



UCL Department of Computer Science
CS M038/GZ06: Mobile and Cloud Computing
Spring 2014
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One-pager: MAUI (Cuervo *et al.*, 2010)

Due: Start of lecture, 5th March 2014

Instructions: *in your own words*, answer the following questions as *succinctly* as possible (in 200–500 words total, but shorter answers within this range are encouraged). Quoting figures or text from the assigned reading or from any other source is specifically prohibited.

The authors consider different program profiling strategies in Section 5.2.1 and in Figure 6. The LastDiff profiling strategy does not measure the size of the state that must be transferred to offload a method on every invocation of that method; it does so less often. Suppose that LastDiff's state size estimate becomes stale (*i.e.*, inaccurate because the state that must be shipped for use in an offloaded method has changed in size, but the estimate has not been recomputed). Assuming that MAUI uses the LastDiff strategy to estimate state size, explain the exact circumstances under which a stale estimate can cause MAUI to *never again* remote a method during a run of an application—even in some cases where doing so might save a significant amount of energy. In your answer, refer to any relevant details of the LastDiff program profiling strategy.