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Resilient Energy-Efficient Service Embedding in Smart Buildings with Latency Minimization

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Abstract: *This paper introduces a generic MILP model that has been developed to minimizethepowerconsumptionduetobothprocessingandthetrafficflowthrough the network to minimize the end to end data delivery time with resilient embedding. We investigate various resilience schemes for IoT nodes and traffic and evaluate the performance and the implications of these schemes in smart building settings, such as the data delivery time and energy consumption. We formulate the problem of finding the optimal set of IoT nodes and links to embed BPs into the IoT layer as an optimization problem, with an objective function that aims to minimize both the total power consumption and the traffic latency.*

Keywords: Resilient service embedding, IoT Networks, MILP