example, Recent white papers or case studies from CNCF (Cloud Native Computing Foundation). | |
| Is the language/English quality of the article suitable for scholarlycommunications? | The language quality is acceptable for scholarly communication but would benefit from revisions to improve clarity, readability, and formal tone. | |
| Optional/General comments | I would give the manuscript an 8/10 for its strong technical foundation and scientifically accurate content. It effectively discusses Kubernetes' capabilities in managing microservices under high-load conditions with relevant performance results and credible references. However, improvements are needed in language clarity and scholarly tone to enhance readability. The experimental methodology lacks sufficient detail, impacting transparency and reproducibility. Additionally, incorporating more recent studies and addressing ethical considerations like data privacy and system reliability would strengthen the overall quality of the article. | |

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| | Reviewer's comment | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
|--|---|---|
| Are there ethical issues in this manuscript? | (If yes, Kindly please write down the ethical issues here in details) | |

Reviewer Details:

| Name: | Prasanna Pasam |
|----------------------------------|----------------|
| Department, University & Country | USA |

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