

The shift towards multicore processors and the well-known drawbacks imposed by lock-based synchronization have forced researchers to devise new alternatives for building concurrent software, of which transactional memory is a promising one. This work presents a comprehensive study on the energy consumption of a state-of-the-art STM (Software Transactional Memory) implementation using STAMP, a representative set of transactional workloads, comparing it to its lock-based counterpart. Our results show that STM can be up to 22x (~3x on average) more energy-inefficient when compared to locks. This work is a novel step towards a better understanding of the energy behavior of STM systems.