## DSMage: BlackBox Far-memory Aware Scalable Data Structures

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**GOAL:** Provide a framework for the **non data-centric** developers to write application in **low-level languages** and in a **single-threaded** way. The framework automatically provides **scalability** on **heterogeneous memory** with correctness guarantee.



## **Exploring Direction**

2.

Currently focusing on 2 first as a base => A scalable transactional synchronization on RDMA 1. What is the performance of existing synchronizations if there objects can be in Far Memory

- using existing approaches (w.r.t r/w ratio, skewness, object size)
  - Prototype design choices: - synchronization overhead, + + local object access
    - a. Object Placement: temporal objects, non temporal objects
    - b. Elastic Log Space: on-demand log space allocation
    - c. GC Design: Opportunistic GC, Pessimistic GC; (De)couple GC
    - d. Cooperative Scheduling: Latency hiding