IoT applications services placement in a Fog computing infrastructure

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1 Abstract

The IoT environment brings many challenges for its applications deployment and management throughout a classical centralized cloud infrastructure. Considering billions of mobile users with different needs and various smart devices with heterogeneous compute and network capacities, the actual cloud computing paradigm seems to be not sufficient to ensure Quality of Service(QoS) requirements such as latency for real-time applications, bandwidth for network greedy services or security and user's privacy needs. Furthermore, could data centres could easily become struggle points and considerably impact the system's QoS. A large scale distributed computing infrastructure is more suitable to sustained IoT applications and user's needs.

Fog computing paradigm is taking a great part of researchers attention and seems to be the most suitable computing paradigm for IoT environnement. Extending cloud capacities with network's and edge equipment to deploy applications leads to reduce there response time and security issues with local processing data.

Our work aims to study IoT services deployment strategies into a fog infrastructure in order to increase system's energy efficiency and optimize applications response time.