

Response to Reviewer 1 Comments

Point 1: The authors model the offloading problem as an optimization problem, but do not provide details regarding the algorithm to solve the problem. Furthermore, what is the computational complexity of the offloading algorithm itself?

Response 1: **Regarding the first part of the comment:** The overall context of undertaking task execution and its relationship to the more wider optimisation problem has now been explained further. The approach adopted in this paper is focused on multiple criteria – i.e. minimise delay, maximise throughput, and minimise energy consumption. As a pair wise comparison is being performed, the complexity of $O(n)$.

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Point 2: It is not clear whether the offloaded computation will be sent to the cloud end or not when congestion occur. If yes, how does the decision process work? For example, during rush hours, there may be much more vehicles waiting for local services, causing congestions within a certain area.

Response 2: This aspect has been explained further – i.e. cloud servers are only used as a last resource – i.e. if queuing delay at all neighbouring nodes exceeds a max threshold (determined by the combined latency to and from the cloud servers). Subsection 3.2.3 has been updated to clarify this further, [page 12](#). We have also updated algorithm 1 (Dynamic offloading threshold) to explain this further.

Point 3: For the experiment part, the authors involve iFogsim for experiment evaluation. How are the IoT computation workload simulated? 

Response 3: In iFogSim, sensors are considered to generate data/task tuples that need to be processed. We have adopted the same terminology and explained this further in the updated section 3.1 on “System model” [page 8](#) and updated section 6 [page 15](#).

Point 4: Page 17, there is an incomplete sentence in line 6 ("Throughput" part). Please make sure to proof read the paper.

Response 4: Done