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	**Research Article (Technical Study on Kubernetes for Microservices Management under High Load Conditions).**

PART 1: Comments

	Reviewer's comment	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/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 manuscript is relevant to the scientific community, particularly for software engineers, cloud computing researchers, and DevOps practitioners. The study addresses the critical challenge of managing microservices under high-load conditions using Kubernetes, a widely adopted container orchestration platform. The research presents an experimental evaluation of auto-scaling, security mechanisms, and load balancing—key factors for ensuring the resilience and performance of microservices. The findings contribute to best practices for deploying scalable and fault-tolerant applications in cloud environments.	
Is the title of the article suitable? (If not please suggest an alternative title)	The title is suitable and accurately represents the content of the manuscript. However, a more precise and engaging title could be: "Optimizing Kubernetes for Microservice Management Under High-Load Conditions"	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	**Strengths:** The abstract provides a general overview of Kubernetes' role in microservices management. **Suggested Improvement:** The contribution of the study should be more explicitly highlighted. **Suggested revision for clarity:** "This study evaluates Kubernetes' role in managing microservices under high-load conditions, emphasizing the efficiency of Horizontal Pod Autoscaler (HPA), Cluster Autoscaler, and security mechanisms. The research demonstrates how Kubernetes enhances scalability, reduces failure risks, and ensures stable performance. Experimental results validate its effectiveness in optimizing CPU load and response time for fluctuating workloads." **Recommendation**: Minor revision to emphasize the study's contribution.	
Is the manuscript scientifically, correct? Please write here.	The manuscript is scientifically sound and methodologically correct. The study follows a logical structure, including methodology, experimental results, and discussions. **Experimental validation** strengthens the claims made by the authors. However, **some additional discussions on performance trade-offs** (e.g., impact of scaling on cost and resource utilization) could enhance the study.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are mostly recent and relevant. The paper references studies from 2020-2024, which is appropriate. Suggested additional reference: **Demystifying Kubernetes Service Types: ClusterIP, NodePort, LoadBalancer & ExternalName - Insights2TechInfo** **Recommendation**: Minor improvement by adding an additional **reference on Kubernetes security or cost-aware scaling**.	

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Is the language/English quality of the article suitable for scholarly communications?	**The language is generally clear and suitable for scholarly communication.** • Some **minor grammatical errors** and **sentence restructuring** are needed. Example: ✗ "The implementing of the platform involves addressing challenges related to configuring auto-scaling, optimizing network connections, and ensuring secure data transmission between components." ✓ "Implementing the platform involves configuring auto-scaling, optimizing network connections, and ensuring secure data transmission." **Recommendation**: Minor proofreading and grammar refinements.	
Optional/General comments	**Strengths** Well-structured, methodologically sound research. Experimentally validated performance measurements. Clear explanation of auto-scaling and security mechanisms. **Areas for Improvement:** Minor language refinement for better readability. Improved discussion on performance trade-offs (cost vs. scalability). Figures/graphs for experimental results (Tables 1, 2, and 3) would enhance readability.	

PART 2:

	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)*	

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