عنوان مقاله:

Resource Allocation optimization in fog Architecture Based Software-Defined Networks

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خلاصه مقاله:

As a growing of IoT devices, new computing paradigms such as fog computing are emerging. Fog computing is more suitable for real-time processing due to the proximity of resources to IoT layer devices. Service providers must dynamically update the hardware and software parameters of the network infrastructure. Software defined network (SDN) proposed as a new network paradigm, whose separate control layer from data layer and provides flexible network management. This paper presents a software-defined fog platform to host real-time applications in IoT. Then, we propose a novel resource allocation method. This method involves scheduling multi-node real-time task graphs over the fog to minimize task execution latency. The proposed method is designed to benefit the centralized structure of SDN. The simulation results show that the proposed method can find near to optimal solutions in a very lower execution time than the brute force method.

کلمات کلیدی:

Software-defined network, fog computing, Multi-nodes weighted directed task graph, Task assigning, task offloading