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Department of _____ Engineering

Academic Year : 2020-21

SUBJECT : **Distributed System**

CLASS: **TE** **SEMESTER:** 5th

ASSIGNMENT NO. : **OCW** **DATE OF SUBMISSION:**

NAME OF STUDENT: **KAUSTUBH SHRIKANT KABRA**

ROLL NO. **38**

Topic: **Optimized data storage algorithm of IoT based on cloud computing in distributed system**

WEBSITE URL REFERRED:
https://e-tarjome.com/storage/panel/fileuploads/2020-05-13/1589365089_E14910-e-tarjome.pdf

Summary/Abstract/Review:

★ Optimized Data Storage Algorithm of IOT based on Cloud Computing -

Large-scale applications of Internet of Things (IoT), which require considerable computing task and storage resources, are increasingly deployed in cloud environments. Compared with the traditional computing model, characteristics of the cloud such as pay-as-you-go, unlimited expansion, and dynamic acquistion represent different conveniences for these applications using the IoT architecture.

One of the major challenges is to satisfy the quality of service requirement while assigning resources to tasks. In these paper, we propose a deadline and cost-aware scheduling algorithm that minimizes the execution cost of a workflow under deadline constraints in the infrastructures as a service (IaaS) model. Considering the virtual machine (VM) performance variation and acquistion delay, we first divide tasks into different levels according to the topological

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structures so that no dependency exists between tasks at the same level.

Three strings are used to code the genes in the proposed algorithm to better reflect the heterogeneous and resilient characteristics of cloud environments. Then, HEFT is used to generate individuals with the minimum completion time and cost. Novel schemes are developed for crossover and mutation to increase the diversity of the solutions.

Based on this process, a task scheduling method that considers cost and deadlines is proposed. Experiments on workflows that simulate the structured task of IOT demonstrate that our algorithm achieves a high success rate and performs well compared to state-of-the-art algorithm.

Conclusion:

Therefore, we have understood the optimized data storage algorithm of IoT based on cloud computing. We have observed the algorithm in detail and we have understood the challenges faced and the solution to overcome them.

Name & Sign of Subject In-charge:	**Marks:**	