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Latency-aware Internet of Things Scheduling in Heterogeneous Fog-Cloud Paradigm

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V. Implementation and

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Abstract	Abstract:	More Like This
	Nowadays, with the advent of many new technologies, the data is alarmingly generated by the widespread of internet devices	Sensing Cloud Computing in
Document Sections	in this data world. Cloud computing seems a viable option for scheduling dynamic data with disparate specifications. However,	Internet of Things: A Novel Data
I. Introduction	the execution time increases due to the computationally-limited resources causing latency overhead. So, Fog computing has	Scheduling Optimization
	evolved as a promising paradigm to complement Cloud computing. Therefore, effectively utilizing the underlying resources for	Algorithm
II. Related Works	scheduling enormous tasks generated by the latency-sensitive applications is a critical issue. Hence, to cope with this, the	IEEE Access
III. Problem model &	current research considers a Multi-Level Feedback Queue (MLFQ) for task classification depending on the priority of each layer	Published: 2020
formulation	to reduce the latency and waiting time. Moreover, the dynamic tasks are scheduled using a heuristic-based approach. A	
Ionnaidion	proposed objective function is optimized through the heuristic-based method for the minimization of latency rate, makespan,	Cost-Efficient Request

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Metrics				

I. Introduction

Cloud Computing is a viable solution for configuring a virtualized environment for multi-tenant users dealing with hosting their Web applications and scheduling their computation. It leverages the inherent limitations of un-premise computation by shifting it to the cloud paradigm by providing on-demand services. However, it becomes a troublesome for the task generated from latencysensitive applications, which need computationally-intensive computing nodes for meeting the deadline as well as reducing the associated latency. Apart from this there are many more drawbacks like: high latency, limited mobility, few server nodes, centralized geographical distribution and many more. Fog computing has evolved as a cutting-edge technology to address such issues and to minimize the latency gap between Internet of Things (IoT) devices and the cloud. It complements the cloud paradigm via edge of the network by forming a 3-L. Sign in to Continue Reading geographical distribution of computing nodes, and machine neterogeneity make the Fog computing as one of the prominent technologies over Cloud computing. [1]. Fog computing enables end devices such as set-top-boxes or access points for service hosting. This paradigm facilitates the execution of tasks in the proximity of smart IoT devices and fog computing nodes [2]. The parameters using which the quality or performance of a system is validated is known as Quality of Service (QoS) parameters. There are many different kinds of QoS parameters such as resource utilization. Internet deadline, service rate, etc. As there is a

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